

Special Edition

PC WORLD

Winter \$3.50

\$4.50 Canada

Display until May 31, 1985

*The Comprehensive Guide to
IBM Personal Computers and Compatibles*

1500 Programs
for the IBM PC

1985

Annual Software Review

A Comprehensive Software
Guide to Word Processing,
Spreadsheets, Data Management,
Graphics, Communications,
Integrated Applications,
Accounting, Business
Management, Education,
Personal Management, and
Entertainment

Includes Evaluations
by PC World Readers

A BUREAUCRAT'S GUIDE TO WORD PROCESSING

Now, if it were you or I and we wanted a word processing program for our IBM-type PC, we'd probably stop off at our local computer store and simply diddle with a few.

You and I, however, are not the U.S. Department of Agriculture.

(Nor any of its permutations of subsystems like the Economic Research Service, National Resources Economics Division, Data Services Center, etc., etc.)

So when the USDA told ERS to tell NRED and DSC to look into a truckload of w.p. programs for all their PCs, the last thing they wanted was simple diddling. Their dedicated Wangs and Lexitrans were far too few to handle their

needs, their IBM® PCs weren't compatible with them anyway, and nobody really, quantifiably, knew from word processing with a personal computer.

Definitely not a diddling-mode condition.

As they put it in *The Exchange*, an internally distributed publication of the Department of Agriculture: "A needs assessment showed that, in the long-term, a word processing system is needed that can increase word processing capability and also be compatible with ERS' Long Range Information Management goals."

Well, "Needs assessment" led swiftly to "procurement action," which galloped into an "objective review" of the eight top-rated PC programs on the market (as compiled by *The Ratings Book* published by *Software Digest*), along with Wordstar® and Display Write 2, because they had some around.

Thus armed with the names, the final evaluators (a team of secretaries from NRED who would be the primary users of the PC software) became armed with each of the programs, along with checklists to record such things as ease of use, advanced features, and similarity to their existing dedicated equipment.

The first to be eliminated from the prospect list were Office Writer™

and Samna,™ since they're copy-protected and couldn't be transferred to hard disks.

Next, IBM's Display Write 2: because it's "not compatible with other software used in ERS (like Lotus 1-2-3,™ dBASE II,® etc.)," and it's "full of confusing menu options and cryptic error messages." Au revoir IBM.

Then, three more, for a variety of reasons.

Which left the following:

Volkswriter® Deluxe™

MultiMate™

Leading Edge™


Volkswriter Deluxe? "Too complicated and confusing." Not "easy to learn or use."

MultiMate? Not bad. It actually tied the winner in a few categories.

The winner being the one that won 82% of the votes in the Ease of Use/Ease of Learning categories. The one about which they said, "The ability to store deleted text and automatic document backup features were both highly desirable." The one they thought they'd quickly "be able to use . . . for their day-to-day word processing tasks."

The whole process took some three months of work by people in DSC to support the NRED in its work with the ERS and DSC to make the world a better place for the USDA.

But the results were well worth the wait. Because at last they've solved their word-processing problems . . .

"With Leading Edge!" 

**THIS WAS THE WINNER:
LEADING EDGE™
LEADING EDGE WORD PROCESSING**

THESE ARE THE PACKAGES THE COMMITTEE EVALUATED:



THESE WERE THE FINALISTS:



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LEADING EDGE SOFTWARE DIVISION, 21 HIGHLAND CIRCLE, NEEDHAM, MA 02194, TEL. 800-343-3436, (617) 449-4655
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ALL YE NEED KNOW.

Like:

"How many boxes of 'Trivial Pursuit' we got left in the West Coast warehouse?"

"Mr. Jones, your expense account just set an IRS record. Can you explain how, where, and with whom you managed to spend \$12,648 on 'client entertainment'? In one week?"

"Listen, Eddie, we own 1,400 stores, and you're telling me you can't find one lousy Cabbage Patch doll?"

"We got any dealers in New England with a new Chevy Citation on the lot in metallic silver, blue interior, and stereo with cassette deck?"

"Of all the furniture we sell, how many pieces in the \$600 to \$800 range haven't turned over this month?"

"I met this distributor in Chicago who wants to order a million units, and his name is McTavish or McCormack or McMurphy or McCarthy or something, and silly me, I lost the napkin I wrote his name on..."

And so on.

And so...

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And it spans a major gap: Between toys that act like glorified file cabinets, on the one hand; and costly, complicated database management systems, on the other.

Now, the Nutshell™ doesn't pretend to give you all the information in the world. Just all the information you need, in any form you need it: inventory lists, invoices, sales reports, salary

summaries, customer histories—with fields of virtually unlimited length—on the screen, or in printed reports.

To be sure, it's similar to a giant file cabinet. (In fact, depending upon your computer, its paper equivalent could be some 2 billion separate records, or 2 miles of printed information.) But there the similarities cease. Because you can access any data in any of those files by the most incredible cross-indexing system ever conceived for a PC. You can call up information by file

name, date, prices, part number, manufacturer, description (like "red"), and a dozen other different ways in seconds.

Even if you forgot you had it.

Remember the incident concerning McTavish, McCormack, McEtc?

All you have to do is type in the first few letters of any name you want to recall (like "Mc") and every word in every file that starts with "Mc" pops up on the screen.

So you find "McGuire" and, along with his name, his million-unit order.

Where were you on that weird week of

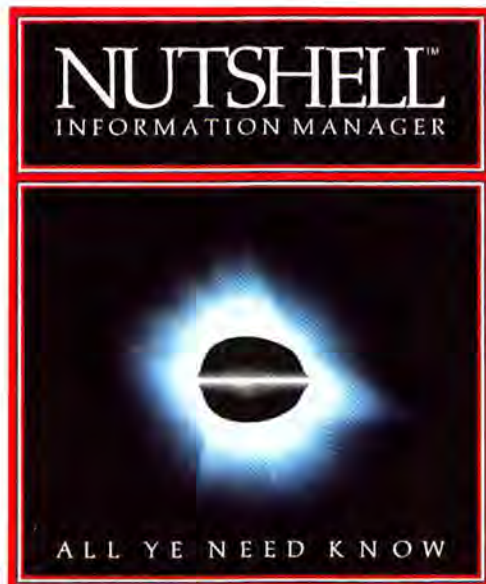
March 5, 1984 when you managed to expense \$12,648? Type in 3/5/84 (or "\$12,648" or "Polo Club"), and... here's your answer, Mr. Tax Man.

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PC WORLD

*The Comprehensive Guide to
IBM Personal Computers and Compatibles*

An abstract graphic on the left side of the page, featuring a large orange shape with a circular cutout and a blue shape behind it.

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Illustrations: K. Mercedes McDonald

PC WORLD

Volume 2, Number 14
Winter 1984/85

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PC World™ (ISSN 0737-8939) is published monthly except semimonthly in June and December at \$24 for one year (14 issues), \$43 for two years (28 issues), \$60 for three years (42 issues) by PC World Communications, Inc., 555 De Haro St., San Francisco, CA 94107. Additional postage outside the US and Canada \$25 per year surface mail, \$110 per year airmail. For questions regarding subscriptions and to place subscription orders call toll-free 800/247-5470 (in Iowa: 800/532-1272). Second-class postage paid at San Francisco and at additional mail offices.

POSTMASTER: Send address changes to PC World, Subscription Dept., P.O. Box 6700, Bergenfield, NJ 07621. Editorial and Business Offices: 555 De Haro St., San Francisco, CA 94107, 415/861-3861. CompuServe 74055,412 The Source STE908

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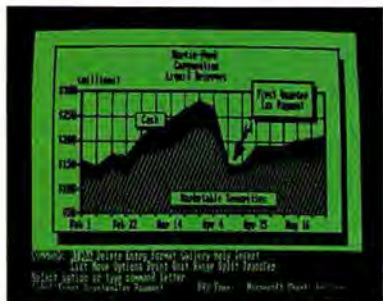
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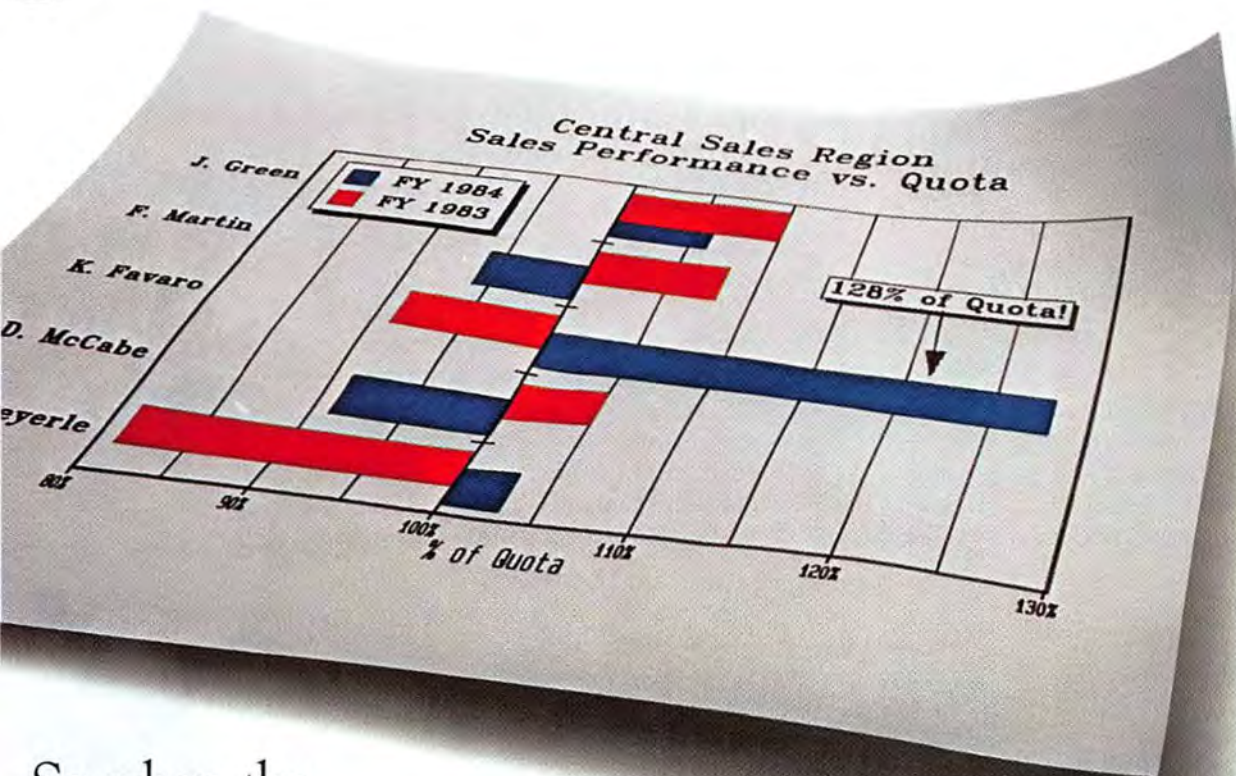
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If they don't fit, they're not worth wearing.

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If they don't fit, they're not worth using.

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Size up the selection.

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Personal Computer Software



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"I've got 4 billion customers.
"The world's biggest
database.

"So I need all the power I
can get my hands on.

"That's why I use R:base."

"With R:base, I can access
billions of records. Open 40
files at the same time. Handle
up to 400 fields. And sort it
all out in a hurry. It's everything
I need to keep my lists in order.

"And if your inventory is
anything like mine, you'll
appreciate the programming
capability of R:base. It lets me
do conditional processing.
Post transactions. And update
multiple files from one input
form.

"But even with all that
power, the real gift is that it's
so easy to use.

"For starters, its on-screen
tutorial makes R:base a snap
to learn. And now, there's a new
applications diskette with
ready-to-use mailing list, inven-
tory management, and fore-
casting applications.

"Not only that, R:base is
designed to work with Clout.
That's the program that lets
me—and my elves—talk to
our personal computers in
plain English. Clout also
remembers where my
data is stored, and can
search for it across

all files. So I don't have to!

"And here's the best
package of all.

"For only \$14.95 (plus ship-
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"Because if your workload
starts to snowball, you could
end up out in the cold!"



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Requires 256K of memory. Runs on MS-DOS and PC-DOS
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The Gilded Age of Software Development



David Bunnell

A shakeout in the software industry forces developers to face the reality of tougher competition and higher consumer expectations.

The personal computer software scene has changed dramatically since the publication of *PC World's* first *Annual Software Review* in 1983. A year ago we were witnessing the height of the industry's golden age. Personal computers energized the marketplace and provided a new enthusiasm for entrepreneurs. Anybody developing a fairly decent word processor or spreadsheet could raise a few million dollars in venture capital and hope to launch a product with the same success as Lotus Development Corporation's 1-2-3.

With the naivete of most pioneers and prospectors, we believed the personal computer boom would last forever. The IBM PC had generated an amazing amount of software, as demonstrated by the sheer size of last year's *Annual Software Review*. The industry's road to success had just begun to be paved, and soon there would be room for everyone. Well, something happened on the

way to bit and byte heaven, and the boom leveled off prematurely.

The welcome back to reality that stock market crashes and industry shakeouts offer gives us a chance to evaluate the true potential of the marketplace and renew our original intentions. The sedated pace of the personal computer industry may have been induced by a shortage of good software to keep the market expanding, or perhaps the public wasn't as ready to accept personal computers as analysts predicted. Industry analysts projected that 5 to 7 million IBM PCs and compatibles would be sold in 1984, but the real number is turning out to be around 3 to 4 million.

The enthusiasts who lead the personal computer revolution tend to enjoy struggling with the difficulties and outright confusion caused by clumsy user interfaces

and inadequate documentation. But the vast majority of potential users aren't—and don't care to be—computer literate. They want to use personal computers without having to understand them. The task of selling personal computers to the technically ambivalent masses requires generating, not just meeting, demand. The slowed growth rate of personal computer sales should have been predicted, but we were blinded by our own fireworks.

Another factor contributing to the industry's first stalls was sloppy performance. Apparently, some of the venture capitalists and their hotshot software partners didn't appreciate the art of software sales and distribution or care that the products they were selling were simply variations of existing products. By supporting the "me-too-ware" phenomenon, they were forcing themselves out of the market. Most users are loyal to one spreadsheet, one data base manager, and one word processor. In turn, the computer stores seldom carry more than three versions of each major application package. It takes considerable creativity to crack the walls that users and distributors have recently raised.

Lotus Development Corporation has had incredible success breaking through those barriers. By combining technical ingenuity and marketing prowess, the start-up company blew the competition away. Starting with an innovative product, 1-2-3, Lotus advanced the state of the art of personal

computing. Not only was 1-2-3 the first spreadsheet successfully combined with graphics and list management, but it was also the first to take advantage of the PC's expanded memory.

Lotus entered the market with perfect timing; the previous spreadsheet leader, *VisiCalc*, was not enhanced early enough and left a gap on the software shelves. Lotus had everything going for it—an excellent product, great timing, and the realization that the company needed one more mainstay. Lotus's president, Mitch Kapor, sensed that the first challenge in marketing a program was to infiltrate the distribution channels. Since most software is sold in computer stores with limited space and human resources, Kapor set out to charm the distributors in order to captivate the market.

In the process Lotus spent big bucks marketing 1-2-3, but the success of the product was ultimately based on its performance and user acceptance. Once a product is on the shelf, it has to sell; otherwise computer dealers will rapidly move it to the back of the stack and finally into the warehouse.

The ultimate dream of personal computing is that the PC will not only be incredibly versatile but become an extension of the mind. The application software necessary to make that a reality hasn't been conceived, much less implemented. The personal computer and the software that fuels it are in their infancy. Compared with the automobile industry, the personal computer industry has certainly come a long way in its ten

years of existence. Industry analysts should be more careful about forecasting doom than they were when they reached for the stars; they should understand the unpredictable nature of the personal computer arena.

The software survivors understand the problems generated by lack of originality and shelf space, and many of them are attempting creative solutions. As this year's *Annual Software Review* demonstrates, there is a plethora of creative software that didn't exist last year. In 1983 there was little software beyond the endless variations of word processors, spreadsheets, data bases, and communications programs. We now have some promising new types of software, including project managers (*PC World*, Vol. 2, No. 10), idea processors (*PC World*, Vol. 2, No. 11), and psychological analyzers (*PC World*, Vol. 2, No. 7) as well as advanced integrated packages such as *Symphony* and *Framework*.

The shakeout in the software industry, which spilled over into magazine publishing, is readjusting our views and approaches. The players will constantly change as the rules become stricter and expectations higher. The gild is chipping off the brass ring, and unless the big names maintain their commitment to excellence, they won't be able to go around one more time.

written for businesses with special needs, are included in the section on job-specific applications. There, you'll encounter such products as accounting packages for law practices or doctors' offices, and data bases of abstracts for libraries or academic institutions.

Since personal computers need not be used strictly for business, we've also collected programs that you can use at home or in school. If you're looking for a challenging game, an easy way to figure your family's taxes, a data base for your recipes, or a learning aid for your youngster, head for the education, personal management, and entertainment section.

The master chefs emerge from the kitchen to take a bow in the section on system software. Foremost are operating systems, which offer different approaches to making a PC do what it does. If you have a problem that can't be solved by a commercial application package, you'll probably resort to writing your own programs with one of the many languages tailored to the PC. Utilities, the third member of the systems triad, are handy electronic tools that can enhance an operating system or a program or tame an unruly printer. A hacker will feel right at home browsing the section, and a recent PC convert may find just the thing for solving a nettlesome problem.

Using the Software Review

Each category is introduced by an essay that not only describes the scope of the section but also offers important tips and informed opinions about current and future trends.

The description of each product reports its intended audience, basic purpose, distinguishing features, and capacities or limitations. In addition, you'll find the list price and any system requirements for the product.

When a program piques your curiosity, be sure to investigate further. We've included manufacturers' names and addresses so you can communicate with them directly; you may also want to ask questions around your office or interrogate your software dealer. Company and product indexes are included for quick and easy reference.

So, welcome to the smorgasbord. Help yourself to as much product information as you can digest, then feel free to come back for more. We hope you find our offering tasty as well as nourishing. Dig in.

*J. Schaffner is an Assistant Editor
at PC World.*

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ALWAYS JUST A KEYSTROKE AWAY . . .

No matter what software you're running!

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- AN APPOINTMENT CALENDAR
- A NOTEPAD
- AN AUTO DIALER
- A PHONE DIRECTORY
- AN ASCII TABLE



**"SIDEKICK
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TO A \$5,000 PROBLEM."**

Garry Ray, PC WEEK,
July 24, 1984



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GUARANTEE**

Sidekick
Owner's
Handbook



Here's Sidekick in action. That's Lotus 1-2-3 running underneath. In the Sidekick Notepad you can see data that's been imported from the Lotus screen. On the upper right, that's the Sidekick Calculator.

R3: (C2) 400

	A	B	C
REVENUE			
Sales	\$400.00	\$440.00	\$480.00
Royalties	\$55.00	\$60.50	\$66.00
Other	\$15.00	\$16.50	\$18.00
TOTAL REVENUE	\$470.00	\$517.00	\$564.00
EXPENSES			
Cost of Materials	\$20.00	\$22.00	\$24.00
Rent	\$5.00	\$5.50	\$6.00
Advertising	\$45.00	\$49.50	\$54.00
Salaries	\$35.00	\$38.50	\$42.00
Total Expens	\$105.00	\$115.00	\$126.00
Profit before TAX	\$365.00	\$402.00	\$438.00
Net Profit	\$365.00	\$402.00	\$438.00

23244.9867

Dec

Hex

Men

Numeric

A B C

D E F

G H I

J K L

M N O

P Q R

S T U

V W X

Y Z

7 8 9

4 5 6

1 2 3

0

C:\SIDEKICKNOTES

Line 35

11:39:23 9/14/1984

Cost of Materials	\$20.00	\$22.00	\$24.00	\$
Rent	\$5.00	\$5.50	\$6.00	\$
Advertising	\$45.00	\$49.50	\$54.00	\$
Salaries	\$35.00	\$38.50	\$42.00	\$

11-help

12-save

13-new file

14-import data

15-expand

16-contract

17-exit

NOW... Whether you're working in dBase, Lotus, Wordstar or whatever... you can unleash the full power of your computer... and make a lot of extra space on your desk at the same time.

Whenever you're using your computer... from start to finish of your session... Sidekick™ will be there... ready to serve. And it's as lightning-fast and compact as only Borland knows how to make it.

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Suppose you're working in Lotus and the phone suddenly rings. Give your Sidekick a call and it pops right up over Lotus with the notepad you need. Or an appointment calendar... one you can never misplace.

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There's lots more, too. You can move the Sidekick windows anywhere on the screen you like. And you can have as many on screen at a time as you need. There's even an on-line help window for each of Sidekick's features.

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Integrated Applications

Robert Luhn

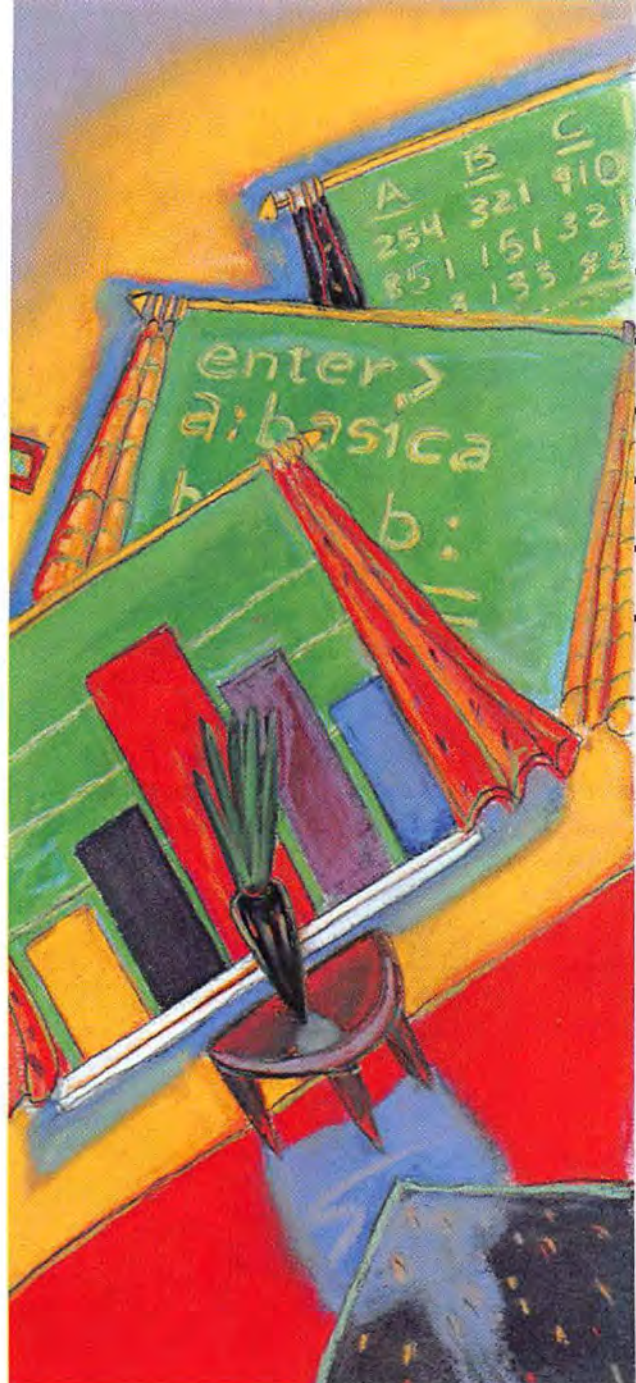
Integrated software. Ask one person what it means, and the answer may be an exuberant "1-2-3!" Ask another, and the response may allude to school buses and PTAs. Still another may talk fondly of icons and windows, mice and Macs. But to the people who design integrated software at Lotus Development, Ashton-Tate, Microsoft, VisiCorp, and a host of other companies, integrated software means a big gamble—and possibly big profits.

An indication of the rapid growth in integrated software can be found in the pages of *PC World*. In last year's *Software Review*, the integrated applications section was tucked away in the back. It held a scant six entries topped by what was then the cream of integrated software, the now ubiquitous 1-2-3 from Lotus Development Corporation. In this second annual edition of the *Software Review*, more than 50 integrated applications are listed; by mid-1985 many more packages will be flooding the software marketplace.

At first glance the term *integrated software* seems redundant. Any piece of software is integrated in the sense that it works on a particular computer—it knows how to locate or ask for memory,

screen display, and related services. The vast majority of programs written for the PC are integrated to an even greater extent, in that they adhere to rules imposed by PC-DOS. The term *integrated software* as used here applies to those software packages that provide or allow a number of applications—such as word processing, spreadsheets, data base management, graphics, and communications—to share data and work in a similar and consistent manner. This still higher level of integration means, for example, that incorporating numbers from a spreadsheet into a word processing document is a relatively direct and speedy process. Higher integration also implies ease of use and simplicity, since the same or similar commands are used in all the applications.

Integrated software comes in several varieties. With *Symphony*, *Framework*, *Jack2*, *Encore*, *Enable*, 1-2-3, and others, you get the tightly integrated, all-for-one and one-for-all approach. Applications may reside on one or several disks but are so closely linked that you can't separate one function from another. This intimacy results from function following form—applications are extensions of or variations on one dominating function. With *Symphony*, for example, most of the other applications sit on top of an underlying master spreadsheet. *Jack2*, on the other hand, uses word processing as a foundation, while *Framework* relies on general-purpose containers called frames to move data among applications.



An older approach to integration is the software family. Each program can be used as an individual, stand-alone program. But all share similar commands and, more important, a design that lets one program transfer data to and from any other family member. One notably successful clan is Software Publishing Corporation's *pfs:* line, which includes such software stars as *pfs:write*, *pfs:file*, and *pfs:graph*.

Somewhere between software families and tightly integrated packages lie operating environments such as *Microsoft Windows*, *DesQ*, and *Visi On*. An environment turns strangers into members of an extended family; it creates a meeting ground where different software programs can talk to each other and work together. Thus if you're wedded to *WordStar*, *1-2-3*, and *dBASE II*, you don't have to abandon them for the convenience of integration.

"Packages like *Symphony* are good short-term solutions," notes Scott McGregor, product manager for *Microsoft Windows*. "The functions in a tightly integrated package are compromised because they're all based on one application. With an environment, you can pick and choose. If you own a package like *Symphony* and you want to use *Multiplan*, you're out of luck—but not with an environment."

Of course, environments have their limitations, something that Robert Carr, chairman of Forefront Corporation, the company that developed *Framework*, is quick to point out. "You gain something with a tightly integrated package that you don't with an environment: true, seamless integration. In an environment, moving data between two basically dissimilar programs is a laborious cut-and-paste process. You're always passing data. In a program like *Framework*, data are always lying next to each other."

Whatever the merits of each approach, today's integrated software user is something of a pioneer. The path to integration has not been smooth. Operating environments are often slow and require wallet-bending amounts of memory. The seamless integration offered by *Symphony*, *Framework*, and other packages also hides traps; it's easy for even experienced users to get lost in multiple windows, frames, and other electronic rabbit holes.

How much integration is necessary? There's no point in buying a Ferrari if you only drive around the block. The same holds true for integrated software. A manager may need only a spreadsheet with simple data management functions; an administrative assistant may need word processing and little in the way of communications or spreadsheets. Not surprisingly Carr contends that tightly integrated software can satisfy both workers for less money. An individual, single-function program like *Word-Star* can cost almost as much as an integrated package offering four or five applications. There's another advantage, too; integrated software grows with you.

"With a tightly integrated package, you learn a common set of concepts that can be applied anywhere in the package," says Carr. "You learn and use new functions incrementally, when you want to, in less time, and for much less money. *Framework* is like a swimming pool. There's a shallow end and a deep end. New users can get used to the water and keep their feet solidly planted; advanced users can venture into the deep end."

Whether one form of integrated software will dominate remains to be seen. If there is any discernible trend, it is toward environment-like integration.

Carr admits that environments are attractive in certain situations, and he expects future tightly integrated products to make more use of external programs. For Scott McGregor it's a matter of masking an unattractive operating system from the user: "DOS [a Microsoft creation] presents a horrible interface to the user ... but *Microsoft Windows* can be used by everybody."

Despite the newness of the technology, software companies are plunging into the integrated software market, spurred on perhaps by the success of 1-2-3. Millions of dollars are being lavished on program development and advertising; to paraphrase a wag from an earlier age, "This is the sort of thing God would do if He only had the money." The stakes and the promises are high. Which firms rise or fall may be as much a matter of timing and luck as of the quality of the product. Whatever happens, integrated software is likely to be with us for some time to come.

Robert Luhn is the Associate Editor of PC World.

Integrated-7

The seven components in *Integrated-7* are data base management, mail merge capabilities, a spreadsheet, word processing, business graphics, communications, and terminal emulation. The data base manager allows up to 60 characters per field and 40 fields per record, sorts on multiple keys, searches on multiple fields, generates reports and labels, and supports character, integer, real, and protected fields. The merge-print feature allows up to 40 variables per document. The spreadsheet includes mathematical, statistical, financial, and logical functions. It supports global cell alignment and formatting.

The word processor has a 40,000-word spelling checker, block insertion or deletion, and search-and-replace capabilities. The graphics component produces 15 types of pie, bar, and line charts and prints 11 fonts. The communications component supports the Xmodem protocol. The terminal emulation module lets a PC communicate with a mainframe as if it were a DEC VT-52, DEC VT-100, or IBM 3101 Model 10 terminal. It also supports the XON/XOFF protocol and allows unattended operation. List price: \$695. Requirements: 320K, one disk drive, DOS 2.00 or later version, graphics board. Mosaic Software, Inc.
1972 Massachusetts Ave.
Cambridge, MA 02140
617/491-2434

Intuit

Using English-like commands and function keys, *Intuit* incorporates a word processor, a spreadsheet, a data base manager, a directory and file manager, a four-function calculator, and a universal forms and report generator. File names can be up to 67 characters long. The spreadsheet uses a simple sentence structure based on 30 English verbs, and statements can be combined to create 46 named procedures of up to 24 steps each. List price: \$395. Requirements: 256K, one disk drive. Noumenon Corp.
512 Westline Dr.
Alameda, CA 94501
415/521-2145

Decision Manager

A windowing integrated package, *Decision Manager* combines word processing, spreadsheet analysis, data management, telecommunications, graphics, and mainframe communications. The program lets you define up to 20 windows or projects, with up to 10 displayed on the screen at one time. Pop-up windows show different applications or menu options. Information can be transferred from one window to another. One keystroke expands an on-screen window for more detailed viewing or switches to another application. Documents prepared on the word processor can be transferred to *PeachText 5000* for a spelling check and specialized printing. The package's 3270 emulation capability extracts data from a mainframe data base. *Decision Manager* also has a state-save capability that lets you return to a program at the point where you left it. You can control the cursor with a mouse or the cursor keys. List price: \$625. Requirements: 256K, two disk drives (hard disk recommended), DOS 2.00 or later version.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

Offix

Offered without a manual, *Offix* includes help screens, menus, and tutorials on how to use its filing, forms design, word processing, and report generation capabilities. *Offix* is patterned after office procedures; its visual displays include a filing cabinet, file drawers, and file folders. The program handles routine correspondence, memos, form letters, and documents of up to 100 pages. List price: \$149. Requirements: 192K, two disk drives. Emerging Technology Consultants, Inc.
1877 Broadway
Boulder, CO 80302
303/447-9495

ABC

Six integrated facilities are included in *ABC*. A word processing module lets you merge text with data, merge files at edit or print time, and merge or split files. Data management functions include field definition and expansion, inquire and append, sort, and file split, merge, and extract. The program's list manager lets you create form letters and labels for mass mailings. A business management module includes a four-function calculator, an on-screen clock, an appointment scheduler, and an alarm clock; the module produces bar charts and tabular spreadsheet reports with totals and subtotals by row or column. Telecommunications capabilities support file transfers and interactive sessions between computers, a call log, and a telephone data base and dialer. List price: \$240. Requirements: 128K, two disk drives.

Owl Software Corp.
15643 Sherman Way #210
Van Nuys, CA 91406
818/989-0883

SeriesOnePlus

The basic components of *SeriesOnePlus* are a word processor, a data base manager, and a spreadsheet. These applications are linked by a master program, which insulates you from the operating system. You can add optional *SeriesOnePlus* modules, including a graphics program, a custom report generator, an automated documentation generator, and a 3780 RJE emulation program that lets you transfer data to and from an IBM host computer. The system can also be expanded with four accounting applications. List price: basic package \$495, *ExecuReporter* \$295, *ExecuPlot* \$295, *ExecuLink* \$350, *PromptDoc Manual Master* \$650, *IRA/CD Analysis* \$500, *Fixed Asset Accounting* \$1500, *Safe Deposit Accounting* \$1500, *Asset/Liability Management* \$500. Requirements: 192K, two disk drives, DOS 2.10. Executec
12200 Park Central Dr.
Dallas, TX 75251
214/239-8080



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For the dealer nearest you, call Curtis at 603/924-7803.

The Idea Manager

By building a customized main menu, *The Idea Manager* lets you use up to eight programs running under DOS. You can switch programs without referring back to the operating system and retyping file names. List price: \$49.95. Requirements: 64K, one disk drive.
Idea Ware, Inc.
225 Lafayette St.
New York, NY 10012
212/334-8043

The Idea Processor

Designed to manage text and graphics, *The Idea Processor* combines a word processor, a card-file data base, and a graphics program. Text and graphics are stored in a cross-referenced card file. You can capture graphics images and ASCII text from any program that runs under DOS, and you can add programs to the main menu. The word processor features automatic footnotes, on-screen boldface and underlining, and keyboard macros. List price: \$295. Requirements: 192K, one disk drive.
Idea Ware, Inc.
225 Lafayette St.
New York, NY 10012
212/334-8043

"The strength of this package lies in the 'card file' and the excellent word processor, whose features can be used to edit individual cards (up to 8K in length) that are easily imported to or exported from documents. As an administrator and writer, I have found this package to be much more useful and to have many more features than the higher-priced word processor that I previously used. Intelligent manual and training disks make it a pleasure to learn." Endymion Wilkinson, Bangkok, Thailand

Statpro

A multipurpose statistics and graphics data base system, *Statpro* is designed for data analysts, researchers, and business professionals. A menu-driven data base manager lets you enter, edit, manipulate, transform, and print out data. The statistics component of *Statpro* includes descriptive statistics, regression analysis,

analysis of variance, time series analysis, and multivariate analysis. The graphics component lets you plot the results of statistical analyses and includes custom editing options. List price: \$1995. Requirements: 128K, two disk drives, color graphics board.
Wadsworth Professional Software, Inc.
20 Park Plaza #1435
Boston, MA 02116
617/423-0420

Tascmaster, Multi-Tascmaster

Used in conjunction with the Addram Elite or Addram Plus multifunction memory boards, *Tascmaster* lets you run up to nine programs concurrently in foreground or background modes. You can switch from task to task without terminating any of the programs. Each task can also run its own AUTOEXEC file. *Multi-Tascmaster* creates a multiuser environment with the addition of inexpensive terminals connected to the PC via serial ports. It directs a given task from *Tascmaster* to the terminals, bringing the task into the foreground mode. List price: *Tascmaster* (includes an Addram board with either one parallel port and one serial port or two serial ports) \$475, *Multi-Tascmaster* \$195. Requirements: 64K, one disk drive, DOS 2.00 or later version.
Profit Systems, Inc.
30150 Telegraph Rd. #173
Birmingham, MI 48010
313/647-5010

Enable

Data from one *Enable* application can be cut and pasted to another without file transfers. The program can do three tasks concurrently and lets you move, shape, or overlap up to eight windows. All full-screen word processing functions can be used in any application, and documents are limited in size only by available disk space.

The word processor features a mail merge capability, a calculator, a range of print options including the ability to save print formats, boldface and superscript, automatic reformatting, search and replace, and multiple character sets includ-

ing foreign and Greek characters. The spreadsheet highlights all cells related by a formula, displays two segments of the spreadsheet in split windows, varies column width for loading information from the data base, iteratively recalculates to resolve circular definitions, protects cells or ranges, and has a "data fill" feature that completes tables by changing data in specified increments. You can use the 8087, two types of macros, and up to 255 columns and 255 rows.

Graphics features include seven graph types, nine fonts, shading and grids, eight X-Y scaling formats, and ten-color plotting. The data base manager features "paint the screen" input and report forms design; over 65,000 records per data base; and menu-driven report generation including virtual and calculated fields and up to 16 break conditions with running, break, conditional, and grand totals. The telecommunications module automatically enters connection protocols, includes auto-dialing, and optionally displays time and cost for connections to information utilities. The system passes files to or from *dBASE II*, *1-2-3*, *WordStar*, and other programs. List price: \$695. Requirements: 192K, two disk drives.
The Software Group
Northway Ten Executive Park
Ballston Lake, NY 12019
518/877-8600

StarBurst

A program that creates an interface for other programs, *StarBurst* builds systems by integrating MicroPro programs or other applications to perform office tasks. The program systematizes office routines and eliminates the need to learn operating system commands. Managers and system designers can use *StarBurst* to create a custom series of menus and help messages with a *WordStar*-like text editor. Once the menus are set up, you can perform a series of tasks using a single keystroke. *StarBurst* is also available with MicroPro's *InfoStar* data base management system in the *InfoStar+* package. List price: *StarBurst* \$195, *InfoStar+* \$595. Requirements: 96K, two disk drives.
MicroPro International Corp.
33 San Pablo Ave.
San Rafael, CA 94903
415/499-1200

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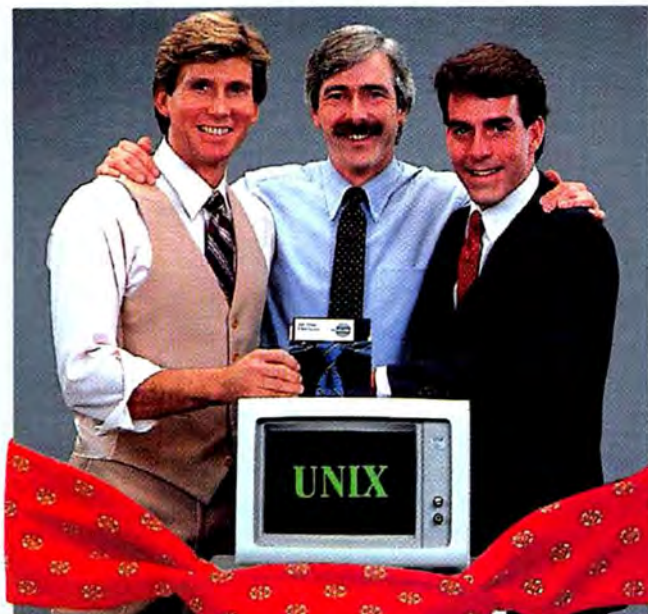
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CALL 617-491-1264



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**Getting UNIX Software
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1-2-3

A spreadsheet, data base management, and graphics are combined in 1-2-3. The spreadsheet handles up to 356 columns and 2048 rows and provides more than 50 mathematical, financial, and statistical functions. Graphs include scatter plots, pie charts, and bar and line graphs. You can print master lists and mailing labels from information in the data base. A macro feature lets you program with DO loops, GOTO branching, and conditional statements for menu and submenu design. List price: \$495. Requirements: 192K, two disk drives.

Lotus Development Corp.
161 First St.
Cambridge, MA 02142
617/494-1270

"Simple to operate with menus. I have used it for nine months and still have not found any severe limitations. Has the best versatility and flexibility of any package I've ever used." D. Kim Simpson, Chicago, Illinois

"Flawless. Not a single bug to be found. Excellent error recovery. Very flexible and powerful." George Roukas, New York, New York

"Though overall this program is superb, the limited ability to use the numeric keypad makes users of spreadsheet applications who normally want to key in large volumes of numbers very uncomfortable. The feeling is like having a meal in a restaurant that serves really good food but doesn't give you the right utensils to eat it with." Pravit Anantavasilpa, Bangkok, Thailand

"Excellent program. My husband and I both love it and have to schedule time on our IBM PC at home to use it for setting up sheets for our businesses. We still haven't tapped its full power. The command setup is very logical." Nancy DeVries, Oakland, New Jersey

Office

To select an *Office* function, you point an arrow on the screen at an icon of an office fixture such as a file cabinet or a desk calendar. Functions include document creation, filing, and elimination; printing; an alarm; a telephone directory; and a four-function calculator. A computer icon gives you access to other programs and files without exiting *Office*. List price: \$99.95. Requirements: 256K, one disk drive, DOS 2.00 or later version.

Applied Microsystems, Inc.
P.O. Box 832
Roswell, GA 30077
404/475-0832

"Some good features of this product are an easy-to-use word processor that will 'file' or 'trash' documents, a calendar/scheduler that keeps all my appointments at the touch of a key, and the phone book, which performs quick searches even by partial name, address, number, or miscellaneous information. The only drawback to the calculator is that it has no tape. I give this product an A+." Ted King, Doraville, Georgia

T/Maker Integrated Software

In a single program *T/Maker Integrated Software* combines word processing with a spreadsheet, a relational data base, list processing, bar graphics, and a spelling checker. The word processor has header and footer capabilities and automatic footnote placement. The spreadsheet's word processing functions reduce spreadsheet setup complexity. The data base manager lets you define screens and restructure the data base at any time. You can link separate data bases to create new ones or to generate sophisticated reports. The spelling checker works with any application file, including those generated by the spreadsheet or the data base manager. List price: \$450. Requirements: 128K, one disk drive.

T/Maker Co.
2115 Landings Dr.
Mountain View, CA 94043
415/962-0195

Softase

Comprising three modules, *Softase* lets you produce reports that combine data, text, and graphics in one document. *Dataease*, the central component, is a relational data base system. The menu-driven program lets you design forms and reports with its full-screen editor. Files can be connected by defining relationships between them. You can also design menus to organize the flow of your application. A query language lets you modify records and sort, group, and calculate statistical information.

Wordease offers functions comparable to those of a dedicated word processor, such as spelling correction, side-by-side paragraphs, and a variety of print options. *Graphease* provides business graphics capabilities including bar charts, line and area graphs, pie charts, and X-Y plots. List price: *Softase* \$1000, *Dataease* \$600, *Wordease* \$400, *Graphease* \$300. Requirements: 192K (256K recommended), two disk drives.

Software Solutions, Inc.
305 Bic Dr.
Milford, CT 06460
800/243-5123, 203/877-9268

"I am a professional evaluator of PC DBMS software for a large corporation, and this is the best I've seen." Richard Peppin, Concord, California

The Desk Organizer

A utility with seven office functions, *The Desk Organizer* resides in memory while you use other programs. A single key-stroke switches you from an active application into *The Desk Organizer* to file information, dial phone numbers, organize data, perform numerical calculations, maintain an appointment schedule, manage time and work flow, or process memos or correspondence. *The Desk Organizer* can also interrupt another program with chimes and an on-screen display to remind you of a scheduled appointment. List price: \$295. Requirements: 128K, two disk drives.

Warner Software, Inc.
666 Fifth Ave.
New York, NY 10103
212/484-3070

Open Access

Built around a relational data base manager, *Open Access* includes a spreadsheet, a graphics module, a word processor, a communications module, and a time manager. The data base can handle 32,000 records and can sort on up to 15 fields. Its mailer generates personalized form letters and mailing labels. The spreadsheet features "goal seeking" to allow for backward solutions. The graphics module lets you create a variety of graphs and charts, including three-dimensional bar graphs. The word processor offers find and replace, a variety of cursor movements, proportional spacing, and storage of paragraph formats. The communications module has three modes: micro to micro, micro to subscription network, and micro to mainframe. The time manager offers a monthly scratchpad calendar for miscellaneous notes, a phone number and address card file, and a search command to retrieve appointments by person or subject. List price: \$695. Requirements: 192K, two disk drives.

Open Access

Software Products International
10240 Sorrento Valley Rd.
San Diego, CA 92101
619/450-1526

Report Manager

A three-dimensional spreadsheet forms the basis of *Report Manager*. You can build distinct spreadsheet pages in memory stacked one behind the other and view data in three ways. The program sorts data on sort fields or by column, row, or page. Complex sort routines can be stored in cells and referenced for fast execution. Keyword searches help you find buried cell references. Spreadsheets and graphics can be combined on the screen in up to four active windows. *Report Manager* has more than 250 graphics characters. Its programming language lets you design templates that prompt users for data. List price: \$495. Requirements: 128K, two disk drives.

Datamension Corp.
615 Academy Dr.
Northbrook, IL 60062
312/564-5060

DesQ

A program that lets you look at different programs at one time through up to nine windows, *DesQ* accommodates, without modification, almost all programs that run on the PC. You can assign a single keystroke to a series of tasks for future repetition. The program lets you create help menus and provides a "minieditor" for making notes or lists. List price: \$399. Requirements: 256K, 5MB hard disk, DOS 2.00 or later version, serial port for optional mouse.

Quarterdeck Office Systems
1918 Main St. #240
Santa Monica, CA 90405
213/392-9851

Electric Desk

A package that integrates four functions, *Electric Desk* has multitasking capabilities that let you work with one function while the others operate in the background. Word processing capabilities include text copy and insert; on-screen centering, boldface, and underlining; and support for six type styles with a dot matrix printer. The data base manager can have up to 50 fields per record, 1000 characters per field or record, and 65,000 records per data base. You can sort data on 5 fields. Search criteria can include Boolean logic and wild cards. You can automatically dial a phone number in the data base with one key. Communications capabilities include speeds of up to 9600 bps, automatic logon to commercial data base and communications services such as The Source and MCI Mail, and dumb terminal emulation. The *Electric Desk's* spreadsheet is 255 rows by 255 columns and features variable cell widths, several numeric formats, and automatic recalculation. All modules let you work on up to nine files simultaneously. You can divide the screen into windows and can use keyboard macros to execute common phrases or a series of commands with one key. List price: PC version \$345, PCjr version \$295. PC requirements: 256K, two disk drives, DOS 2.00 or later version. PCjr requirements: 128K, one disk drive.

Alpha Software Corp.
30 B St.
Burlington, MA 01803
617/229-2924

Corporate MBA

Six functions are combined in *Corporate MBA*: word processing, data management, forms management, business graphics, spreadsheet modeling, and telecommunications. All use common commands, and the screen splits into four windows for viewing and editing data in files. A macro capability lets you build interactive applications based on the program's other functions. *Corporate MBA's* telecommunications module offers IBM terminal emulation and asynchronous protocol support for micro-to-micro communications. The spreadsheet handles 95 columns and 999 rows and allows for variable height or width of each cell. The graphics module provides nine graph types as well as combinations such as a bar graph with a line chart. The word processor features block moves and combinations of text, spreadsheets, and graphs in a single printed document. Each data file can hold up to 32,000 records, with six sort criteria per file. *Corporate MBA* exchanges data with popular spreadsheet, word processing, and data base programs. List price: \$895. Requirements: 384K, two disk drives, color graphics board, IRMA board for 3278 terminal emulation, Hayes Smartmodem for asynchronous communications.

Context Management Systems
23868 Hawthorne Blvd.
Torrance, CA 90505
213/378-8277

DayFlo

Combining features of a word processor and a data base manager, *DayFlo* uses familiar concepts such as file cabinets, wastebaskets, and stacks of paper to organize information. Unlike traditional data base programs, *DayFlo* lets you build a data base for both unstructured data such as letters and memos and structured data such as address lists. List price: \$495. Requirements: 256K, hard disk, DOS 2.00 or later version.

DayFlo Software
2500 Michelson Dr., Bldg. 400
Irvine, CA 92715
714/476-3044

BEHIND EVERY GREAT PROGRAM IS A GREAT PROGRAM

Introducing Spotlight.[™]

Note it. File it. Schedule it. Calculate it. Save it. Find it fast.



The Spotlight[™] program is a set of convenient desktop accessories all in one package. No matter which application program you're working in—including VisiCalc[®], 1-2-3[™], WordStar[®], dBase II[®], pfs:File[®], MultiMate[®], MicroSoft Word[™], TK!Solver[®], and Symphony[™]—Spotlight gives you instant access to six essential functions.

Just a keystroke suspends your application program and gives you a window into Spotlight. Another keystroke gets you back to where you were just as fast. It's that easy.

Here's what you get:

Appointment Book—schedule daily and weekly meetings or display monthly calendar. Set a sound alarm to remind you of appointments, even if you're using another program.

DOS Filer—perform operating system tasks without leaving your program. List, create, delete, copy, and sort files and directories. Even format disks.

Phone Book—find and instantly display any name, address and phone number from 36 available lists. Each list can hold 500 different entries.

Note Pad—jot a note or write and edit messages up to eight pages long.

Index Card File—search up to 36 separate files, each of which contains 500 cards. Cards are alphabetically sorted.

Calculator—calculate any problems and insert the answers into the program you're using.

Spotlight is the great program behind any great program you use.

System requirements: IBM[®] PC or XT[™], or COMPAQ[®] portable computers, one disk drive, 75K memory for RAM resident portion, DOS 2.0 or higher. Printer optional. Can be installed on hard disk. Runs with most IBM PC software packages.

Spotlight[™]
By Software Arts[™]

27 Mica Lane, Wellesley, Massachusetts 02181

Circle 253 on reader service card

the closest thing to
perfect is WordPerfect
by SSI.

Reference Magazine

When it comes to software, nobody's perfect. But according to many of the experts, one word processing program is as close as you can get. No wonder it's called WordPerfect.

What are all the critics raving about?

Simplicity. Most WordPerfect functions require only one keystroke, a simple press of a finger. So you can concentrate on writing, not programming.

Speed. Because it is document-oriented instead of page-oriented, WordPerfect won't make you

wait between pages. No matter how fast you type, WordPerfect won't slow you down.

Features. From writers to doctors, accountants to lawyers, WordPerfect has built-in special functions to meet a wide variety of specific needs. And at SSI, every day is spent upgrading and improving WordPerfect — reaching for perfection.

Get your hands on the critics' choice, WordPerfect word processing from SSI.

WordPerfect is my favorite
because it is easy, simple
and powerful. The people

List Magazine

It's the closest thing to perfection. For more information, see your dealer.

Or call or write:
SSI Software
288 West Center Street
Orem, Utah 84057
Information: (801) 224-4000
Order Desk: 1-800-321-4566,
Toll-free



SSI Software
Reaching for perfection.

WordPerfect isn't flawless
word processing software,
but it comes very close.

Digital Review

Systemate

A software integration and security system, *Systemate* creates an interface between DOS and applications. The shell gives you one-keystroke access to programs, utilities, and commands. It also supports subdirectories and allows an unlimited number of nested menus from which you can run programs. *Systemate* uses access codes, authorization codes, and passwords to provide a security system. A security lock feature prohibits access to any program or data file through DOS; users must go through *Systemate*. The program allows any combination of applications, including popular programs such as 1-2-3 and *WordStar*, to access common files. *Systemate* operates on floppy disks, hard disks, and emulated disk systems. List price: \$47. Requirements: 128K, one disk drive.

Systemate Inc.
Twin Towers E #200
Austin, TX 78723-1033
512/458-6202

pfs: Family

The programs in the *pfs:* family work separately or together. *pfs:file* is a data base manager that lets you design forms and enter information in any order by filling in blanks. *pfs:report* sorts, calculates, formats, and prints reports from the information in files created with *pfs:file*. *pfs:report* prints multiple columns and can save eight report formats. *pfs:graph* produces bar, line, or pie charts from information generated by *pfs:file* or *VisiCalc* or entered directly. *pfs:write* is a word processing package that incorporates data files, data tables, or charts from other *pfs:* programs into documents or other ASCII text files.

pfs:access lets you use information services, time-sharing systems, and home banking services. *pfs Solutions* are ready-made applications of *pfs:file* and *pfs:report* for specific record-keeping tasks such as mailing lists, invoices, inventory, home budget, stocks, and school record keeping. List price: *pfs:file*, *pfs:graph*, *pfs:write* \$140 each; *pfs:report* \$125; *pfs:proof*, *pfs:access* \$95 each; each *pfs Solutions* package \$20. Requirements: *pfs:file*, *pfs:report*, *pfs Solutions* 64K with DOS

1.10, 128K with DOS 2.00 or later version, one disk drive; *pfs:graph* 128K, one disk drive, graphics board; *pfs:write* 128K, one disk drive; *pfs:proof* 128K, two disk drives; *pfs:access* 128K, one disk drive, serial port.
Software Publishing Corp.
1901 Landings Dr.
Mountain View, CA 94043
415/962-8910

"The combination of pfs:file and pfs:report is very suitable for setting up high school student records that include name, address, grade, homeroom, etc. Alumnae records need to be listed alphabetically sometimes and by class other times; with these programs only one update is needed for all records. Mailing labels are easy to do, and all printouts look professional. No problems all year." Sister Mary Josanne, Los Angeles, California

SuperCalc 3, Release 2

A spreadsheet with graphics capabilities, *SuperCalc 3, Release 2* offers a number of improvements over *SuperCalc 3*. The program supports the 8087 coprocessor, enabling it to calculate up to seven times faster than before. A solve feature performs iterative calculations. The Sideways utility lets you print reports sideways and in different character fonts. Movement within the spreadsheet is facilitated by horizontal and vertical paging and end, tab, and backtab keys. Graphics options include pie and exploding pie charts; bar and stacked bar graphs; and line, area, high/low/close, and X-Y graphs. List price: \$395. Requirements: 128K, one disk drive, DOS 2.00 or later version.
Sorcim/IUS Micro Software
2195 Fortune Dr.
San Jose, CA 95131
408/942-1727

Aura

The four functions included in *Aura* are menu-driven. The central module is a data base manager that offers free-form screen and report design, 256 fields per record, up to 8 indexed fields per file, seven field types, and six video attributes. The number of records per file and total number of records are limited only by disk capacity. Spreadsheets can be 255 rows by 63 columns, and over 50 functions are included. *Aura* lets you link multiple spreadsheets and save print formats. It conserves memory by requiring storage only for cells with data or formulas. The graphics module lets you draw diagrams using 1-pixel cursor movements and features a set of menu-selectable graphics objects as well as a variety of shading patterns, data symbols, text, and fonts. The word processor lets you edit three files concurrently with block moves between documents, search and replace, flexible deletion and cursor movement, and a variety of formatting operations and text attributes. To match the needs of a particular business, any of *Aura's* operations can be put in a series and called with a single name. You can create menus of series names. List price: \$595. Requirements: 256K, two disk drives, DOS 2.00 or later version.

Softrend, Inc.
2 Manor Pkwy.
Salem, NH 03079
603/898-1777

Microsoft Windows

Designed as an extension to DOS, *Microsoft Windows* integrates other programs. It has a window manager that lets you view unrelated programs simultaneously and transfer data between programs. *Microsoft Windows* extends the functions of DOS to include management of bit-mapped screen graphics and mouse hardware, letting software developers write programs that will run on different computers. List price: \$195. Requirements: 256K, two disk drives, color monitor, DOS 2.00 or later version.

Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8080

Extended Batch Language, Version 2.0

A language to expand the capabilities of DOS batch files, *Extended Batch Language (EBL)*, version 2.0, lets you integrate programs not originally designed to work together. You can create menus or prompts, pass data from one program to another, and run programs automatically. *EBL* can be programmed to read messages on the screen and react accordingly, letting you set up system operations for unskilled users or simplify repetitive tasks. List price: \$30 suggested contribution (payment required for business use). Requirements: 64K, one disk drive. Seaware Corp.
P.O. Box 1656
Delray Beach, FL 33444
305/276-5072

"EBL is easy to use and allows automation of intimidatingly complex sequences."
Jos Marlowe, Mammoth, California

"Remarkable! The most useful DOS utility I can imagine. It lets you stack input to automate programs, display menus with attributes, get input with either Read or Inkey commands, write records to files, or read the screen or even a file—all from DOS." Bob Stephan, Pebble Beach, California

Lois

The integration capabilities of *Lois* let you combine a variety of programs under a single menu system. Because *Lois* is menu-driven, you can bypass the operating system as you switch programs. A routing facility extracts information from one application and inserts it into another, performing any necessary file format conversions. *Lois* includes a calendar, a calculator, a file cabinet, and a scratchpad. List price: \$395, networking version \$695. Requirements: 256K, hard disk, DOS 2.00 or later version. Modtech International
5250 S. Green St.
Salt Lake City, UT 84123
800/223-6250, 801/264-2050

PeachText 5000

The five office productivity products that make up *PeachText 5000* share a common menu. PeachText Word Processor features search and replace; subscript, superscript, boldface, and variable-pitch printing; and automatic backup. It also lets you edit two documents simultaneously. Random House Thesaurus contains approximately 4400 indexed words and 26,000 synonyms. PeachCalc Electronic Spreadsheet allows entry of numbers, formulas, or text in each position on the worksheet. It provides a variety of arithmetic functions, allows for differing column widths, and can combine two or more worksheets. List Manager is designed for mailing lists and simple data bases such as membership lists, personalized telephone directories, and glossaries. Spelling Proofreader contains 21,000 words and can be expanded. List price: \$425. Requirements: 128K, two disk drives.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
800/554-8900

"A good package for initial computer use, since it meets a little bit of all basic needs. The manual is poor—too small and short to include semiadvanced uses. The three-month limit on phone consultations is way too short for the novice, especially in light of the manual limitations. PeachCalc needs a sort function." Julie Heyer, Mankato, Minnesota

"An underrated integrated package. This author was a complete nontyping computer novice who has used all of the applications for over a year. The spelling dictionary is quick and easy. The thesaurus is superfluous. Printer control is easy. I have never run into the problems I see described constantly in articles evaluating other packages. I wish, though, that the system allowed text columns." Mary H. Griffith, Idaho Falls, Idaho

R Word

A package of integrated programs, *R Word* includes a word processor, a spelling checker, mail merge capabilities, and a data base manager. Features include eight background color choices, inverse video, and highlighted text. The data base manager has three levels containing nine directories with 32 categories each. The word processor produces tables of contents and footnotes, automatically reformats and numbers pages, and formats on screen. List price: \$395. Requirements: 256K, two disk drives. R Systems, Inc.
11450 Pagemill Rd.
Dallas, TX 75243
214/343-9188

Smart Software System

The trio of applications in the *Smart Software System* can operate independently or transfer information to each other. All the programs feature a built-in appointment scheduler, a business and scientific calculator, up to 25 windows, keyboard macros, and support for the 8087 coprocessor. A "project processing" capability lets you store a chain of commands; you can then create your own menus to use the stored chains. *The Smart Data Manager* has "read only" and "must enter" fields and eight field types for data validation, such as social security number or date. A browse mode lets you scroll horizontally and vertically to view a large number of records on a single screen. *The Smart Word Processor* features cut and paste between documents, footnotes, multiple on-screen and printed type styles, on-screen page breaks, and definable fonts. *The Smart Spreadsheet* can have multiple spreadsheets in memory at once. A spreadsheet can be up to 999 columns by 9999 rows. The program also generates a variety of graphics, including full-color, three-dimensional bar charts. List price: *Smart Software System* \$895, *The Smart Data Manager* \$495, *The Smart Word Processor* \$395, *The Smart Spreadsheet* \$495. Requirements: 256K, two disk drives, DOS 2.00 or later version. Innovative Software
9300 W. 110th St. #380
Overland Park, KS 66210
800/438-7627

IT Series

Comprising 11 programs, the IT series has as its core a relational data base manager, *KeepIT*. Data and calculations performed with *KeepIT* can be transferred to all other programs in the series. *AskIT*, an intelligent interface to *KeepIT* that requires no data base experience, lets you request reports, perform calculations, display records, and query the data base.

SortIT lets you sort data using up to nine fields or merge up to ten files into a single file. The program features input and output using random block read and write and supports a variety of data types.

WritIT is identical to the *Multimate* word processing program, with features patterned after Wang's dedicated word processors. *EditIT* is a text editor for programmers, with keyboard macros, cut and paste, multiple-file on-screen editing, and multiple windows.

CalcIT is a three-dimensional spreadsheet with up to 255 pages, rows, or columns. It includes command files for repetitive procedures and report linking. *StatIT* is a set of statistical routines including cross-tabulation, transformation, descriptive statistics, frequencies, principal components, probability functions, t-tests, correlation, ANOVA, and regression. *MailIT* is a document transfer program for PCs using IRMA boards to emulate 3270 terminals. *PassIT* provides the capability for bisynchronous or SNA file transfers between an IBM mainframe and a PC. It allows variable block and record sizes as well as optional numbering of data sets.

LinkIT is a menu-driven, asynchronous communications program that links a PC with another PC or with information services. The program works with *Please*, an intelligent communications program that resides on a VM/CMS mainframe.

ShowIT is a business graphics program that creates three-dimensional pie charts, pyramids, and other formats. List price: *KeepIT* \$450, *AskIT* \$100, *SortIT* \$125, *WritIT* \$500, *EditIT* \$150, *CalcIT* \$400, *StatIT* \$500, *MailIT* \$250, *PassIT* \$250, *LinkIT* \$150, *ShowIT* \$250. Require-

ments: *KeepIT* 192K, two disk drives; *AskIT*, *WritIT* 256K, two disk drives; *SortIT* 48K, one disk drive; *EditIT* 64K, one disk drive; *CalcIT*, *StatIT* 128K, two disk drives; *PassIT* 64K, one disk drive, IRMA or FORTE 3270 Interface board; *MailIT* 64K, two disk drives, IRMA board; *LinkIT* 64K, one disk drive, full-duplex modem or cable connection to mainframe.

ITSoftware
P.O. Box 2392
Princeton, NJ 08540
800/222-0592, 609/799-7500

Symphony

Five functions are contained in *Symphony*: word processing, communications with other personal computers and mainframe data bases, a spreadsheet, a forms-oriented data base manager, and graphics. The word processor provides windows for simultaneously viewing several documents or different parts of the same document. The spreadsheet has up to 8192 rows and 256 columns and features over 70 text manipulation, financial, date and time, statistical, mathematic, logical, and special functions. The data base allows wild-card parameters and compound search criteria using up to 32 fields. Graphics functions include eight graph types, a zoom capability to let you temporarily view a graph at full-screen size, and multiple windows. *Symphony* is open-ended, allowing expansion with specialized add-in applications. The *Symphony* command language lets you automate any program process and supports hidden cells, password protection, input validation, and error detection. High-level language commands include subroutines for parameter passing, FOR...NEXT loops, direct access to named ranges, array-oriented assignment statements, delay and beep control, and screen display control. List price: \$695. Requirements: 320K, two disk drives, DOS 2.00 or later version.

Lotus Development Corp.
161 First St.
Cambridge, MA 02142
617/494-1270

InteSoft

The central component of the *InteSoft* series is *InteMate*, a program that allows *InteSoft* programs and other popular software such as *WordStar* and *1-2-3* to share data. *InteMate* acts as a menu-driven shell for DOS, letting you perform common operating system commands without leaving the program. Its file management system handles file descriptions as long as 44 characters and stores other information in an accessible format. *IntePert* is a project management system that uses the critical path approach. It allows up to 1200 tasks per project, tracks up to 26 resources, produces PERT and Gantt charts, and creates road maps. *InteCalc* is a three-dimensional spreadsheet that lets you view data in rows, columns, and pages, as in a ledger book. Other features include business graphics, programmability, sorting, keyword search, floating dollar signs, and varying column widths.

IntePlan is a time manager and filing system. It includes an Agenda module with a calendar, to-do lists, and expense tracking as well as a Records module for filing names, addresses, and information. *IntePlan* can update expense accounts, print mailing labels, and keep notes. *InteWord* features lexicon and mail merge facilities, multiple fonts, proportional printing, a type-through mode, page and line orientation, and print enhancements such as boldface and superscript without control codes. All five modules can operate independently or can share data with any of the others. List price: *InteMate* \$249, *IntePert* \$249, *InteCalc* \$295, *IntePlan* \$195, *InteWord* \$395. Requirements: 128K, two disk drives (DOS 2.00 or later version for *InteMate*).

InteSoft/Schuchardt Software Systems
515 Northgate Dr.
San Rafael, CA 94903
800/421-1144, 800/421-1145 California

Textplus

A word processor and a data base manager are combined in *Textplus*, letting you handle different applications without swapping disks. The program produces mailing labels, bar charts, prioritized lists, and computer programs. A sort and select function that uses Boolean features can act upon single or multiple fields in both data and text. List price: \$149. Requirements: 128K, one disk drive.

Owl Software
15643 Sherman Way #210
Van Nuys, CA 91406
818/989-0883

Visi On

A collection of specialized software that includes the *Visi On Applications Manager*, *Visi On* also works with software from companies other than its manufacturer, VisiCorp. The *Visi On Applications Manager* includes a mouse for pointing, selecting commands, and scrolling; overlapping windows that let you view several programs at once or cut and paste from one window to another; and a set of commands that provide a consistent interface to all programs that run under the system. *Visi On Calc* is a spreadsheet with up to 511 rows and 128 columns. Labels for columns can be up to 255 characters, regardless of column boundaries. English terms can be used to describe cell locations. Form-building features include cell protection, tabs, data checking, and upper and lower boundaries. *Visi On Graph* offers a variety of graph formats and uses overlays to create such combinations as multiple line graphs or line-and-bar graphs. *Visi On Word* has search and replace, an undelete command, and a background printing feature that lets you print while editing. Text attributes such as boldface can be seen on screen, and a GOTO instruction eliminates the need to scroll. List price: *Visi On Applications Manager* \$95, optical mouse \$250, *Visi On Calc* \$395, *Visi On Graph* \$250, *Visi On Word* \$375. Requirements: 512K, 5MB hard disk, DOS 2.00 or later version, serial port, graphics board.

VisiCorp
2895 Zanker Rd.
San Jose, CA 95134
408/946-9000

Knowledge Man

An integrated data management program, *Knowledge Man* includes spreadsheet analysis and application development. You can create data base files with read and write access codes specified for a particular file or its record fields. A query language lets you select data by logical and conditional operators or by wild-card strings. The spreadsheet feature lets you enter formulas for fields in data base files. Screens defined for data entry include error checking, special effects such as inverse video, and free-form field placement. For advanced users the program has a structured language for creating and executing procedures including arithmetic and logical operations and IF... THEN... ELSE control structures. List price: \$500. Requirements: 192K, two disk drives.

Micro Data Base Systems, Inc.
P.O. Box 248
Lafayette, IN 47902
317/463-2581

"Version 1.06 is nearly bug-free and does everything you could ask for. Extremely versatile, excellent forms handling. Its only fault is its slowness. Very well supported by the manufacturer." George Roukas, New York, New York

"Very powerful and versatile—I've written a tax preparation package with Knowledge Man, although the documentation doesn't train you how to program with it. The spreadsheet can't memory-lock column or row headings; the spreadsheet is powerful but unsophisticated." Raleigh Martin, Edina, Minnesota

"A real jewel, but it has some flaws. The spreadsheet is cumbersome compared to Multiplan. It is annoying to have the programs always go to disk for error messages. Still, these are small things in an overwhelmingly good package where simplicity and convenience exist for most needs. Knowledge Man may be used in a simple fashion or with increasingly complex techniques." Laurence Wingerter, Jr., San Antonio, Texas

Form Writer

A package that combines a data base manager and a word processor, *Form Writer* also has mail merge capabilities. Data management features include up to ten fields per record, searches for any characters in any field, and batch records for merging with text. The word processor allows insertion of up to 14 items from the data base and closes extra space after the insertion. List price: \$275. Requirements: with DOS 1.10 64K, two disk drives; with DOS 2.00 or later version 96K, two disk drives.

Business Development International
P.O. Box 5, Station A
Winnipeg, Manitoba
R3K 1Z9 Canada
204/837-8509

Framework

In addition to a full-featured word processor, a spreadsheet, business graphics, data management, forms processing, and an outline generator, *Framework* contains a programming language for developing specialized applications. The outline generator expands any heading to full-screen size and works with the other applications. The word processor features automatic paragraph reformatting and on-screen boldface, italics, and underscoring. The spreadsheet calculates internal rate of return and provides rapid movement using the <Tab> key. Graphics functions include six types of charts and graphs. The data manager is intended to be an analytical tool rather than a replacement for data base programs such as *dBASE II*. The program's DOS access facility lets you run other DOS software without leaving *Framework*. The program's high-level programming language, Fred, includes over 150 verbs. List price: \$695. Requirements: 256K (384K recommended), two disk drives, DOS 2.00 or later version.

Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/204-5570

Creative Series

A family of personal productivity software, the *Creative* programs share files and offer help screens. *Creative Writer* has common word processing functions, which compose, edit, save, retrieve, and print documents. *Creative Filer* is an electronic filing system that creates index cards on screen in any format. You can add, modify, delete, or browse through alphanumerically stored data, while report formats can be designed from any stored data. *Creative Calc* is a spreadsheet in which results are automatically calculated and displayed on screen. If a number is changed, all related figures are changed accordingly. *Creative Finance* is a budgeting and accounting program that can be used to track investments, utility costs, credit charges, and bank accounts. It reports balances for assets, liabilities, and depreciation. List price: \$49.95 each. Requirements: 128K, one disk drive. Creative Software
230 E. Caribbean Dr.
Sunnyvale, CA 94089
408/745-1655

Perfect Family

The Perfect family includes a word processor, a spreadsheet, a records management system, and a telecommunications package. *Perfect Writer* has a 50,000-word thesaurus and a 50,000-word spelling checker. The program automatically creates an index, footnotes, and a table of contents. It can keep up to seven documents in memory, and a split-screen feature lets you edit two documents simultaneously. *Perfect Writer* can exchange data with *Perfect Calc*, which features multiple spreadsheets in memory and split-window viewing of two spreadsheets. Advanced *Perfect Calc* functions include linear regression, interpolation, and recalculation on specific regions of the spreadsheet. *Perfect Filer* includes ready-to-use data base forms such as cataloging forms and letter formats. *Perfect Link* lets a PC use information services, communicate with other microcomputers, or function as a dumb terminal. You can list, rename, delete, or display files without interrupting a communications link. List price: *Perfect Link* \$129, other mod-

ules \$199 each. Requirements: 128K, two disk drives, serial port for *Perfect Link*. Thorn EMI
3187 C Airway Ave.
Costa Mesa, CA 92626
714/751-3778

"Perfect Writer has a marvelous string function that cannot be matched by anyone. It works well when processing variable documents such as contracts. You can actually program with it." C. J. Vetter, Grand Forks, North Dakota

"Overall, Perfect Calc is my favorite of the Perfect products." Darrell Holtz, Lakeside, California

Plan Family

The seven programs in Chang Labs' *Plan* family can operate either as stand-alone products or as an integrated set. *GraphPlan* is a graphics package with a simple spreadsheet. It also creates graphs and charts from results generated by *MicroPlan*, a full-featured financial planner that includes the *ProfitPlan* spreadsheet. *ProfitPlan* accommodates worksheets of up to 200 rows and 60 columns. *MicroPlan*'s special financial commands let you do complex depreciation, loan analysis, internal rates of return, balance forward operations, and rolling forecasts. With add-on modules, *MicroPlan* handles three kinds of consolidations, automated variance analysis, and statistical calculations. A programming feature lets you develop customized models. When loaded onto a *MicroPlan* disk, the *Link* module can use information generated by *FilePlan*, a file manager that is designed like a spreadsheet in a row-and-column format. The *MemoPlan* "electronic notesheet" lets you compose up to five documents at once, flipping among them with a keystroke. Two documents can be edited on a split screen and data shared between them. *DocuPlan* formats long reports; its features include automatic footnoting, indexing, and table of contents generation. List price: *GraphPlan* \$295, *MicroPlan* \$495, *ProfitPlan* \$195, *Link* \$295, *FilePlan* \$295, *MemoPlan* \$195, *DocuPlan* \$295. Requirements: 128K, two disk drives, graphics board for *GraphPlan*. Chang Labs
5300 Stevens Creek Blvd. #200
San Jose, CA 95129
408/246-8020

EasyPlus

A windowing program, *EasyPlus* integrates Sorcim/IUS Micro Software applications including *EasyWriter II*, *EasyFiler*, *EasyPlanner*, and *EasyBusiness*. You can display up to ten windows simultaneously, vary their sizes, overlap them, and transfer data from one window to another. Within each window you can perform all functions of a particular application. *EasyPlus* lets you designate up to ten keys as EasyKeys and assign each to a series of up to 20 keystrokes. *EasyWriter II* stores information by the page rather than in one long scroll. Function keys control all editing and formatting options. The program has an 88,000-word dictionary, with optional legal and medical dictionaries. It also generates personalized form letters and sorts addresses by zip code.

EasyFiler is a data base manager that can have 60,000 records per data file, ten key fields, 256 characters per field, and 50 fields per record. It offers both a calculator and a report generator. *EasyPlanner* is a spreadsheet that can have 255 columns and rows. It handles variable column widths and has a report generator. *EasyBusiness* is a set of accounting modules that includes *General Ledger*, *Accounts Receivable*, *Accounts Payable*, *Payroll*, *Inventory Control*, and *Order Entry*. List price: *EasyPlus* \$95, *EasyWriter II* \$395 (\$525 with Webster's Medical Speller or Webster's Legal Speller), *EasyFiler* \$400, *EasyPlanner* \$250, each *EasyBusiness* module \$595 (*Payroll* \$745). Requirements: *EasyPlus* 256K (512K recommended), one hard disk, DOS 2.10; other programs 128K, two disk drives.

Sorcim/IUS Micro Software
2195 Fortune Dr.
San Jose, CA 95131
408/942-1727

"I have found *EasyWriter II* to be an excellent and enjoyable word processing program. Its features are, for the most part, more than adequate. I especially appreciate the search and replace feature. The use of function keys is excellent." Maya Bohnhoff, Grass Valley, California

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J. Houston, BYTE MAGAZINE - February 1984

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Encore!

Designed as a support system for financial decisions, *Encore!* lets you build a spreadsheet of up to 32,000 cells. The program features ten financial functions, including federal tax tables and ACRS depreciation tables. Nine types of graphics are available, including graphs with messages and pointers. The program lets you build models using English terms. *Encore!* performs arithmetic operations on rows, columns, or entire matrices. A full-screen text editor features search and replace, paging, and a variety of page formats. The program's EXEC programming language has over 70 English-like commands that can automate repetitive operations and create menus. Goal-seeking analysis lets you specify targets and vary models to reach those targets.

GraphPower, a separate package, extends *Encore!*'s graphics capabilities. It creates slide presentations, overlays 2 graphs, and prints up to 15 graphs per page. *WordExec* is a full-featured word processor that works with *Encore!* and *GraphPower*. *NPL* is an English-like language for developing data base management applications. It stores and manipulates information from *Encore!* *LogOn* lets PCs communicate with other personal computers or with commercial information services. It works with the other Ferox programs. List price: *Encore!* \$695, *GraphPower* \$295, *WordExec* \$495, *NPL* \$950, *LogOn* \$150, hard disk support \$95. Requirements: 256K, two disk drives.

Ferox Microsystems Inc.
1701 N. Fort Myer Dr., Sixth Floor
Arlington, VA 22209
800/336-5496, 703/841-0800

"*Encore!* is a far superior spreadsheet package to 1-2-3. It has advanced financial functions, advanced logic capabilities, EXEC programming language, a report writer, regression analysis, goal seeking, and many more capabilities that are limited or nonexistent in 1-2-3." Wesley H. Perry, Winston-Salem, North Carolina

pc Scratchpad

Designed to mix text and calculations, *pc Scratchpad* is a word processor with a simple spreadsheet. The program helps prepare quotation letters, price lists, bills of materials, and financial reports, using a single-column spreadsheet with a 60-character text area. The spreadsheet holds up to 500 lines per file. The word processor is similar to a typewriter, having no block moves or dot commands. All files are in ASCII format and are compatible with *WordStar*, *Microsoft Word*, and *MultiMate*. List price: \$49.95. Requirements: 128K, one disk drive, graphics board. Softmarc
132 Central Way
Kirkland, WA 98033
206/453-2262

Concept Series

Designed for multiuser Business BASIC systems, the Concept Series includes a word processor, a spelling checker, a mail merge feature, a spreadsheet, and a program development and maintenance tool. The programs can exchange Business BASIC data files, including files not created by the series. *Mail Concept* combines a data base for names and addresses and a mail merge function. The program works with *Word Concept* to produce form letters, reports, and other specialized documents requiring the combination of text with data file information. *Spell Concept* has a 20,000-word dictionary and is accessed through *Word Concept*. *Model Concept* is a financial modeling tool that performs financial operations ranging from simple calculations to forecasting, budgeting, and cost analysis. *BASIC Librarian Concept* is a full-screen program editor and library system for program maintenance and development. List price: *Mail Concept* and *Spell Concept* \$395 each, *Word Concept* and *Model Concept* \$495 each, *BASIC Librarian Concept* \$595. Requirements: 128K for single user, 256K for multiuser, 10MB hard disk, Thoroughbred OS or SMC Business BASIC.
Concept Omega
P.O. Box 6701
Bridgewater, NJ 08807
201/722-7790

Benchmark

The programs integrated in *Benchmark* handle file directories, word processing, data management, spelling checks, financial planning, telecommunications, and graphics. The programs are available together or separately. Any *Benchmark* program can be accessed with a single key-stroke through *The Administrator* directory program, which also allows access to other DOS programs. You can perform operating system functions without exiting the program. *Benchmark Financial Planner* is a spreadsheet program that allows you to view and analyze single or multiple sheets of data. The spreadsheet offers report linking, individual or global formatting, definable windowing with synchronous or asynchronous scroll, full replication, and preprogrammed standard functions. *Benchmark Data Manager* provides 64 keyed fields for data retrieval, nine types of data fields, three types of numeric fields, and up to four screens per record. The program reads ASCII files, generates DIF files, and works with *Benchmark Word Processor* and *Benchmark Graphics* to generate reports and graphics.

Benchmark Graphics prepares financial and business graphs and charts, schematic diagrams, and freehand drawings. Single-pixel cursor movements are controlled with the numeric keypad. Images can be stored in the graphics data base. *Benchmark Word Processor* provides automatic reformatting, line graphics, horizontal scrolling, multiline headers and footers, footnotes, and hyphenation. With many printers it offers proportional printing, boldface, and underlining. The program includes a calculator. *Benchmark Spelling Checker* has a 27,000-word dictionary that can be supplemented. Up to 99 documents can be queued for a spelling check. *Benchmark Telecom Package* is an asynchronous communications program that sends CP/M, CP/M-86, and DOS files as well as any *Benchmark* file at 300 to 9600 bps. Data can be transferred between computers with different operating systems. Error-checking functions automatically restart a transmission at the point of interruption. List price: *The Administrator* \$195; *Financial Planner*, *Data Manager*, *Graphics* \$295 each; *Word Processor* \$395; *Spelling Checker* \$125; *Telecom Package* \$150; *Executive I* package (*The Administrator*, *Word Processor*, *Data*

Manager, *Spelling Checker*) \$495; *Executive II* package (*The Administrator*, *Graphics*, *Financial Planner*) \$395; *Executive III* package (*The Administrator*, *Data Manager*, *Financial Planner*, *Word Processor*, *Spelling Checker*, *Graphics*) \$795. Requirements: 256K, two disk drives, graphics board for *Graphics*, modem for *TelecomPackage*.
Metasoft Corp.
6509 W. Frye Rd. #12
Chandler, AZ 85224
602/961-0003

"It is an outstanding word processing package for those interested in composition and editing rather than in extensive layout and print options. The key is the use of single-keystroke mnemonic commands. For example, to delete, you move the cursor to the right spot and press D." Robert Bain, West Lafayette, Indiana

The Executive Toolkit

Word processing, spreadsheet, and list management programs are included in *The Executive Toolkit*. *The Writer* includes suppressible on-screen help menus, word wrap, search and replace, and centering. It also offers insert or overwrite typing modes, justification, file chaining, headers and footers, and mail merge capabilities. *The Planner* is a spreadsheet that contains 16,320 cells in 64 columns and 255 rows. The program provides named cells or blocks of cells, protected cells or blocks, block move, block copy, joined spreadsheets, and mathematical functions. *The List Manager* accommodates many types of lists without requiring input formats, output formats, or data structures. Each program can be purchased separately. List price: *The Writer* \$49.95, *The Planner* \$99.95, *The List Manager* \$49.95. Requirements: *The Writer* 64K (96K with DOS 2.00 or later version), one disk drive; *The Planner* 128K, one disk drive (two recommended); *The List Manager* 128K, two disk drives. Hayden Software, Inc.
600 Suffolk St.
Lowell, MA 01853
800/343-1218, 617/937-0200

STC: MultiSolver

You can tailor any of *MultiSolver's* nine business applications to your needs or use them as they are. Two disks provide data management, word processing, a spreadsheet, a general ledger, mailing lists with form letters, a checkbook manager, a budget manager, bar graphs, and invoicing. All applications are available from the main menu, and each uses prompts, help screens, and English commands. You alter an application by answering questions on a menu. The relational data base lets you define up to 20 fields and sort by any of them. Bar graphs can be generated without a graphics board. The budget analyzer offers 28 categories and reports by the month or for the year to date. The mailing list program stores 2200 names and integrates with the word processor for form letters. *MultiSolver* generates ASCII text and data files. List price: \$295. Requirements: 128K, two disk drives. Software Technology for Computers, Inc. 153 California St. Newton, MA 02158 617/244-2590

Sidekick

While working with an application, you can call up *Sidekick* with one keystroke and use its notepad, calculator, appointment calendar, or automatic dialer. The program is an integrated set of utilities, each in its own window, that can share data and can be used with software such as *1-2-3*, *WordStar*, and *dBASE II*. The notepad function has a word processor that saves notes to disk and returns to the original application with one keystroke. The calculator has business and scientific functions, and the automatic dialer uses numbers from the notepad or from the program itself. ASCII data conversion charts contain decimal and hexadecimal characters, control character representations, and mnemonics. List price: \$49.95. Requirements: 20K, one disk drive. Borland International 4113 Scotts Valley Dr. Scotts Valley, CA 95066 408/438-8400

IOAS-3

A data base manager, a spreadsheet, and a word processor are combined in *IOAS-3*. The data base manager, *IDM-X*, has a built-in sort and merge package and a report writer. The word processor, *WORD-X*, features word wrap and a file merge function. The spreadsheet, *SS-X*, lets each cell be individually formatted and colored. It sorts, searches, and consolidates several spreadsheets and produces bar charts. List price: \$99.99, each module \$49.99. Requirements: 128K, one disk drive. Micro Architect Inc. 6 Great Pines Ave. Burlington, MA 01803 617/273-5658

TopView, TopView Programmer's ToolKit

Providing windowing and multitasking for the PC, XT, Portable PC, and AT, *TopView* works with the keyboard, an optional mouse, or any pointing device. It allows you to cut, copy, and paste data within an application or between applications. You can manage as many applications as will fit in memory and run multiple applications concurrently.

TopView Programmer's ToolKit is a set of utilities for designing programs that use a mouse and perform cut, copy, and paste operations. It provides window design aids and application development guidelines. List price: *TopView* \$149, *TopView Programmer's ToolKit* \$395. Requirements: 256K (512K recommended), two disk drives, DOS 2.00 or later version (Microsoft Mouse, PC Mouse, or Visi On Mouse optional).

IBM Systems Products Division P.O. Box 1328 Boca Raton, FL 33432 800/447-4700, 800/322-4400 Illinois, 800/447-0890 Alaska and Hawaii

Cullinet PC Software

An integrated program designed for networks, *Cullinet PC Software (CPCS)* transfers information among its data base, spreadsheet, color graphics, financial, and electronic mail components. The menu-driven program has on-line help for all components. The relational data base limits a data table to 65,530 records. Most other parameters are limited only by the storage available. You can query the data base using menu selections or commands of minimum keystrokes.

The spreadsheet component can fit different sets of data into the same model and can change a model at any time. The graphics component provides bar and pie charts and line and symbol graphs, which change to reflect revised spreadsheets. The word processor is a complete text editor that incorporates graphs, tables, and spreadsheets into documents. With support for the IRMA board and the IBM Asynchronous Adapter, documents can be mailed electronically to stations in a network. *CPCS* also provides 3270 terminal emulation. List price: \$995. Requirements: 256K, 5MB hard disk, color graphics board. Cullinet Software, Inc. 400 Blue Hill Dr. Westwood, MA 02090-2198 617/329-7700

Multi-RAM

An integrating utility, *Multi-RAM* lets you exchange information among nine programs. It works with spreadsheet, word processing, accounting, and data base programs. You can load programs and transfer data between them with two keystrokes. You can keep one program on a color monitor and run another program on a monochrome monitor. On-line help and status messages track programs in use. List price: \$99. Requirements: 128K, one disk drive. Softsmith Corp. 2935 Whipple Rd. Union City, CA 94587 415/487-5900

Core Executive

You can integrate your favorite programs with *Core Executive*. The utility can process up to eight applications concurrently. You can define overlapping windows for applications, construct keyboard macros, and "cut and paste" data between programs. *Core Executive* works with 1-2-3, WordStar, VisiCalc, SuperCalc, Multi-mate, dBASE II, and the pfs: series. List price: \$195. Requirements: occupies 37K of RAM.

Application Executive Corp.
600 Broadway #4C
New York, NY 10012
212/226-6347

Assistant Series

An enhanced version of the pfs: series, the Assistant series can be purchased separately or together. The series includes *Writing Assistant*, a word processor that includes the Word Proof spelling checker; *Filing Assistant*, a program that lets you design filing systems, add or delete items,

and search and update records; and *Reporting Assistant*, a program that sorts and organizes *Filing Assistant* files and displays or prints them in tabular form. Also available are *Graphing Assistant*, which produces line, bar, or pie graphs using data from other Assistant Series programs, and *Planning Assistant*, a spreadsheet program designed for budgeting, planning, forecasting, and financial analysis.

Three template programs are available for use with *Filing Assistant*. *Home Solutions* provides prearranged files for tracking stocks, finances, valuables, coupons, and records. *Executive Solutions* includes templates for maintaining a disk library, mailing lists, stock portfolios, and checking accounts. *Accounting Solutions* provides formats for payroll, invoices, inventory, personnel information, and a general ledger. List price: *Writing Assistant*, *Filing Assistant*, *Graphing Assistant*, *Planning Assistant* \$149 each; *Reporting Assistant* \$129; *Home Solutions*,

Executive Solutions \$60 each; *Accounting Solutions* \$80. Requirements: 128K, one disk drive.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Master Menu

Providing a common interface to DOS, *Master Menu* creates an integrated environment in which Prentice-Hall's *Profit Center* programs can work together with consistency of design and function. *Master Menu* can be configured to any number of printers, takes advantage of up to eight disk storage devices (floppy or hard), and provides three levels of system security. List price: \$25. Requirements: 128K, two disk drives.

Prentice-Hall
Englewood Cliffs, NJ 07632
201/592-2000

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- City _____ St. _____ Zip _____
- Signature _____

WindowMaster

A windowing program, *WindowMaster* runs multiple applications simultaneously in user-defined windows. It permits DOS and CP/M-86 programs to run concurrently in windows that you can expand, shrink, or move, using the cursor keys. You can scroll data horizontally, vertically, or diagonally; transfer data between windows; create graphs from window data; and assign repetitive tasks using a Script function. The program provides status information on programs currently running and the amount of memory being used. *WindowMaster* runs any Structured Systems Group software as well as other software such as *1-2-3* and *WordStar*. List price: \$295; with bundled applications for word processing, spreadsheet, report generation, mass mailing, and sorting \$495. Requirements: 256K, two disk drives.

Structured Systems Group, Inc.
P.O. Box 29144
Oakland, CA 94604
415/547-1567

Number Cruncher Series

A series of upwardly-compatible numerical analysis programs, *Number Cruncher* is available in four versions for the PC and compatibles (*Number Cruncher I, II, III, and Run Time*) and four versions for the PCjr (*Number Cruncher Ijr, IIjr, IIIjr, and Run Timejr*). Each program includes a fourth-generation language for creating applications that are independent of specific computers or operating systems. The *Number Cruncher* series allows you to create any type of financial model, report, spreadsheet, data base, application, or graph.

Number Cruncher I is a text editing and spreadsheet system that provides two "pages" of 66 lines by 132 characters for building models. *Number Cruncher II* provides ten "pages" for spreadsheets, text editing, and information management. Printer control features allow you to fill in preprinted forms regardless of

spacing requirements. You can create original forms and store internal tables for calculating figures. *Number Cruncher III* combines the functions of *Number Cruncher I* and *II* with a relational data base manager and applications generator. *Number Cruncher Run Time* is a virtual memory executor that runs programs developed under *Number Cruncher I, II, or III* but will not allow documentation to be printed or the application to be modified.

Also available is a series of application templates, each in two versions, one that can be modified and another that cannot. *General Ledger, Accounts Payable, Accounts Receivable, and Payroll Check Writing* are available for both the PC and the PCjr. The *Foundation* relational data base, the *Loan Amortization Preparer*, and the *Invoice Preparation System* templates work only with *Number Cruncher III*. *Foundation* allows you to track a customer data base in any format, merge and sort data, and write letters. List price: *Number Cruncher I, Ijr* \$99.95; *Number*

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Cruncher II, IIjr \$295; *Number Cruncher III, IIIjr* \$695; *Number Cruncher Run Time, Run Timejr* \$99.95; *General Ledger* \$149.95, modifiable version \$219.95; *Accounts Payable, Accounts Receivable, Payroll Check Writing* \$89.95 each, modifiable versions \$129.95 each; *Foundation* \$189.90; *Loan Amortization Preparer* \$49.95; *Invoice Preparation System* \$59.95. Requirements: 128K, one disk drive.

Pyramid Data, Ltd.
P.O. Box 10116
Santa Ana, CA 92711
800/521-2233, 714/639-1527

PractiWord, PractiBase, PractiCalc III

A family of three programs, *PractiWord*, *PractiBase*, and *PractiCalc III* have many common commands, function keys, and features. Each program offers context-sensitive help, a simple command menu, and a menu for more complex operations. You can cut and paste information between programs, and data from one module can be manipulated by another.

PractiWord is a word processor that automatically creates indexes and tables of contents, types in frequently misspelled words from abbreviations, and executes lengthy commands from macros. *PractiBase* stores up to 60 fields per record; it indexes and sorts by any number of fields. The data base stores short memos about records, and it reads and converts *dBASE II* files. The spreadsheet module, *PractiCalc III*, lets you name groups of cells for quick access, highlight cells with color, and recover the last piece of data deleted. A window can display a bar or density graph alongside data. The programs are available separately or as a complete package. List price: each program \$99.95, complete package \$250. Requirements: 128K, one disk drive.

Practicorp International Inc.
The Silk Mill
44 Oak St.
Newton Upper Falls, MA 02164
617/965-9870

VisiSeries

The six programs in the *VisiSeries* family work together or as stand-alone programs. The *VisiCalc* spreadsheet program has a worksheet of 63 columns by 254 lines with replication and recalculation functions and windowing capabilities. It includes arithmetic operators and logical, financial, math, and engineering functions. The worksheet format can include integers, dollars and cents, left or right justification, or simple graphs. *VisiCalc* data can be transferred to the *VisiWord Plus* program for inclusion in documents.

The *VisiWord Plus* word processing program offers single-keystroke commands for primary editing functions. You can cut and paste text between windows. The program prepares documents up to 255 characters wide and provides text formatting features such as headers and footers, page numbers, justification, line centering, and paragraph indentation.

VisiLink offers menu-driven access to the Data Resources data base, a collection of business information and forecasts. Data can be transferred automatically to *VisiTrend/Plot* and *VisiFile* programs.

VisiTrend/Plot allows you to input, transform, and project time series data and create high/low/close charts, X-Y plots, and pie, line, and bar charts. The program automatically generates plotting symbols and legends, axis dimensions, and horizontal and vertical grids and provides both fixed and movable titles.

VisiFile is a file management system that sorts up to ten fields at a time. The program calculates formulas between fields, recalculates automatically, and allows you to change file structures without rekeying information. *VisiFile's* automatic printer configuration lets you print some or all records, tabular and nontabular reports with free-form output, and mailing labels. You can store formats for later use.

VisiSchedule is a project planning program that calculates a project's critical path, skill categories and cost per task, total labor and direct costs, staff levels, and the start, completion, and deadline dates for each task. Summaries, calendar time charts, milestones, and other reports are also displayed. Data can be printed or transferred to other *VisiSeries* programs. List price: *VisiCalc* \$99, *VisiWord Plus* \$195, *VisiLink* \$149, *VisiTrend/Plot* \$99,

VisiFile \$149, *VisiSchedule* \$195. Requirements: *VisiCalc* 64K, one disk drive; *VisiWord Plus*, *VisiTrend/Plot* 128K with DOS 1.10, 192K with DOS 2.00, two disk drives; *VisiLink* 192K, two disk drives, serial port; *VisiFile* 128K, two disk drives; *VisiSchedule* 64K, two disk drives.

VisiCorp
2895 Zanker Rd.
San Jose, CA 95134
408/946-9000

Foundation

Customer management, letter writing, and mail merge capabilities are combined in *Foundation*. The customer management function lets you store a variety of information on each customer, including name, address, comments, and up to 30 10-character codes, 6 date codes, and 6 numeric codes that can be used to create selective listings. The letter-writing function, when coupled with mail merge, lets you use customer information to print customized letters, labels, and listings. List price: \$189.90. Requirements: 128K, two disk drives.

Pyramid Data, Ltd.
P.O. Box 10116
Santa Ana, CA 92711
800/521-2233, 714/639-1527 California

BPT

A line-oriented budget and forecasting program, *BPT (Business Planning Tool)* combines a spreadsheet with a data base management program and allows you to view 12 months of data in a "time window." The program creates graphs, and you can change worksheet assumptions using the cursor and arrow keys. *BPT* prints financial reports and automatically writes *VisiCalc* templates and stores them on disk. *BPT* templates can also be used with *Multiplan* and 1-2-3. List price: \$225. Requirements: 96K (128K for DOS 2.00), one disk drive.

Sofstar, Inc.
1330 S. Killian Dr. #2
Lake Park, FL 33403
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It's my Editor performs nonformatted editing and some word processing functions. *It's my Graphics* runs under Simplex to give you freehand abilities to paint, fill, and draw lines, circles, and ovals with a mouse. The program comes with predefined graphics templates for line graphs and bar, stacked bar, and pie charts. You can insert drawings or charts into *It's my Word* and *It's my Business* documents. List price: *It's my Business* \$695, *It's my Word*, *It's my Editor* \$100 each, *It's my Graphics* \$245. Requirements: 128K, two disk drives, DOS 2.00 or later version, graphics monitor. Quest Research, Inc. 303 Williams Ave. Huntsville, AL 35801 800/558-8088, 205/533-9405

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Word Processing

Darcy DiNucci

As anyone who uses a typewriter knows, committing words to paper is the practical equivalent of carving them in stone. But when you use a word processing program, the PC stores the words you type on a floppy disk, where they patiently wait for you to correct misspellings or rearrange sentences. You can make changes to text quickly and easily, a fact that has made word processing one of the most popular business and home applications for the IBM PC.

Finding a typo in an important business letter is no longer the frustration it once was. Instead of retyping the whole letter (and probably making additional mistakes in the process), you make the change, save the corrected version to disk, print out the letter again, and finish a second letter in the time you would have spent redoing the first. You never need to retype text you're satisfied with.

You can use word processing programs to write letters, memos, reports, outlines, legal documents, mailing lists, novels, schoolwork, and virtually anything else you would normally produce on paper. Whatever your appointed task, it's not easy to choose a word processor with the right combination of features, ease of use, and price from among the array of available programs. Power and ease of use don't always go together, so a trade-off may be necessary. If your tasks are simple—a weekly letter home or an occasional essay—the less expensive programs priced from \$10 to \$100 may be suitable. At work the word processing requirements will be more demanding, and a costlier program will probably be necessary.

Some features can be expected in almost any word processing program: automatic word wrap, choice of format for margins and spacing, automatic insertion and deletion of text, moving text within a document, and a search-and-replace function. Even among these common features, though, is a wide range of sophistication and ease of use. Most word processing programs can search for the first occurrence of a word or part of a word, for instance, but not all can search for those characters and replace them with others throughout an entire document.

Other, more specialized features are harder to find, and you'll have to shop carefully to get the combination you need. If your office routinely sends out several versions of the same letter, you will probably want a merge feature, which lets you automatically insert variable information into form letters. If you produce special reports that require format features like multiple-line headers and indented paragraphs, you must make sure the word processor you buy can handle them. Other features are a matter of personal preference. Automatic page numbering and spelling checkers are useful adjuncts that you may decide you can't live without. Some packages can automatically index a document and create a table of contents for it. Some allow you to save frequently used formats for easy recall. A macro capability lets you recall frequently used text or a string of commands with one or two keystrokes. Some of these advanced features can be purchased separately as ac-



cessory programs that will work with a variety of word processing programs. Accessory programs are offered that will check not only your spelling but also your grammar, punctuation, and word choice.

Word processing programs for the PC often tout their similarity to dedicated word processors. Some programs, such as *Multimate* and the *DisplayWrite* programs, mimic Wang and IBM DisplayWriter dedicated word processors almost command for command and menu for menu. In general the claim that a word processing program is like a dedicated word processor means that the program is easy to use and offers advanced features. But Merrily Shinyeda, an office automation consultant in Arizona, notes that "a number of word processing packages are just as good as most dedicated word processors." She adds, "It's gotten to the point where it's hard to dream up new features. Ease of use is the direction things are going. I think we're going to see more on-screen tutorials and interactive help."

Another noteworthy trend in word processing is toward integration, which allows you to share data between word processing and spreadsheet, graphics, data base management, and communications programs. A graph, for instance, can be incorporated in a business report. Some manufacturers integrate all those functions on one disk, while others produce separate programs that are designed to work together and are sold as a series. Windowing programs, sometimes referred to as operating environments, let you choose which of your favorite programs you want to integrate. You can often view data from separate programs simultaneously through windows on the same screen.

Another new development is the "outline processor," or "idea processor." Those programs are designed to fight writer's block by letting you organize text in small segments in a data base or outline format and expand them unit by unit.

Shinyeda predicts that when the possibilities for more extensive features and more user-friendliness are exhausted, software manufacturers will follow another trend being set by dedicated word processor manufacturers and concentrate on vertical markets, designing programs to suit the needs of a particular segment of the market, such as medical or legal offices. A word processing program for a medical office, for instance, might provide a spelling checker with a medical dictionary and an extended character set that includes scientific characters.

After you are accustomed to using a word processing program, you will find that it can greatly reduce the time it takes to produce business documents or write a manuscript. You might even find that your writing style improves; you can experiment with sentence structure or reorganize paragraphs and see results quickly. If you don't like the changes, you can return the text to its original form with little loss of time or effort. One thing is certain: once you get used to writing on a word processor, you'll find it hard to use a mere typewriter again.

Darcy DiNucci is an Assistant Editor at PC World.

Laser Type

A command-oriented text formatter designed for document generation, *Laser Type* can print with various type fonts. The program generates tables of contents and indexes, creates boxed text, forms bar charts, and includes a mail merge function. Other features include chapter and section commands, list enumerations, and command name reassignments. An editor is included that features on-screen boldface and underlining. List price: \$595. Requirements: 256K, one disk drive.

Soft Lab, Inc.
P.O. Box 879
St. George, UT 84770
801/628-4969

FinalWord

You can view and edit two files simultaneously with *FinalWord's* split-screen capabilities. The program produces tables of contents, indexes, and automatically numbered footnotes placed on the pages on which they are referenced. With *FinalWord* you can print one file while editing another. A state-save feature lets you return to the place where you stopped, even after using another application. A crash recovery feature prevents text from being lost. The program has a full set of utilities, including ones for backing up and formatting a disk. List price: \$300. Requirements: 64K (320K recommended), two disk drives.

Mark of the Unicorn, Inc.
222 Third St.
Cambridge, MA 02142
617/576-2760

Volkswriter Executive

A word processing program that includes an on-line tutorial, *Volkswriter Executive* is designed for individuals and small businesses. Features include multiple-line headers and footers; subscripts and superscripts; file inclusion or extraction; automatic word wrap; find and replace; and character, word, line, and block deletion. The program is compatible with 1-2-3,

VisiCalc, and *dBASE II*. List price: \$195. Requirements: 128K, one disk drive.

Lifetree Software
411 Pacific St.
Monterey, CA 93940
408/373-4718

"The program is easy to use. The two major drawbacks are that you can't request multiple copies, and there is no option for using other printing modes such as emphasized printing." Ann Milldrum, Burney, California

Edix + Wordix

The text editor *Edix* combined with the text formatter *Wordix* creates a comprehensive multiwindow word processor, *Edix + Wordix*. The program provides up to four windows for different files and offers independent formatting and editing. Features include a keystroke macro capability, multicolumn layout, automatic footnotes, section numbering, and a table of contents generator. The program comes with a tutorial disk and features on-line help. List price: *Edix + Wordix* \$390, *Edix* \$195, *Wordix* \$195, *Spellix* \$95. Requirements: 128K, one disk drive. Emerging Technology Consultants
1877 Broadway
Boulder, CO 80322
303/447-9495

"The program is user-unfriendly but extremely powerful. Learning its versatility takes a long time but is worth it in the end. Wordix's automatic two-column format mode is one-of-a-kind and a must for producing long documents, if you want them to be read. I have no regrets for having bought the program." David A. Basskin, Toronto, Ontario, Canada

"I have discovered no limitations in using Edix and Wordix for one and a half years." Robert Bellandi, Syracuse, New York

PowerText

PowerText produces automatic headers and footers, cover pages, tables of contents, and "intelligent" pagination. Features include subscripts and superscripts, boldface, Greek symbols, definable function keys, and vertical and horizontal border lines. The program stores formats for any kind of correspondence and comes with its own UCSD p-System operating system. List price: \$399. Requirements: 128K, two disk drives.

Beaman Porter, Inc.
Pleasant Ridge Rd.
Harrison, NY 10528
914/967-3504

Spellbinder

Macro capabilities extend *Spellbinder's* word processing abilities to functions such as data base management, mail merge, and program development. The program offers on-screen indentation for outlines, alphanumeric and sequential queue sorting, boilerplates, footnotes, and columnar manipulation. Print features include bidirectional printing, true proportional spacing, two-column printing, and an ability to print foreign language characters. Spelling and grammar checkers are included. List price: \$495. Requirements: 128K, one disk drive.

Lexisoft, Inc.
P.O. Box 1378
Davis, CA 95617
916/758-3630

XyWrite II, XyWrite II-plus

A screen-oriented word processor, *XyWrite II* shows indents, line breaks, underlining, and boldface on screen. It offers split-screen or alternate-screen editing and comes with a built-in math package for four-function calculations. Other features include footnotes and column definition. Blocks of text can be deleted, moved, or copied between files or within a file and stored for use as boilerplates. *XyWrite II-plus* adds a mail merge program and a

mappable keyboard; you can assign commands and text to single keystrokes. List price: *XyWrite II* \$195, *XyWrite II-plus* \$295. Requirements: 128K, one disk drive.

XyQuest, Inc.
P.O. Box 372
Bedford, MA 01730
617/275-4439

"XyWrite II and XyWrite II-plus are full-featured and use DOS-compatible ASCII files. They run DOS and .EXE or .COM programs in a shell and return to the point of edit. They have split screens for editing two files, and the keyboard macros are better than ProKey's. The program prints all 256 IBM characters from the keyboard." W. M. Hutchinson, Cedar Rapids, Iowa

"XyWrite II-plus allows a remarkable variety of professional editing, formatting, and typesetting capabilities, for example tables of contents and multiple indexes. The program is uniquely useful because of the embedded programming language. It allows utmost flexibility in custom-tailoring editing and formatting options and display and print modes." Charles D. Soule, Langdale, Pennsylvania

Bibliography

Designed for use with long manuscripts, *Bibliography* is an auxiliary program that checks citations in text against bibliographic entries in a separate reference file. The program works with most word processing systems. List price: \$125. Requirements: 48K, one disk drive. Digital Marketing Corporation
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

Footnote

An auxiliary program for *WordStar* and *Select*, *Footnote* automatically numbers and formats footnotes. Both single and multiple footnotes can be entered anywhere in text; the program places the entry either at the bottom of the page or in a separate file. Additions, deletions, and corrections can be made, and footnotes can be renumbered and reformatted. *Footnote* comes with a companion pro-

gram, *Pair*, that ensures that the commands for underlining and boldface have terminated and checks for opening and closing quotation marks and parentheses. List price: \$125. Requirements: 48K, one disk drive, *WordStar* or *Select*. Digital Marketing Corporation
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

Volkswriter Deluxe

A program that includes a merge function to help generate form letters and labels, *Volkswriter Deluxe* can handle documents of up to 1 million characters (1 megabyte). Features include an undo key, true proportional spacing, foreign language and scientific characters, and footnotes. The program supports DOS 2.00 directories and a variety of printers and shows automatic page breaks, underlining, boldface, and other special effects on screen. Because it stores documents in standard ASCII and DOS file formats, it is compatible with other programs such as spelling checkers and spreadsheets. The program reads *WordStar* documents. List price: \$295. Requirements: 128K, two disk drives. Lifetree Software
411 Pacific St.
Monterey, CA 93940
408/373-4718

"The program is easy to learn. The tutorial is good, but both it and the manual leave a lot out, and the manual is not indexed. Printer control for the Epson FX-80 is set up poorly, but the capability to make modifications is included. The program is easy to use, and its flexibility partially compensates for its shortcomings." Bob Stephan, Pebble Beach, California

"This package allows one to concentrate on writing—not the program itself—with a help key, menus, and easy-to-remember functions that coincide with letters (S for save, R for retrieve). This is the best program I've used." Peter Kotsinadelis, Somerset, New Jersey

Microsoft Word

A multiple-window word processor, *Microsoft Word* can be used with the *Microsoft Mouse*. The mouse and the keyboard can be used to move among as many as eight files to compare and transfer sections. With *Microsoft Word's* glossary you can create boilerplate text and call up commonly used phrases with simple codes. The program provides a number of formats, and you can create and store new formats. Other features include automatic reformatting, columnar word wrap, an undo key, and a display ruler that can be used to place tabs and margins. Special effects appear on screen as they would on paper. List price: \$375. Requirements: 128K, one disk drive. Microsoft Corporation
10700 Northrup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088

"I'll take Word over WordStar anytime." Leo J. Scanlon, Inverness, Florida

"For about the same price, Word sure makes WordStar look like a chisel and granite." Russell Schnapp, San Diego, California

"If there is a better word processor out there, it must be astonishingly powerful." Darrell Holtz, Lakeside, California

"We use Multiplan as a spreadsheet. The training required for a Multiplan user to learn Microsoft Word is minimal because the commands and the keyboard functions are so similar. The program is flexible to user preferences." Laurence Wingerter, Jr., San Antonio, Texas

EZMemo +

A line-oriented word processor, *EZMemo +* can use all dot matrix type styles to print custom letterheads. The program can generate automatic form letters but cannot edit files longer than one page. List price: \$49.95. Requirements: 64K, two disk drives. Systemics
3050 Spring St.
West Bloomfield, MI 48033
313/851-2504

The Word Worker

A programmable word processor, *The Word Worker* has four modes: Edit, Write, Print, and BASICWP. The program offers automatic word wrap, underlining, and centering but omits right justification. It is one of the only word processing programs available for the IBM PC that can be run from a cassette recorder. A separately sold book, *Write, Edit, and Print*, shows how to modify and reprogram *The Word Worker* to individual specifications. List price: \$29.95, *Write, Edit, and Print* \$24.95. Requirements: 48K, one disk drive.

Design Enterprises of San Francisco
P.O. Box 14695
San Francisco, CA 94114
415/282-8813

CataList

A list manager that acts as a front-end preprocessor for 13 word processing systems, *CataList* produces envelopes, labels, and Rolodex cards. The program can format the postal codes for 106 countries. Once data is entered in a file, it can be converted to a specific word processing format for producing form letters or merging documents. *CataList* has two numeric fields for data to be summed or counted. A table of title codes for addressees may be used during entry of file additions. Eleven codes are assigned for titles, and fifteen other codes can be used for customizing. When an asterisk is entered in the first character position of a field, the corresponding field information from the previous record is repeated. *Multimate* and *WordStar* users can add and control color in text using the IBM PC Color Printer, the Data-Products Color Prism P80 and P132, and the Diablo C-150/Xerox-1770 color ink jet printer. List price: PC version \$200, XT version \$250. Requirements: 192K, two disk drives.

Automation Consultants International
18070 Lake Encino Dr.
Encino, CA 91316-4432
818/344-9270

Incorporate by Reference

Incorporate by Reference (IBR) merges paragraphs or citations from a library file into any standard ASCII text file. The program offers unlimited text merging; you can enter blocks of text of any length into the library file. A stored block is retrieved by typing a code name into the text file where the block should appear. The program orders paragraphs numerically and creates alphabetized, unnumbered tables of contents. List price: \$125. Requirements: 64K, one disk drive. Digital Marketing Corporation
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

WordMARC

A word processing program designed for offices, *WordMARC* includes a spelling checker and mail merge capabilities. You can create and edit equations containing Greek and mathematical symbols. Other features include definable function keys, menus, and formats; background printing; column or block moves; horizontal scrolling; and an abbreviation glossary. Users can access DOS, perform system functions, or run other applications programs without exiting the program. List price: \$495. Requirements: 256K, two disk drives. MARC Software
260 Sheridan Ave.
Palo Alto, CA 94306
415/326-1971

Select Bilingual

A bilingual word processor, *Select Bilingual* includes both Spanish and English menus, help screens, and commands. The program contains a Spanish/English on-screen tutorial, a Spanish/English spelling checker, and a mail merge function. Other features include justification and on-screen underlining and boldface. List price: \$395. Requirements: 128K, two disk drives. Select Information Systems, Inc.
919 Sir Francis Drake Blvd.
Kentfield, CA 94904
415/459-4003

Indix

An automatic index generator, *Indix* produces a list of words, phrases, and concepts with their respective page numbers that can then be formatted into a standard index. *Indix* offers flexibility when you specify which words, phrases, and concepts are to be indexed. Digits, uppercase words, and specific sections of the document can be excluded. Page numbers can contain nonnumerical characters. The index is ordered alphabetically and uses ranges of page numbers where suitable. List price: \$95. Requirements: 128K, one disk drive. Emerging Technology
1877 Broadway
Boulder, CO 80302
303/447-9495

"Indix does not just automatically spit out an index. It is the tool a writer can use to make an index. The writer still must exercise a considerable amount of judgment on the product. Indexes have added a new dimension to my technical reports."
Robert Bellandi, Syracuse, New York

EasyWriter 1.15

An improved version of *EasyWriter 1.10*, *EasyWriter 1.15* is a menu-driven word processor that makes full use of the PC function keys. The program provides block move of paragraphs and sentences, global search and replace, headers and footers, automatic word count, and an undo key. List price: \$175. Requirements: 64K (128K recommended), one disk drive. IBM

Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

"This package proved beneficial for both school and personal uses. All reports, memos, agendas, programs, letters, envelopes, study sheets, etc., have been typed using EasyWriter all year. There has never been a problem." Sister Mary Josanne,
Los Angeles, California

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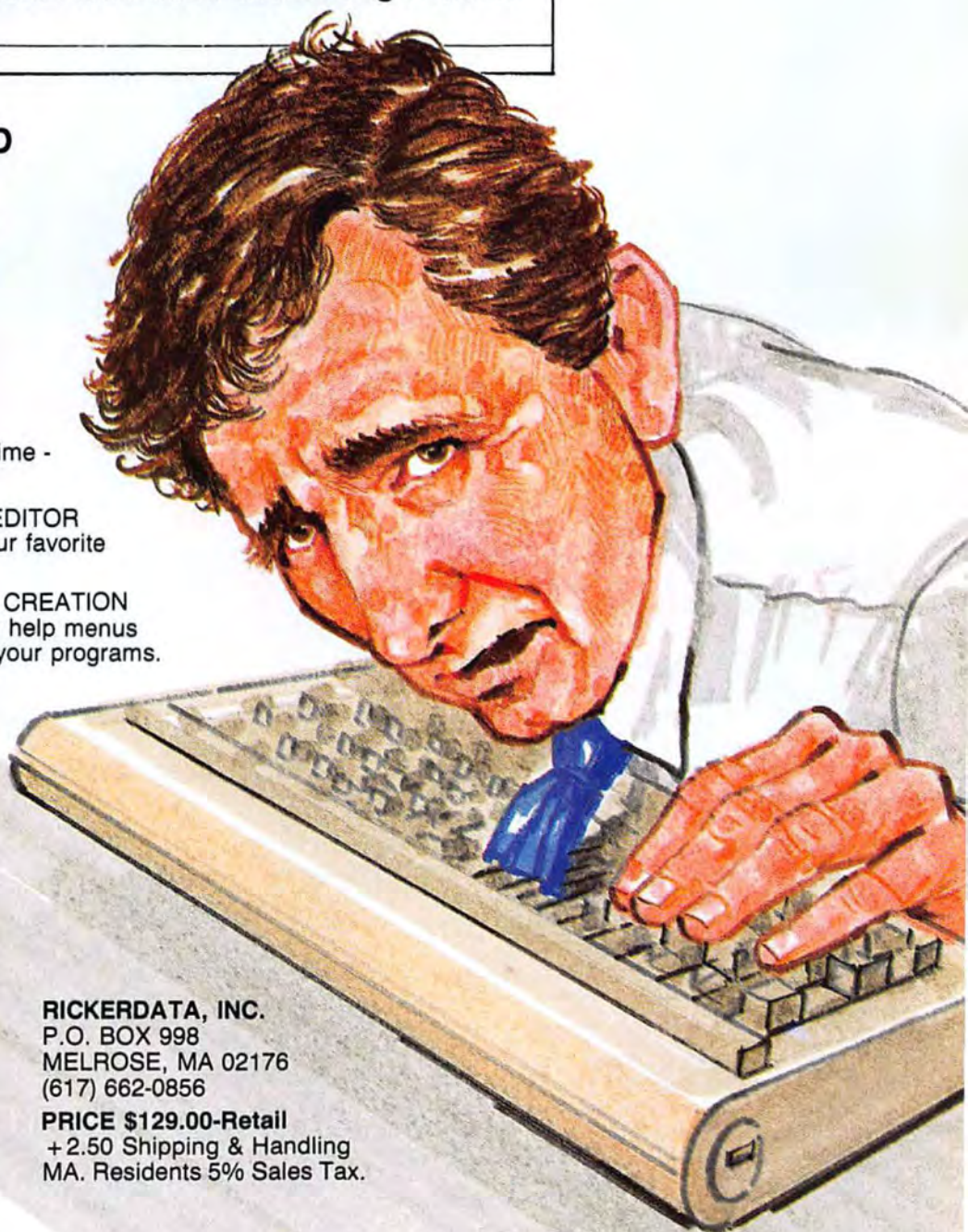
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Menus list all your options and tell you exactly which keys to press for every *Please* feature.

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Say you're looking for an efficient way to maintain sales data. *Please* leads you every step of the way in creating a sales database that might include names, addresses, dates and figures. These categories are called "fields" in database lingo, and they're the very heart of your database structure.

Want last month's total in a particular region? Press a few keys and it's yours! A few more keystrokes and you'll know who's moving product, and what's your biggest seller.

Please will supply you with labels for a mailing to selected customers. It can send customer information to your word processor for a promotional letter. And it can receive data from

your spreadsheet program. *Please* will even look up a name and company for you, your Hayes Smartmodem* will dial the phone number, and you're ready to talk!

Taking this same sales database, you might also want to define special

fields for a custom Output Plan.

With a defined field for "COMMISSIONS DUE,"

Please can automat-

ically compute each salesman's commissions, and print them out in a report of your own design. All this and more, just for saying "Please."

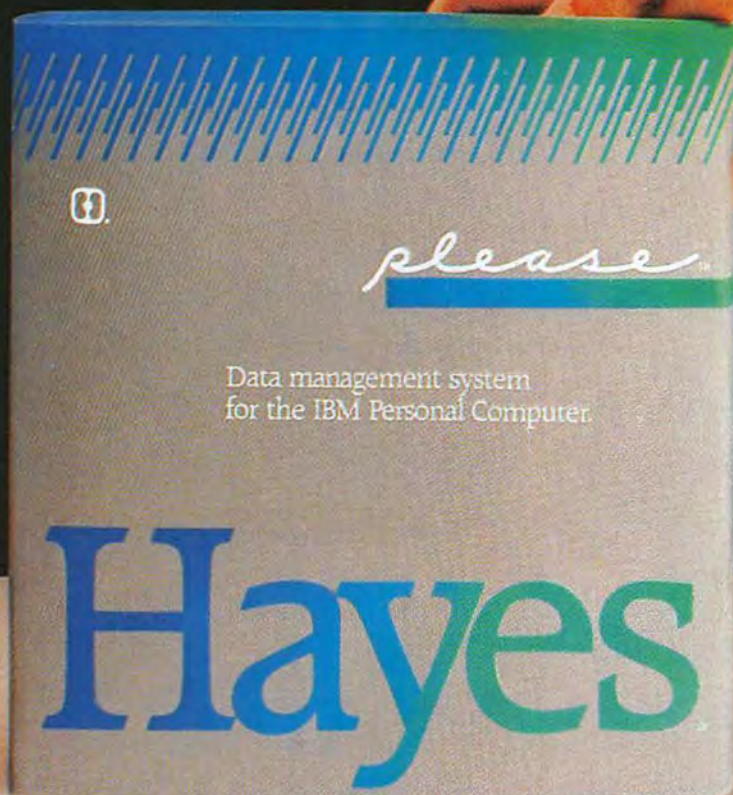
And if you ever change your mind and want to change the structure of your database, please feel free. Step-by-step instructions show you how.

You have this same flexibility with any database you and *Please* design. You can store up to 16 million records† and 200 custom Output Plans for each database! More than you're likely ever to require. But isn't it nice

"Make it snappy, Please!"

Need a report fast? You and *Please* can put together a Quick List in a matter of seconds.

Please.



"Put it here, Please."

Design a special screen format to position data in a particular place.

Just in case you ever need it?

Now you might think that a data management system that does all this must be difficult to use. Right? Rest assured. *Please* works hard so you don't have to. An easy-to-follow sample disk shows you everything you need to know to create your first database. Three *Please* menus show you which keys to press to access every feature. And whenever you need it, *Please* provides on-screen HELP messages, tailored to a specific task. So you needn't waste time reading through a list of unrelated instructions on your screen. Or stop what you're doing to consult a manual. In no time at all, and with no assistance at all, you'll be a *Please* database pro!

knowing all that storage power is there?

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Circle 362 on reader service card

Select: The Word Processor, Select Write

A menu-driven word processor, *Select: The Word Processor* features single-key commands, a built-in expandable spelling checker, and mail merge capabilities. The program includes a glossary of commonly used forms, phrases, and formats and an on-screen tutorial. *Select Write* has the same text-editing features but excludes the spelling checker and the mail merge program. List price: *Select: The Word Processor* \$295, *Select Write* \$99. Requirements: 128K, one disk drive. Select Information Systems, Inc. 919 Sir Francis Drake Blvd. Kentfield, CA 94904 415/459-4003

Freestyle

A writing system for business professionals, *Freestyle* offers a line-drawing feature for charts and forms and extensive outline capability. The program has a spelling checker, mail merge capabilities, a Wang-like glossary feature called Keyfiles, and an on-screen tutorial. Select's computer-assisted writing program, Outline Zoom, helps you create templates, or writing guides, for preparing documents. List price: \$295. Requirements: 128K (192K recommended), two disk drives, DOS 2.00 or later version. Select Information Systems, Inc. 919 Sir Francis Drake Blvd. Kentfield, CA 94904 415/459-4003

WordStar, CorrectStar, MailMerge, StarIndex

A menu-aided, screen-oriented program, *WordStar* offers cursor movement by character, word, line, and beginning and end of document; block and column movement; justification; and full search capabilities. Files can be copied, merged, deleted, and automatically backed up. Print features include underlining, boldface, subscripts and superscripts, and pause for text entry.

WordStar text files can be checked with *CorrectStar*, a 65,000-word spelling checker. *CorrectStar* flags errors and suggests corrections. You can add words to a

personal dictionary. *MailMerge* is a file-merging program that runs only with *WordStar*. *MailMerge* enables you to create personalized form letters, mailing labels, invoices, and boilerplate documents. *StarIndex* is an index generator that produces alphabetized indexes, tables of contents, and lists of figures and tables for *WordStar* files. List price: *WordStar* \$495, *CorrectStar* \$195, *MailMerge* \$250, *StarIndex* \$195, *WordStar Professional* (includes all four programs) \$695. Requirements: 64K, one disk drive. MicroPro International Corp. 33 San Pablo Ave. San Rafael, CA 94903 415/499-1200

"That the program is difficult to use is a false impression. If you know how to touch-type, you can use WordStar. I would like to see on-screen underlining, boldface, and page break indicators that adjust with mid-document changes of margins." John Horstmann, Oradell, New Jersey

"This program is not really difficult to use, and the new documentation is greatly improved. The multitude of commands simply reflects the depth of capabilities." B. G. Dudley, Coraopolis, Pennsylvania

"WordStar is a powerful and effective program. It is particularly valuable because it has so many available word processing features, because of the extent of its general use, and because it is screen oriented, which is important to most writers. Problems include not having any patches from MicroPro, no automatic duplicate printing, no disabling process for automatic backup, no proportional justification, and poor documentation." Tal D. Noble, San Diego, California

"WordStar may be old and limited, but it has all the features a writer would want. Editing and block move capabilities are very handy. Who needs a split screen anyway?" S. Kagan, Bristol, Rhode Island

MegaWriter Plus

A word processing program with mail merge capabilities and a 50,000-word spelling checker, *MegaWriter Plus* has nine programmable function keys and a document filing system for storage and retrieval on the basis of keywords, dates, and names. The program can use information from 1-2-3. List price: \$179.95. Requirements: 128K, two disk drives. Megahaus Corporation 5703 Oberlin Dr. #209 San Diego, CA 92121 619/450-1230

Spellbinder/Scientific

Designed for scientific and technical writers who use complex mathematical and chemical formulas, *Spellbinder/Scientific* displays and prints formulas and structural diagrams up to one page long, using common scientific characters and symbols. Characters from chain molecules to organic structural diagrams such as six-member rings can be altered or created. The program supports Greek characters; subscripts and superscripts; and large characters such as integral signs, sigmas, radicals, and brackets. List price: \$295. Requirements: 64K, one disk drive (two recommended), graphics board. Lexissoft, Inc. P.O. Box 1378 Davis, CA 95617 916/758-3630

Multi-Lingual Scribe

Any combination of Hebrew, English, and Greek letters can be typed with *Multi-Lingual Scribe*. Features include word wrap, adjustable margins, and insert and delete. You can choose either the IBM Selectric or the mnemonic keyboard layout, and templates are included. List price: \$149.95. Requirements: 128K, one disk drive, graphics board. Gamma Productions, Inc. 817 Tenth St. #102 Santa Monica, CA 90403 213/451-9507

At Last. Free-form database that's compatible with both sides of the brain.

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Docurite

A menu-driven word processor, *Docurite* formats text and provides optional page numbering and dating and a variable number of headers and footers. The program has two parts: a text-creating mode and an editing mode. Text can be appended to a previously created file. List price: \$99.95. Requirements: 64K, two disk drives.

Simplified Software Systems
118 Third Ave.
P.O. Box 1192
Hickory, NC 28601
704/328-2386

Formlet

Form letters can be created from prewritten, stored paragraphs with *Formlet*. You can save up to ten form letters on disk and add new text. List price: \$47.95. Requirements: 64K, one disk drive.

Contract Services Associates
706 S. Euclid
Anaheim, CA 92802
714/635-4055

Datatest

A text editor with formatting features, *Datatest* lets you merge files with addresses entered in *dBASE II* to produce mass mailings. *Datatest* lets you print while editing and supports proportional spacing and justification. The program uses embedded English commands instead of control codes. Other features include footnotes, alphabetized indexing, and horizontal scrolling for editing lines with up to 255 characters. List price: \$450. Requirements: 128K, two disk drives.

Datatek, Inc.
280 Railroad Ave.
Greenwich, CT 06830
203/625-0098

Multimate Professional Word Processor, Version 3.22

Emulating a Wang dedicated word processor, *Multimate Professional Word Processor* features an 80,000-word spelling corrector, math capabilities, a mail merge function, and indexable document summary screens. A library function stores boilerplate text. Macros store and replay keystroke commands as well as characters, aiding in the creation of merge documents and specialized applications. You can edit while printing and queue documents for printing. List price: \$495. Requirements: 256K, two disk drives.

Multimate International Corp.
52 Oakland Ave. N
East Hartford, CT 06108
203/522-2116

"Multimate is comprehensive, versatile, and easy to learn. The spelling checker has a provision for adding up to 5000 names or other words not commonly found in dictionaries. Also included are numerical and text column-handling features. Standard editing functions such as insert, delete, copy, and move are easily accessed with one or two keystrokes. Compared with other popular word processing programs I've seen, Multimate gets an A+ for functionality and ease of use." Stephen L. Bassin, New City, New York

"This is a great program. It is very powerful and offers lots of flexibility. Because it has so many functions, it takes a while to learn, but once you are over the hurdle, it becomes second nature. I would feel lost without it." Stanley C. Brobeck, Lafayette, California

"This package has the word processing features needed by most users. It has an excellent on-disk tutorial, and the software is very easy to learn. I have been and continue to be very pleased." Frances Mendelsohn, Rockville, Maryland

"I am a writer, and I like Multimate because it performs the way I think. The keystroke functions are easy to learn. The company's support system leaves nothing to be desired." William A. Whitman, Seattle, Washington

MicroSpell

A 60,000-word spelling checker, *MicroSpell* works with files produced by most popular word processors. The program scans text, indicating suspect words in context. *MicroSpell* displays a list of guesses at intended words and allows you to accept a guess, retain the original choice, or add a word to the dictionary. The program offers options to ignore format commands, skip abbreviations, identify suffixes, and create auxiliary dictionaries. The disk is not copy protected. List price: \$139. Requirements: 96K, one disk drive (two recommended). This product is also available from Lifeboat Associates.

Trigram Systems
3 Bayard Rd. #66
Pittsburgh, PA 15213
412/682-2192

NBI Personal Computer Word Processor

Retaining most features of NBI's dedicated OASys word processors, the *NBI Personal Computer Word Processor* lets word processing personnel use personal computers with little or no retraining. Such features as six-level outlining, widow and orphan control, and an annotated disk directory are in both systems. However, this scaled-down version lacks the dedicated NBI's records processing and statistical math capabilities as well as its ability to display Greek characters. Businesses who own both dedicated NBIs and personal computers can use the program's file transfer utility to ferry documents via modem with original formats intact. List price: \$695. Requirements: 128K, two disk drives.

NBI, Inc.
3450 Mitchell Ln.
P.O. Box 9001
Boulder, CO 80301
303/444-5710

Samna Word I, II, III, Samna +

Designed for the office environment, the Samna word processors have a "zoom" feature for previewing a page in miniature. *Samna Word II* offers undo commands, column movement, and proportional printing. The program supports DOS 2.00 directories and subdirectories and includes a mail merge function and a spelling checker. You can move or copy text to a buffer or a temporary file.

Samna Word I, the entry-level package, omits the mail merge and spelling checker features that come with *Samna Word II*. *Samna Word III* has all the features of *Samna Word II* plus table-of-contents generation, five-function math, automatic indexing, foreign keyboards, a glossary function, and programmable function keys. *Samna +* combines *Samna Word III* with a spreadsheet and a word base manager, which is a facility for searching text and is the complement of a data base manager. It also supports IBM's DISOSS (Distributed Office Support Software) for connecting to other packages and systems, including mainframes. List price: *Samna Word I* \$295, *Samna Word II* \$450, *Samna Word III* \$550, *Samna +* \$695. Requirements: 256K (*Samna +* requires 320K), two disk drives, DOS 2.00 or later version.

Samna
2700 N.E. Expressway #C-700
Atlanta, GA 30345
404/321-5006

Starmailer, WORDs to go, Volksmailer

Designed to produce form letters, mailing labels, and mailing lists, *Starmailer*, *WORDs to go*, and *Volksmailer* add the same abilities to three different word processing programs. *Starmailer* works with *WordStar* and *MailMerge*, *WORDs to go* works with *Microsoft Word*, and *Volksmailer* is a utility for *Volkswriter*. Each file can hold up to 2000 names, limited by the 128K memory; more memory would increase file size. List price: \$95 each. Requirements: 128K, one disk drive.

Softmarc
132 Central Way
Kirkland, WA 98033
206/453-2262

Palantir Word Processor

A word processor designed for the business environment, *Palantir Word Processor* has math capabilities and can sort by variables using conditional logic. Other features include the ability to exit the program and return to the cursor position automatically, proportional printing, double underlining, printing of multiple copies, multiple-line headers and footers, mail merge capabilities, and a glossary function. Users can save formats with documents and can have unlimited format changes within a document. *Palantir Speller*, with a literal dictionary of 60,000 words, corrects in context, permits double word marking, and automatically corrects common misspellings. List price: *Palantir Word Processor* \$395, *Palantir Speller* \$145. Requirements: 128K, two disk drives.

Palantir Software
3400 Montrose Blvd. #718
Houston, TX 77006
800/368-3797, 713/520-8221

"Palantir is very easy to learn and use. It reminds me of a Lanier dedicated machine, except that it does not allow editing of columns, nor does it sort. It is almost foolproof regarding saving files—there is little chance of losing data." Malcolm Bender, Dallas, Texas

Wordease

A screen-oriented, menu-driven word processor, *Wordease* features multiple side-by-side paragraphs, boldface, and italics. You can specify margins individually or with global tab positions, and you can specify page breaks or protect portions of the text from page breaks. When printing, you can modify a format or print only selected portions. A variety of print options modifies pitch globally or locally. The program supports a hard disk. List price: \$300. Requirements: 128K, two disk drives. Software Solutions, Inc.
305 Bic Dr.
Milford, CT 06460
800/243-5123

ZyINDEX

Designed to help manage text in business, legal, medical, and research work, *ZyINDEX* can be used to retrieve information from all the files in a company or organization and from files downloaded from a public data base. The program automatically indexes every word in a document and a list of informational terms, or "content words." You can retrieve information on any topic using a word or a phrase. The program works with various word processing, data base, and spreadsheet programs because it uses standard ASCII files. List price: \$295. Requirements: 192K, two disk drives, DOS 2.00 or later version.

ZyLAB
233 E. Erie St.
Chicago, IL 60611
312/642-2201

Textra

Designed for common tasks such as letters, memos, articles, and reports, *Textra* shows page breaks, boldface, and underlining on screen. Other features include automatic reformatting, undelete, and a "print letter and envelope" command that simplifies this common task. List price: \$95, upgrades \$10. Requirements: 128K, one disk drive.

Ann Arbor Software
407 N. Main
Ann Arbor, MI 48104
313/769-9088

"Textra has blindingly fast screen updates and cursor movements. The menus across the bottom are perfect for occasional typists and programmers. The program has a good tutorial and manual, but you don't need them. My secretary likes Textra more than her IBM Displaywriter." Michael Zanin, Cuyahoga Falls, Ohio

"The program is useful for high-level-language program writing and memo creation. But it has poor page-movement abilities and nonadjustable tabs." Brad Branham, Houston, Texas

"The program is easy to learn. By eliminating a myriad of lesser- or never-used functions, Textra achieves acceptable per-

formance while preserving your sanity. Although version 2.1 isn't in the same league with the expensive high-powered packages, neither is the price. It's a bargain. If you need more horsepower, version 3.0 is on the way." Howard Millman, Irvington, New York

"This program is difficult to use. You can't tell if you're underlining or making bold or normal print. There seems to be no way to globally eliminate underlining. I don't recommend it." Ray Parnell, Appleton, Wisconsin

EinsteinLetter Series

A series of packages containing sample correspondence, *EinsteinLetter Series* lets you copy and modify hundreds of letters. You can use the packages interactively with *EinsteinWriter* to create custom letters, or use them as text files with other word processing programs. Every paragraph of a letter has an outline of its content. An extraction function lets you copy a model letter's entire text, parts of the text, or only the schematic outline. The *Social and Civic Correspondence* series provides sample personal letters such as thank-you notes, wedding correspondence, club announcements, and government and political action letters. The *Consumer and Employment Correspondence* series presents model consumer inquiries and complaints, payment and collection letters, and employment-seeking letters. *Business Operations Correspondence I* includes standard business correspondence for ordering and responding to requests for products, services, and credit; *Business Operations Correspondence II* focuses on credit and collections and employee selection and review. List price: *Social and Civic Correspondence* \$59.95, *Consumer and Employment Correspondence* \$59.95, *Business Operations Correspondence I* and *II* \$79.95 each. Requirements: 64K, one disk drive.

Alison Software Corporation
14937 Ventura Blvd.
Sherman Oaks, CA 91403
818/905-8000

Proofwriter, Proofwriter International

Designed for scientific and foreign language word processing, *Proofwriter* displays and prints special characters and equations. The program includes a mail merge feature and an expandable spelling checker. Other features are footnotes, endnotes, equations, and text macros. It can be used as a program editor. *Proofwriter International* includes all the features of *Proofwriter* plus 12 programmable keyboards designed for Western European, Russian, Greek, and scientific users. List price: *Proofwriter* \$250, *Proofwriter International* \$300. Requirements: 192K, two disk drives.

Image Processing Systems
4414 Regent St.
P.O. Box 5016
Madison, WI 53705
608/233-8419

EinsteinWriter, EinsteinSpeller

A menu-driven, split-screen word processor, *EinsteinWriter* features an undo function, separate wrap points for indentations, and seven definable formats. Print features include justification, boldface, pitch variation, subscripts and superscripts, file chaining, and print spooling. A 200-word thesaurus comes with the program. *EinsteinSpeller* is a 45,000-word spelling checker that can be run interactively or in batch mode. Its dictionary is based on frequently used words; you can add dictionaries. The program suggests alternative words and flags punctuation and hyphenation errors. List price: *EinsteinWriter* \$249.95, *EinsteinSpeller* \$99.95. Requirements: 128K, one disk drive.

Alison Software Corporation
14937 Ventura Blvd.
Sherman Oaks, CA 91403
818/905-8000

PeachText Word Processor With Random House Electronic Thesaurus

Designed for the business environment, the *PeachText Word Processor With Random House Electronic Thesaurus* offers variable pitch control, headers and footers, and nine shades of boldface. Print commands and formats can be embedded in the text or implemented from the print menu. The program shows unusual ASCII characters, such as foreign language characters, on screen. Up to 128 variables can be defined to individualize form letters and construct documents using parts of paragraphs from other documents. Backup files are created automatically. *PeachText* offers print spooling so that users can print one file while editing another.

The *Random House Electronic Thesaurus* contains 4400 indexed words and 26,000 synonyms. By pressing a key, users get a list of synonyms for the highlighted word at the bottom of the screen; the target word and surrounding text remain on the top half of the screen. The original word can be replaced automatically with a new selection if desired. The program supports a hard disk. List price: \$250. Requirements: 128K, two disk drives. Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

NewWord

Using the same commands as *WordStar*, *NewWord* is a menu-driven word processor that features mail merge capabilities, the ability to go directly to any page without having to scroll, inverse video, boilerplating, undo and unerase commands, and multiple-line headers and footers. *NewWord* offers "living" ruler lines—the ability to store margins and tabs in text and have them change automatically as you move through a file. Print features include microjustification, variable character widths and heights, and superscripts and subscripts. Boldface, underlining, and overstrike appear on screen. The program



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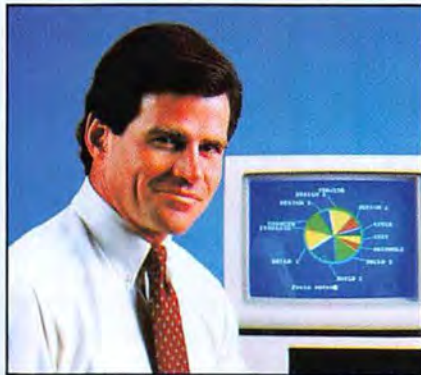
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has 40 programmable function keys and supports color. List price: \$249. Requirements: 64K, one disk drive.

Rocky Mountain Software Systems
1280C Newell Ave. #1092
Walnut Creek, CA 94596
800/832-2244, 800/732-2311 California

WordPatch

Designed to extend *WordStar*'s printing capabilities on dot matrix printers, *WordPatch* adds near-letter-quality printing, italics, subscripts, superscripts, and continuous underlining. Choice of type includes bold, emphasized, bold emphasized, double- and triple-bold emphasized, supertiny, compressed, normal, wide compressed, and wide. The program is menu-driven. List price: \$49.95. Requirements: 64K, one disk drive, *WordStar*.

Rocky Mountain Software Systems
1280C Newell Ave. #1092
Walnut Creek, CA 94596
800/832-2244, 800/732-2311 California

PIE: Writer, The Writer

A virtual memory machine buffer lets you enter text while scrolling in *PIE: Writer*. Two files can be edited at once in either split-screen or alternate-screen mode. *PIE: Writer* provides columnar tabbing, horizontal scrolling, print queuing, and automatic paragraph indentation. The program includes mail merge and telecommunications programs.

The Writer is an entry-level, command-driven word processor that offers page and horizontal scrolling, automatic centering, print features shown on screen, mail merge capabilities, justification, text transfer from file to file, and file chaining. *The Speller* is a 22,000-word spelling checker that works with both *PIE: Writer* and *The Writer*. It displays suspect words in context and automatically corrects text. It can total the number of words in a document but cannot check words longer than 18 characters. List price: *PIE: Writer* \$199.95, *The Writer* \$49.95, *The Speller* \$49.95. Requirements: 64K, one disk drive.

Hayden Software Company
600 Suffolk St.
Lowell, MA 01853
617/937-0200

Document Management System

Integrating word processing and list management, *Document Management System* can be purchased as an integrated package or as separate programs. *Edscreen*, the text editor, produces files compatible with those produced by EDLIN. *Document Writer*, the word processing program, produces letters, reports, and memos; and automatically generates tables of contents. Other features include headers and footers, subscripts and superscripts, and boldface. *Letter Writer* generates form letters. *Mailing Label Maker* helps you create and maintain mailing lists. Fields in the files are prestructured and include those for name, title or company, three lines of address, a 9-digit zip code, a telephone number, and a definable code. Selection of records is made by zip code range or by your own codes. The program prints one- to three-up labels. When used with *Letter Writer*, *Mailing Label Maker* provides name and address information for form letters. List price: all four programs \$500, *Edscreen* \$125, *Document Writer* \$300, *Letter Writer* \$200, *Mailing Label Maker* \$100. Requirements: 128K, two disk drives.

Syntax Systems—Software Products
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

Dillowriter

Designed for novices, *Dillowriter* uses labeled keys to simplify learning. The program does not offer automatic hyphenation or proportional spacing but provides most standard word processing functions. It uses inverse video to highlight selected text. List price: \$29.95. Requirements: 64K, one disk drive.

Software Research
P.O. Box 10004
Austin, TX 78766
512/346-5097

HomeWord

A word processing program designed for the PCjr, *HomeWord* employs on-screen pictures, or icons, to represent program functions such as printing, editing, and formatting. A portion of the screen shows the format of the entire page. You can merge text from a file with text on the screen. List price: \$75. Requirements: 128K, one disk drive, DOS 2.10.

IBM

Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/332-4400 Illinois,
800/447-0890 Alaska and Hawaii

Wes

A word processor that includes math instructions for spreadsheet applications such as invoices and variance reports, *Wes* also features mail merge capabilities, data base recall, and macros. The program has automatic pagination, but you can control page breaks. Print features include justification, underlining, boldface, overstrike, subscripts, and superscripts. The program has an undo function, scrolls horizontally, offers file copying within another file, and aligns decimals automatically. List price: \$495. Requirements: 64K, one disk drive.

Westerly Business Systems
137 Main St.
Westerly, RI 02891
401/596-1811

PCWriter

A word processing program that includes a spelling dictionary of about 125,000 words, *PCWriter* allows you to add up to 8000 characters in a personal dictionary. Features include a synonym assistance function, subscripts and superscripts, and the ability to merge DOS data files with documents to create personalized letters for mass mailings. List price: \$199. Requirements: 128K, two disk drives.

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 - Math Interface Library for the IBM FORTRAN Library
 - Math Macro Library for the IBM MACRO Assembler

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- Complete operating instructions.
- One Year Software Update Service.

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- Diskette with Math Macro Library for the IBM MACRO Assembler.
- Complete Operating Instructions.

HCW

358 Veteran Memorial Highway,
Suite MSI
Commack, New York 11725
516-360-3827

Hauppauge Computer Works Inc.

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THE NEW 87 MATH PAK NOW INCLUDES: from the PC Library of BRADY Publications, the book entitled, "8087 Applications and Programs for the IBM-PC" by Richard Startz.

Circle 303 on reader service card

Typewrite

Jobs easily done with a typewriter can be performed on a computer with *Typewrite*. The program addresses envelopes, fills out forms, and types in foreign languages. Like a word processor, *Typewrite* can save, modify, and print documents. List price: \$75. Requirements: 64K, one disk drive. Selfware, Inc.
3545 Chain Bridge Rd.
Fairfax, VA 22030
703/352-2977

FriendlyWriter With FriendlySpeller 2.1

A word processing package designed for writing, editing, and organizing business and personal letters, *FriendlyWriter With FriendlySpeller 2.1* includes a 70,000-word spelling checker. You can define letter formats and adjust lines per inch and characters per line. Features include on-screen underlining and automatic reformatting. Letter names can contain up to 25 characters, and you can recall or copy a specific letter, all letters, or a related group of letters. List price: \$89.95. Requirements: with DOS 1.00 and 1.10 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive. FriendlySoft, Inc.
3638 W. Pioneer Pkwy.
Arlington, TX 76013
817/277-9378

"I was looking for a simple word processor that would allow my wife and me to generate general business correspondence without having to become familiar with dozens of commands. FriendlyWriter allowed us to do that and more. It is absolutely the best word processor value on the market." Michael A. Dubbs, Chino, California

"This is the best entry-level word processor. It is fun to use but powerful. Great color, great printer support, a 24-hour hot line, great customer service and update policies, and inexpensive." Mike O'Neil, Phoenix, Arizona

"I have tried several word processing programs, and this is the simplest I've seen. The 70,000-word speller is fast, and files can be retrieved even without an exact name. The 24-hour hot line is for real. FriendlySoft has the best software support that I have seen, and I need a lot." Charles M. Hayes, Jr., Santa Maria, California

Wordplus-PC

A word processing program with a mail merge function, *Wordplus-PC* includes *The Boss*, a built-in 90,000-word spelling checker that can add 10,000 more words. *Wordplus-PC* features proportional spacing, justification, the ability to edit while printing, boilerplating, multiple-line headers and footers, automatic page numbering, horizontal scrolling, and on-screen underlining and boldface. The program can share data with 1-2-3, dBASE II, and pfs:file. List price: \$495, without *The Boss* \$395. Requirements: 192K, two disk drives; without *The Boss* 64K, one disk drive. Professional Software
51 Fremont St.
Needham, MA 02194
617/444-5224

DisplayWrite 1, 2

DisplayWrite 1 is a menu-driven text processing program whose functions include saving, copying, deleting, and moving blocks of text. Users can justify text, use subscripts and superscripts, and create line drawings and free-form bar charts using horizontal and vertical lines. *DisplayWrite 2* includes a 100,000-word spelling checker and supports an additional dictionary of about 4500 characters. Features include automatic hyphenation and pagination, four-function math capability, and merging DOS ASCII files into text documents. List price: *DisplayWrite 1* \$95, *DisplayWrite 2* \$299. Requirements: *DisplayWrite 1* 128K, two disk drives; *DisplayWrite 2* 192K, two disk drives, DOS 2.10.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/332-4400 Illinois,
800/447-0890 Alaska and Hawaii

Synonym Finder

You can look up synonyms while using a word processing program with *Synonym Finder*. The program contains an average of ten synonyms for each of 9000 words. *Synonym Finder* can be declared in the AUTOEXEC file at power-up; thereafter, you request a synonym list by placing the cursor on a word and pressing the appropriate key. A list of synonyms appears at the top of the screen, and the program automatically replaces the original word with the synonym you choose. List price: \$199. Requirements: 64K, one disk drive. Selfware, Inc.
3545 Chain Bridge Rd.
Fairfax, VA 22030
703/352-2977

Docu-power!

An enhancement for word processors, *Docu-power!* allows you to create a numbered index on marked sections of previously created and coded text files. *Docu-power!* displays the section number with either your corresponding comment or the first line of text. From the numbered index of comments you can create new documents or rearrange text without retyping. The program works with any word processor or ASCII files. List price: \$149. Requirements: 128K, two disk drives. Computing!
2519 Greenwich St.
San Francisco, CA 94123
415/567-1634

Professional QWERTY, Personal QWERTY

Documents can be printed without saving them on disk with *Professional QWERTY*. Line width, margins, and tab settings can be reset at any point by introducing a new format ruler. Tab stops can be set at any column location, producing true column limits rather than simply inserting spaces in text. While approximate maximum document size is 12 pages, the printed size is unlimited since documents can be linked for printing, with pagination and formatting automati-

cally continued across boundaries. The screen always displays the status of keys such as <CapsLock> and <NumLock>. The program offers optional custom printer drivers, produces real subscripts and superscripts, and changes pitch and fonts. *Personal QWERTY* includes mail merge capabilities. List price: *Professional QWERTY* \$325, *Personal QWERTY* \$99. Requirements: 128K, one disk drive. HFK Software
Old Danbury Rd.
P.O. Box 150
Danbury, NH 03230
617/259-0059

"An impressive job of human engineering and programming. The program is easy to learn, yet it keeps up with professional typing speeds and lets you do just about everything your printer is capable of."
Allen Avner, Champaign, Illinois

OfficeWriter 3.0

Users of dedicated word processors should feel at home with *OfficeWriter 3.0*, a screen-oriented program that uses function keys in much the way Wang systems do. A mail merge function does conditional printing; other features include block or column move, multiple-column print, global find and replace, horizontal scrolling (up to 156 columns), a go-to-page command, multiline headers and footers, on-screen boldface and underlining, and print spooling. The program works with Wang OIS and VS systems, Wang PC, and IBM's Distributed Office Support System (DISOSS). The optional *Office Speller* incorporates the 80,000-word Proximity/Merriam-Webster Linguibase and lets you check either one spelling or the entire document without leaving the edit mode. List price: \$325, with *Office Speller* \$445. Requirements: 192K, two disk drives. Office Solutions
5708 Odana Rd.
Madison, WI 53719
800/228-0747, 608/274-5047 Wisconsin

ReadiWriter

A text formatter based on the GML (Generalized Markup Language) and SCRIPT systems used on IBM mainframes, *ReadiWriter* provides formatting capabilities that your word processor may lack. Using either *ReadiWriter* or your word processor, you enter brief codes—such as :p for begin paragraph or :fn for start footnote—in the text. *ReadiWriter* interprets the embedded commands as it prints the document. Output can also be directed to a disk file or monitor. Other features include table of contents generation, footnotes with automatic numbering, and proportional spacing. For programmers, *ReadiWriter* provides more complex codes to perform calculations or conditionally execute commands. List price: \$125. Requirements: 128K, two disk drives. ReadWare Systems, Inc.
P.O. Box 680
West Redding, CT 06896
203/431-3521

"ReadiWriter is well documented, and the company offers good support, but the program is not 100 percent compatible with DCF." H. Clay Davis III, Henneta, New York

"This text formatter's device driver for the Epson FX-80 produces very high quality output. New releases are cheap (\$20) to registered owners." Orlo Elfes, Torrance, California

MASS-11pc

Virtually identical to the word processor used on Digital's VAX family of superminis, *MASS-11pc* lets users edit text files on a PC and transfer them to and from a VAX. A conversion utility can transfer DECmate files to *MASS-11pc* as well. Features include split-screen editing, table of contents generation, list processing, footnotes, scientific equation editing, and a four-function calculator. *MASS-11pc* supports 25 printers, including several laser printers. List price: \$995. Requirements: 256K, two disk drives. Microsystems
2400 W. Hassell Rd. #400
Hoffman Estates, IL 60195
312/882-0111

Foundation

Created for salespeople and others who send many customized form letters, *Foundation* combines a basic letter-writing capacity with mail merge functions. Keywords can be used to retrieve names, addresses, phone numbers, and other client data and to delimit and target mailings. List price: \$189.95. Requirements: 128K, two disk drives, DOS 2.00 or later version. Pyramid Data, Ltd.
P.O. Box 10116
Santa Ana, CA 92711
714/639-1527

WordPerfect, Personal WordPerfect, WordPerfect Jr.

A word processor for business applications, *WordPerfect* comes with mail merge capabilities, four-function math, proofreading, and programmable macros bundled in. You can create footnotes, multiline headers and footers, and multiple columns of different widths. *WordPerfect* supports printers with foreign characters, math symbols, and proportional spacing in two pitches. Its spelling checker operates directly from editing mode. An optional *WordPerfect Sorter* selects and sorts mail merge records.

Personal WordPerfect and *WordPerfect Jr.* omit footnote, math, text column, proofreading, and mail merge capabilities. *WordPerfect Jr.* runs on the PCjr. List price: *WordPerfect* \$495, *WordPerfect Sorter* option \$95, *Personal WordPerfect* \$195, *WordPerfect Jr.* \$69. Requirements: 128K, one disk drive. Satellite Software International
288 W. Center St.
Orem, UT 84057
801/224-8554

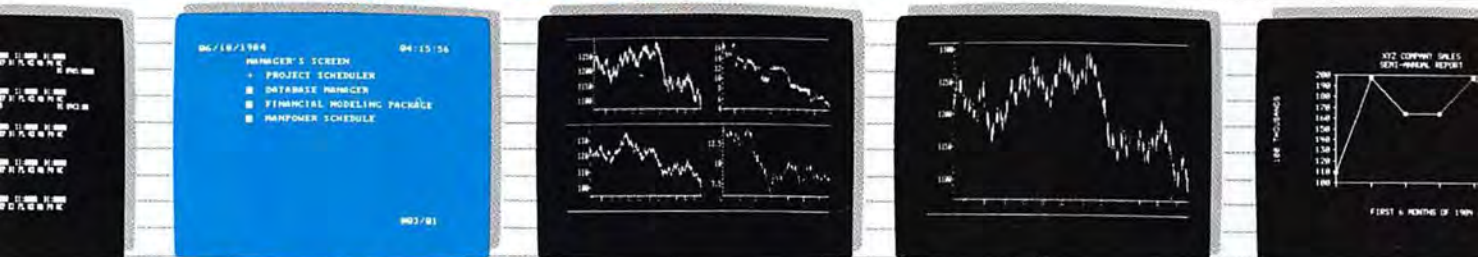
"The guide is written with practice exercises so that even a beginner can soon master the most difficult functions, such as math and macros." Donna Magruder, Frederick, Maryland

"WordPerfect is just that." Matthew Starobin, New York, New York

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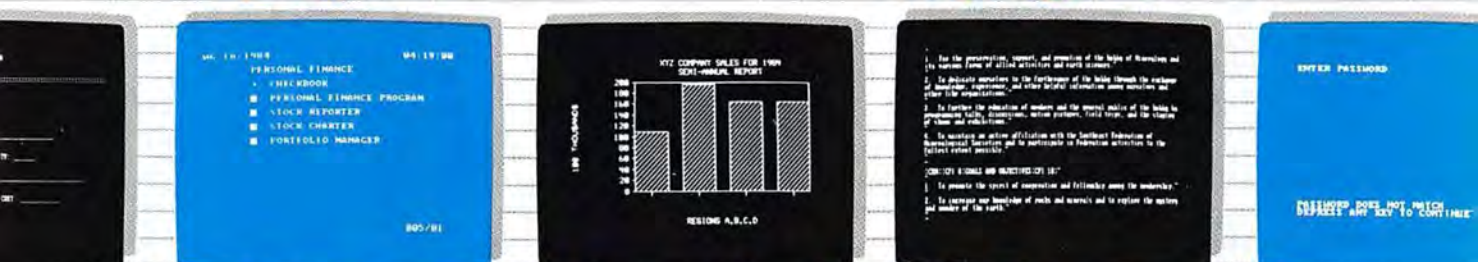


from program



to program

to program



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DeereSoft, Inc.



P.O. Box 1360
Melbourne, FL 32901

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Wordvision

A word processor for basic writing tasks, *Wordvision* uses icon selection to simplify operations. Features include the ability to transpose letters, words, sentences, or paragraphs; 11 kinds of delete plus undelete; global find and replace; and an on-screen "help tree." An optional set of 32 keycaps labels *Wordvision*'s function keys. The formatting menu displays the proportions of edited text on a mock page. The program supports the boldface, underlining, and proportional spacing capabilities of most printers and the superscript and subscript features of some. List price: \$79.95, keycaps \$5. Requirements: 96K, one disk drive.

Bruce & James Program Publishers, Inc.
2355 Leavenworth St. #103
San Francisco, CA 94133
800/531-1309

"Wordvision has many more features than comparably priced word processing programs." J. Richard Toler, Granville, Ohio

Volkswriter Scientific

Geared for the scientific and academic markets, *Volkswriter Scientific* features over 400 bit-mapped scientific and mathematical characters, multiple type styles and sizes, and the Roman and Greek alphabets. You can create your own fonts and scientific symbols. The program offers on-screen composition of text with formulas and symbols, definable and recallable composite symbols and macros, five text levels for each line, on-screen tutorials, and nine help menus. *Volkswriter Scientific* is a page-oriented word processor with on-screen hyphenation, underlining, and boldface. List price: \$495. Requirements: 256K, two disk drives, DOS 2.00 or later version.

Lifetree Software Inc.
411 Pacific St.
Monterey, CA 93940
408/373-4718

Personal Editor

Designed for writing and editing short documents and programs, *Personal Editor* has features of more elaborate word processors. These include word wrap, text reformatting, global find and replace, and block move, copy, and erase. Each is executed with the function keys. *Personal Editor* lets you edit up to 20 files at a time, and its "storage file" saves up to five previous drafts. You can redefine up to 99 keys and key combinations to complement your editing style. List price: \$100. Requirements: 64K, one disk drive (128K for DOS 2.00 or later version or hard disk).

IBM

Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

MemoPlan, DocuPlan

Billed as an "electronic notesheet,"

MemoPlan lets you compose up to five documents at once, flipping among them with a keystroke. You can also edit two documents at once on a split screen, transferring parts of one document to the other. Text deleted accidentally can be recalled, and if power fails, *MemoPlan* automatically saves your file. The program supports proportional spacing and footnotes. A companion program, *DocuPlan*, formats long reports; its features include automatic footnoting, indexing, and table of contents generation. List price: *MemoPlan* \$195, *DocuPlan* \$295. Requirements: 64K, two disk drives.

Chang Labs
5300 Stevens Creek Blvd.
San Jose, CA 95129
408/246-8020

ThinkTank

An outline processor for organizing plans and strategies, *ThinkTank* lets you enter ideas in any order and expand on them later, opening multiple sublevels or collapsing them for a compact view of the whole. You can search or re-sort the entire outline and append up to 20,000 characters per heading at any level. The program is compatible with 1-2-3, *WordStar*, and *dBASE II*, among other programs. List price: \$195. Requirements: 256K, two disk drives.

Living Videotext, Inc.
2432 Charleston Rd.
Mountain View, CA 94043
415/964-6300

"ThinkTank offers an unusual and effective way to organize your thoughts. It is not quite a word processor. It's almost another category of software entirely. Using it is very natural and easy. I will be using ThinkTank extensively this year in preparing a course, and I'm delighted with it." David A. Basskin, Toronto, Ontario, Canada

forMATH

A text formatter for mathematic writing, *forMATH* lets you prepare technical articles, books, and theses using special formatting and 94 Greek and math symbols. *forMATH* automatically sizes and places matrices, ratios, summations, and integrals with any size brackets, braces, and radical signs. You can redefine any symbol or format. The program automatically numbers bibliographic references, chapters, subsections, equations, tables, and cross-references. It supports macros, same-page footnotes, tables of contents, indexes, tabs, and justification. *forMATH* can be used with any text editor. List price: \$400. Requirements: 64K, one disk drive.

Shantha Software, Inc.
50 W. 97th St. #11N
New York, NY 10025
212/222-7647

Spell

A proofreader for most text editors and word processors, *Spell* lists suspect words from a document and optionally marks them for you to correct. The program and its 50,000-word expandable dictionary fit into 31K of disk space. *Spell* works with *WordStar*, *Magic Wand*, and other word processors. List price: \$49.95. Requirements: 48K, one disk drive.

Software Toolworks
15233 Ventura Blvd.
Sherman Oaks, CA 91403
818/986-4885

Bank Street Writer

First developed for the pupils at Manhattan's Bank Street School, *Bank Street Writer* displays relatively simple commands on a single menu. The expanded version for the PC and PCjr provides 80-column display, decimal tabulation, definable function keys, enhanced screen prompts, and expanded block moves as well as copy, replace, and format functions. It displays boldface and underlining on screen and supports other printer formatting commands. List price: \$79.95. Requirements: 64K, one disk drive.

Brøderbund Software
17 Paul Dr.
San Rafael, CA 94903
415/479-1170

Text 4.0

Prepare a text file with any text editor or word processor, then pass it through *Text 4.0* for additional formatting that other software may not allow. At print time special dot commands and escape sequences embedded in the text can call in boilerplate text from other files and produce right justification, pagination, underlining or boldface, centering, and headers and footers. *Text 4.0* prepares an index and table of contents. List price: \$39.95. Requirements: 128K, one disk drive.

Software Toolworks
15233 Ventura Blvd.
Sherman Oaks, CA 91403
818/986-4885

EasyWriter II System

Word processing, proofreading, and mail merge programs all work together to make the *EasyWriter II System* appropriate for business applications. Like dedicated word processors, *EasyWriter II* stores information by the page rather than on one long scroll. Function keys control all the editing options, which include delete, insert, substitute, boldface, and underlining. The program lets you use any type option the printer offers. *EasySpeller II* contains an 88,000-word dictionary, with optional legal and medical dictionaries, that checks spellings from *EasyWriter's* editing mode. *EasyMailer II* generates personalized form letters using all or part of a mailing list and can sort addresses by zip code. The *EasyWriter II System* interacts with others in the Easy Productivity Series, including *EasyFiler* and *EasyPlanner*. List price: *EasyWriter II System* \$395, with Webster's Medical Speller or Webster's Legal Speller \$525. Requirements: 128K, two disk drives.

Sorcim/IUS Micro Software
2195 Fortune Dr.
San Jose, CA 95131
408/942-1727

Gold Letters, Gold Writer

If you dislike writing letters or lack the time, *Gold Letters* provides you with 101 form letters to meet virtually any business contingency. Categories include credit collection, sales and marketing, credit terms, press releases, personal business, internal memos, and customer, employee, and shareholder relations. The letters come formatted for printout by your word processor. If you have none, *Gold Writer* (on the same disk) provides enough word processing power to plug names, addresses, and other elements into the prewritten letters. An index and hard copies of the letters are included. List price: \$159. Requirements: 64K, one disk drive.

Data Base Industries
330 W. Felicita Ave. #D6
Escondido, CA 92925
619/480-9616

The Word Plus

Not only does *The Word Plus* find misspellings, but it also corrects spellings and hyphenations while automatically matching capitalizations in the text. A 45,000-word dictionary comes with the program, expandable to disk capacity. An automatic correction feature edits your draft for style, changing *I'll* to *I will* or *utilize* to *use*. *The Word Plus* can find rhyming words and solve anagrams. The program works with most word processors, including *WordStar*, *Magic Wand*, *Vedit*, *Mince!*, *Scribble*, *WordMaster*, and *Electric Pencil*. List price: \$150. Requirements: 64K, one disk drive.

Oasis Systems
2765 Reynard Way
San Diego, CA 92103
619/291-9489

"Punctuation" & Style

Everything from simple punctuation errors (such as misplaced commas and unbalanced quotes) to stylistic gaffes (such as wordiness and clichés) can be found and rectified with *"Punctuation" & Style*. This electronic copy editor marks errors directly in a file or ignores them if you choose. The program recognizes more than 500 types of literary lapses, including awkward or muddy phrasing, folksiness, pomposity, and redundancy. List price: \$125. Requirements: 64K, one disk drive.

Oasis Systems
2765 Reynard Way
San Diego, CA 92103
619/291-9489

Lettrix

A formatter that improves printouts, *Lettrix* allows Epson or IBM printers to print letter quality text in pica or elite and with proportional spacing, italics, underlining, boldface, expanded or compressed characters, and subscripts and superscripts—all from the existing word processor or spreadsheet. Working at 25 percent of the printer's top speed, *Lettrix* prints any of six typefaces: Courier, Gothic, Orator, Old English, Broadway, or Greek. It also allows you to use the entire IBM character set—including French, Spanish, Ger-

man, Italian, and scientific characters—and to design other symbols on a graphics or monochrome screen. A key-stroke switches back normal high-speed printing. List price: \$98.50. Requirements: 128K, one disk drive.

Hammerlab, Inc.
7301 Yale Station
New Haven, CT 06520
800/351-4500, 212/265-8100 New York

"Lettrix offers letter quality print using dot matrix graphics from a word processor or spreadsheet. Any program that prints standard ASCII files to disk can be used. You can add your own font."

Robert Price, State College, Pennsylvania

The Executive series

The six programs in *The Executive* series are designed to fill a range of word processing needs. With all the features of a dedicated word processor, *The Executive Secretary* lets you produce indexes, print on preprinted forms, merge mailing lists from outside data bases, send documents by phone, and use 60 embedded commands to produce a variety of formats. For less complex work, *The Personal Secretary* provides mailing list and form letter generation along with some other *Executive Secretary* features. *The Executive Speller*, an optional spelling checker for either word processor, has an expandable 15,000-word dictionary that displays misspelled words in context. *The Executive Footnoter* adds footnotes to documents created with many word processors. *The Executive Connection* lets your word processor use name and address records from your data base. *The Executive Cardfile* is a mail merge add-on for other word processors. List price: *The Executive Secretary* \$159.95, with *The Executive Speller* \$189.95, *The Personal Secretary* \$69.95, *The Executive Footnoter* \$69.95, *The Executive Cardfile* \$69.95, *The Executive Speller* \$49.95, *The Executive Connection* \$49.95. Requirements: 128K, one disk drive, Microsoft BASIC.

SOF/SYS, Inc.
4306 Upton Ave. S
Minneapolis, MN 55410
800/328-5727 ext. 105 orders,
612/929-7104 technical information,
800/742-5685 ext. 105 Minnesota

NBI Personal Computer Word Processor

Retaining most features of NBI's dedicated OASys word processors, the *NBI Personal Computer Word Processor* lets word processing personnel use personal computers with little or no retraining. Such features as six-level outlining, widow and orphan control, and an annotated disk directory are in both systems. However, this scaled-down version lacks the dedicated NBI's records processing and statistical math capabilities as well as its ability to display Greek characters. Businesses who own both dedicated NBIs and personal computers can use the program's file transfer utility to ferry documents via modem with original formats intact. List price: \$695. Requirements: 128K, two disk drives.

NBI, Inc.
3450 Mitchell Ln.
P.O. Box 9001
Boulder, CO 80301
303/444-5710

SuperWriter

A word processor with a form letter generator, *SuperWriter* uses simple commands to control the cursor, set up margins, insert and delete, and perform other editing tasks. It supports proportional spacing and prints multiple copies in nine intensities of boldface. With *SuperWriter's* mail merge feature, you can send custom form letters to all or part of a mailing list. The optional *Super SpellGuard* spelling checker checks your text against its 20,000-word dictionary. The 83,000-word *Random House Dictionary* can be added, as can others. List price: *SuperWriter* \$295, *Super SpellGuard* \$49.95. Requirements: 64K, two disk drives.

Sorcim/IUS Micro Software
2195 Fortune Dr.
San Jose, CA 95131
408/942-1727

Business Word Processor

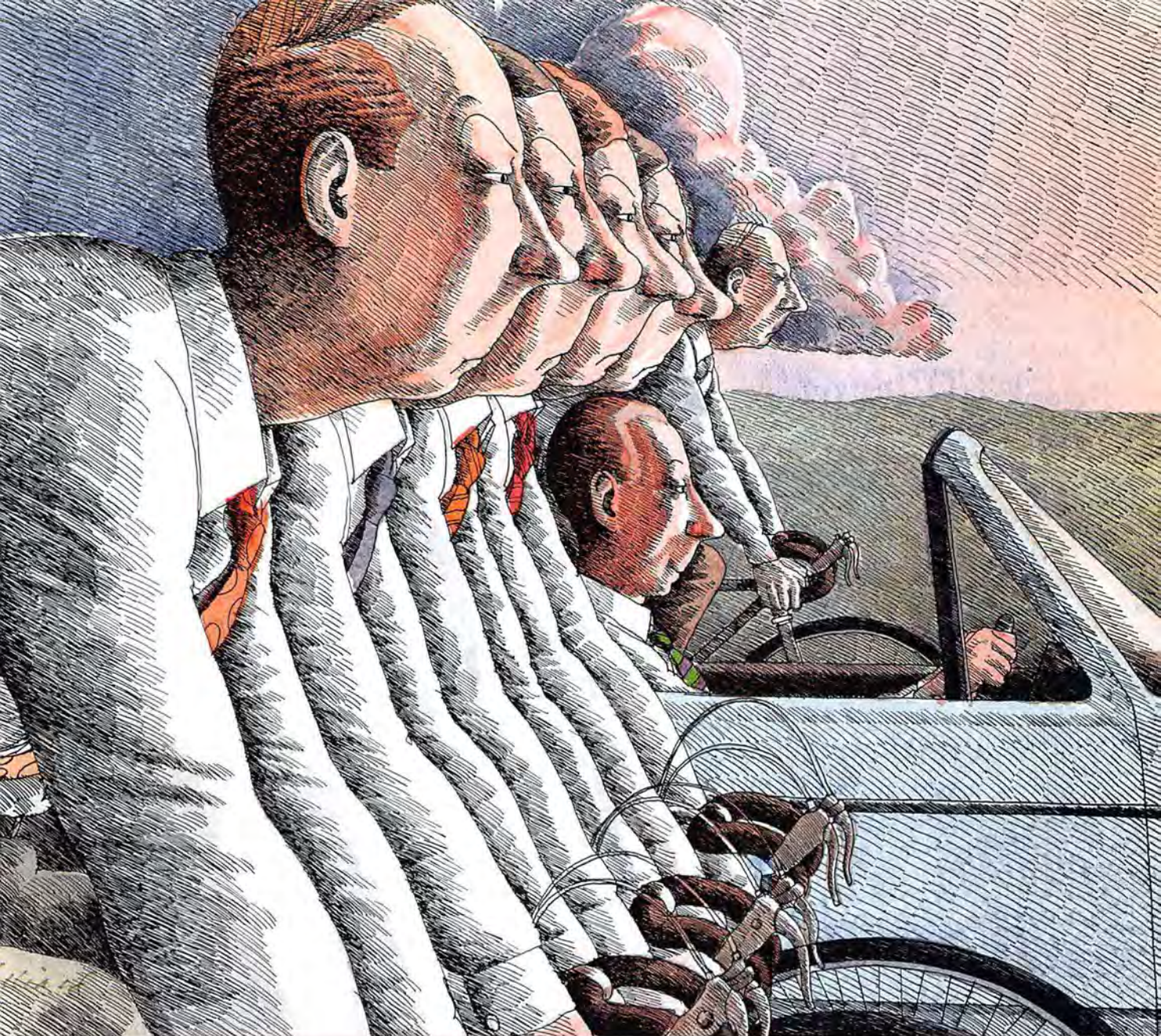
A word processor with a form letter generator and a built-in spelling checker, the *Business Word Processor* works with any Prentice-Hall accounting program. You can select accounting reports and integrate customer addresses and other information. On-line help is available. List price: \$250. Requirements: 128K, two disk drives.

Prentice-Hall
Englewood Cliffs, NJ 07632
201/592-2000

Forthwrite

To assist in layout visualization, *Forthwrite* uses a screen full of dots instead of a blank screen. Any character can be substituted to create other screen formats. *Forthwrite* provides wild-card search and replace capability and lets you delete by word, blank, sentence, paragraph, block, or page or to the end of text. You can customize such variables as cursor speed and scrolling distance. The program provides true proportional spacing, decimal tabs, and the ability to turn a tape recorder on and off for transcribing dictation. *Forthwrite* can share data with *Datahandler* and *Datahandler-plus*, programs from the same manufacturer. *Forthwrite* is written in FORTH and comes with source code. List price: \$175. Requirements: 64K, two disk drives, MMSFORTH.

Miller Microcomputer Services
61 Lake Shore Rd.
Natick, MA 01760
617/653-6136



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Seattle, WA 98188, (206) 824-9942

Circle 436 on reader service card

PC-Write, Version 2.2

Customized for the PC keyboard, *PC-Write* is a user-supported program that gives you basic word processing power and access to a printer's special features. The current version supports keyboard macros, multiple fonts, underlining, boldface, superscripts and subscripts, soft hyphenation, and DOS 2.00 directory path names. Subsequent versions will incorporate a mail merge capability and footnoting. Nine help screens summarize key functions and teach basic editing. Maximum file size is 19K for DOS 1.00 or 1.10, 7K for DOS 2.00 or a later version. *PC-Write* also runs on the PCjr. List price: \$10 handling fee (or free from other users) plus \$75 voluntary registration fee (\$25 of the registration fee is returned when someone else registers a copy of your disk). Requirements: 64K (128K recommended), one disk drive.

Quicksoft

219 First N #224
Seattle, WA 98109
206/282-0452

"PC-Write is easy to use and powerful. You can use macros, reassign keys, develop help screens, and move blocks. It does most of what the expensive programs do." Dr. Terry F. Pettijohn, Marion, Ohio

"I have found PC-Write convenient and efficient." Steven Barnes, Olympia, Washington

The Business Letter Library

Over 200 model business letters for sales, acknowledgments, complaints, thanks, credit, and collection come in *The Business Letter Library*. A search function helps you locate specific letters by selecting from menus. You fill in the blanks for dates, names, and amounts. You can also modify letters or write your own with the help of a KeyStyle feature, which lists items to be included. *The Business Letter Library* contains ASCII text files. List price: \$99.95. Requirements: 64K, one disk drive, a word processing package. Delta Point Corp.

711 W. 17th St. #B-10
Costa Mesa, CA 92627
714/642-1827

Spellbinder/Arabic

You can edit and print Arabic and English in the same document with *Spellbinder/Arabic*. No special keyboard is necessary because the program displays the correct form of an Arabic letter according to its position in a word. You can insert English text into Arabic and vice versa, and the program will display the English from left to right and the Arabic from right to left. The program includes most of the features of *Spellbinder*, including block moves, search and replace, an on-screen calculator, and keyboard macros.

Hyphenation is not required because in Arabic letters are stretched to justify margins. *Spellbinder/Arabic* displays 16 lines of text when used with the IBM Color/Graphics Adapter and 25 lines with the Hercules or Tecmar boards. List price: \$1200. Requirements: 64K; one disk drive; IBM Color/Graphics Adapter, Hercules Graphics Card, or Tecmar Graphics Master.

Lexissoft, Inc.
P.O. Box 1378
Davis, CA 95617
916/758-3630

Rainbow Writer

You can produce formatted color documents using the *Rainbow Writer* color text formatter with a word processor and a Dataproducts P-Series printer. Using plain English commands, you can change formats or adjust print features anywhere in a document. You can merge color text with color graphics. *Rainbow Writer* also provides word processing features such as word wrap, pagination, definable variables, macro capabilities, and mailing-list generation. List price: \$149. Requirements: 64K; two disk drives; Dataproducts SPG 80, P 132, or M 480 printer.

Applications Techniques, Inc.
80 Townsend St.
Pepperell, MA 01463
617/433-5201

Thor

A hybrid word processing program, *Thor* includes a text management system and a full set of ASCII-character graphics. You can create new files with New Thought, assign keyword titles with Categorize, search by keyword with State of Mind, review files with Brainscan, and combine thoughts for printing with Collect Thoughts. *Thor* can send files to other word processors. List price: \$295. Requirements: 128K, two disk drives. Fastware, Inc.

200 Freeway Dr. E
East Orange, NJ 07018
800/372-2345, 201/676-7963

Superfile

A free-format file management program, *Superfile* is designed for use with word processing text files. Up to 250 text file keywords can be cross-referenced. The program performs search and retrieval using logical operators and wild cards. You can sort as many as 99 files simultaneously, make replacements throughout files, and split or merge files. List price: \$195. Requirements: 128K, two disk drives.

Software Marketing Assoc.
4615 W. Beecaves Rd.
Austin, TX 78746
512/327-2882

"Superfile lets you search and retrieve text information with ease and speed. The program has an excellent user manual and provides powerful data handling." Fred Zahnow, Luling, Texas

"Superfile's manufacturer provides great support through telephone conversations. The program has flexible search routines but requires that even experienced users go through a complete series of menus for regular program use." Millard S. Cohen, St. Louis, Missouri

"Superfile has very fast retrieval and is excellent for filing letters, memos, reports, and annotated bibliographies." Anthony LaBruzza, Orange, New Jersey

FYI 3000

Writers, researchers, and attorneys can use *FYI 3000* for filing, cross-indexing, and retrieving word processing text. The program uses text in any format to cross-index on every word in a document or on separate keywords. It uses Boolean logic to retrieve information that matches the search request. Up to 128 words can be linked in a single search request. The program allows search and retrieval of information on as many as 255 floppy disks and also works on hard disk systems. *FYI 3000* manages up to 65,000 individual entries in a single filing system and works with any word processor text saved in standard ASCII or DOS files. List price: \$395. Requirements: 128K, two disk drives.

FYI, Inc.

4202 Spicewood Springs Rd.
Austin, TX 78755
512/346-0133

The Executive Assistant

A word processor, a spelling checker, and a time management program are included in *The Executive Assistant*. *The Writer* includes suppressible on-screen help menus, word wrap, search and replace, centering, and page breaks. It also offers insert or overwrite typing modes, justification, file chaining, headers and footers, and mail merge. *The Speller* includes a 15,000-word dictionary that can be supplemented with a definable word list. The program corrects spelling errors in any ASCII document. *The Calendar's* windows allow you to see and make changes to any day, week, month, or year on the monitor. Each program can be purchased separately. List price: \$99.95, each program \$49.95. Requirements: *The Writer* 64K (96K with DOS 2.00), one disk drive; *The Speller* 64K, one disk drive; *The Calendar* 128K, two disk drives.

Hayden Software, Inc.

600 Suffolk St.

Lowell, MA 01853

800/343-1218, 617/937-0200

Micro Indexing System

A menu-driven indexing program for books, periodicals, and newspapers, *Micro Indexing System* can handle 9000 records and is based on the indexing guidelines of *The Chicago Manual of Style*. The length of each entry is flexible within each data record. Punctuation is automatically inserted when entering data or creating the index format. Data and page references are automatically concatenated. Typesetting codes can be inserted automatically for direct transmission to a publisher. Several files can be joined using the optional *MIS Utilities* package for unlimited index size. List price: \$600, utilities \$100. Requirements: 128K, two disk drives.

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609/448-9152



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4410 RANCHWOOD LANE TAMPA, FLORIDA 33624

Advanced Productivity System—APS/Text

A text formatter, *Advanced Productivity System—APS/Text* compiles unformatted source text, typed by one or more authors, into a document. The program puts instruction tags in the text to specify headings, paragraphs, highlighted phrases, and other features and records the text in ASCII files. It formats the target document with respect to line length, page length, page numbers, margins, and other features. It also generates a table of contents and a list of figures and can embed footnotes in the source text. List price: \$250. Requirements: 192K, one disk drive.

Arrix Logic Systems, Inc.

P.O. Box 142

Don Mills, Ontario

M3C 2R6 Canada

416/292-6425

ZyIndex Standard Version, ZyIndex Professional Version

You can access information from large volumes of text located in any word processing program with *ZyIndex*. The program retrieves information from up to 1500 files, whether stored on hard disks or floppies. It conducts data searches by use of search topics up to 140 characters long. Topics are made up of words, phrases, and numbers from the original files and connectors such as *and*, *or*, *not*, *parentheses*, and *within*. The *within* connector lets you specify how close together two words must appear in a file for the search request to be satisfied. You can transfer data without reformatting or modifying original text files. The *ZyIndex Professional Version* offers the same features with ten times the capacity. List price: *ZyIndex Standard Version* \$145, *ZyIndex Professional Version* \$295. Requirements: 192K, two disk drives, DOS 2.00 or later version.

ZyLAB Corp.

233 E. Erie St.

Chicago, IL 60611

312/642-2201

Merge 'n Print

A mail merge program that allows you to merge boilerplate blocks and insert variables into form letters from the keyboard or a file during printing, *Merge 'n Print* generates custom labels and form letters when combined with *DataFiler* and *MBS Mailing Label Program*. The program provides boldface, underlining, start and stop printing from anywhere in the file, and conditional printing on two selection criteria. *Merge 'n Print* works with most popular word processors. List price: \$100. Requirements: 96K, one disk drive.

MBS Software

12729 N.E. Hassalo St.

Portland, OR 97230

503/256-0130

Letterform 1000

Designed for both beginning writers and experts, *Letterform 1000* is a collection of letters that can be edited with a word processor and printed. Sample letters cover accounting and collection, sales, legal, shipping, personal, educational, charitable, and general business topics. The manual covers reference information on headings, titles, forms of address, government abbreviations, Roman numerals, the metric system, punctuation, and computer terms. List price: \$95. Requirements: 64K, one disk drive.

PBL Corp.

P.O. Box 559

Wayzata, MN 55391

612/473-8998

File Search 3

An information manager for text, *File Search 3* indexes and retrieves filed information. The program can retrieve documents using partial search criteria, such as author, subject, date, or keyword. Applications include word processing, electronic mail, and indexing and filing of notes, articles, summaries, or bibliographic information. List price: \$195. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Data Technology Corp.

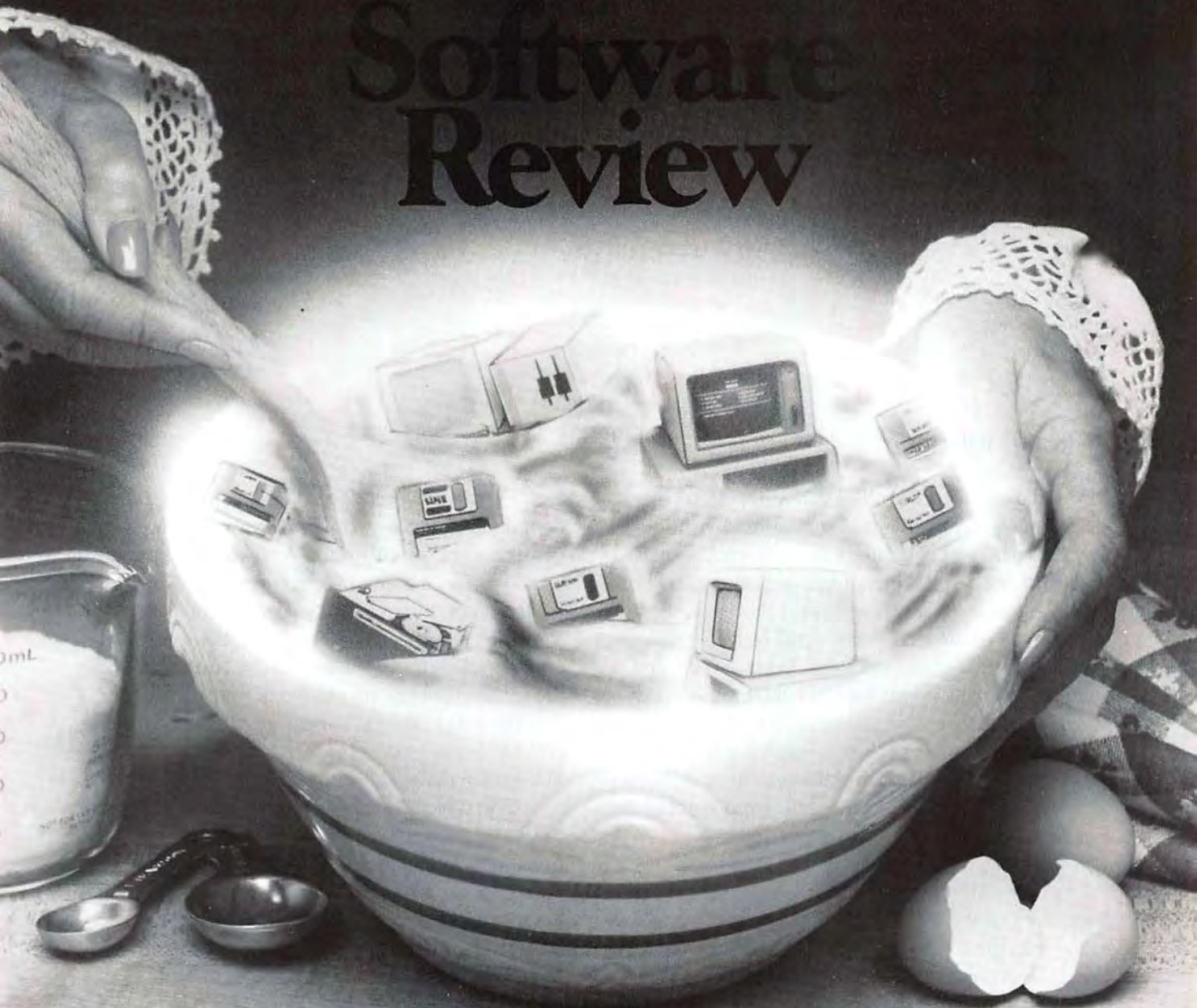
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Spreadsheets

Andrew T. Williams

More than any other kind of software, electronic spreadsheets have convinced the business community that personal computers are powerful business tools and not just the playthings of hackers and hobbyists. An electronic spreadsheet is the automated counterpart of an accountant's pad or ledger sheet, a blank electronic blackboard divided into rows and columns to create a vast field of cubbyholes called "cells." The blackboard can be used to determine relationships and solve problems involving numbers. Spreadsheets apply their problem-solving capabilities to the gamut of business situations, from reports and budgets to forecasts and profit-and-loss statements.

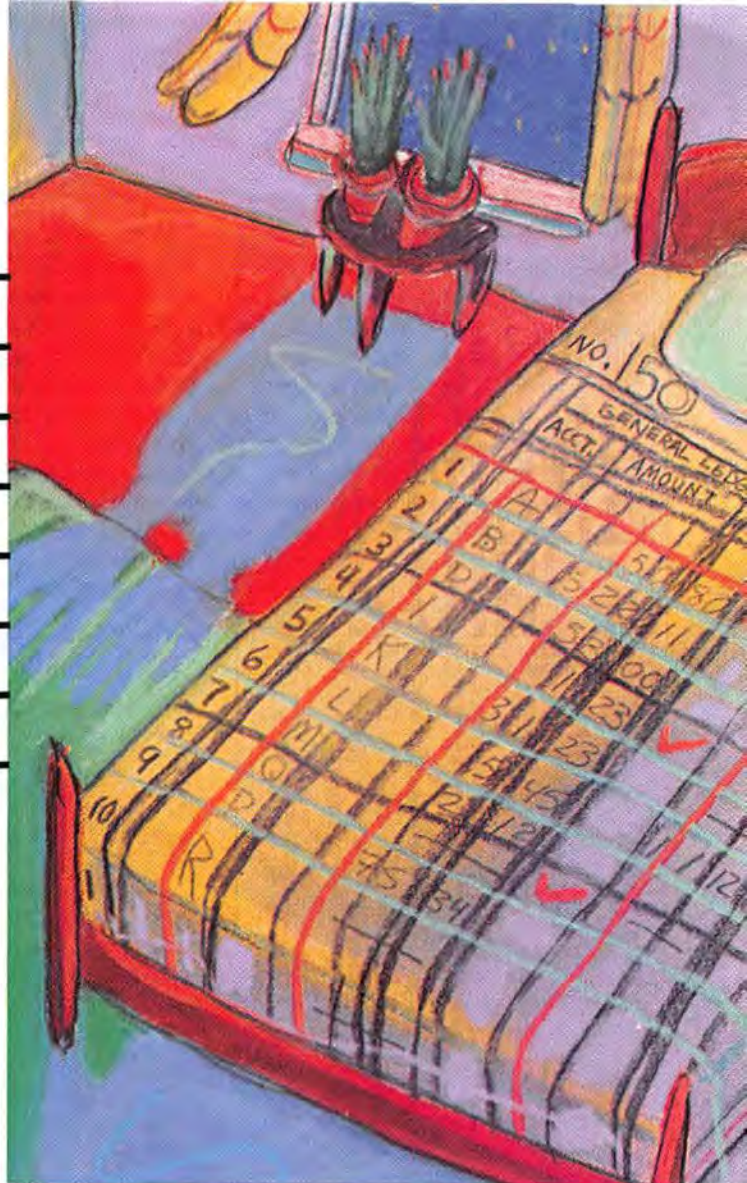
Three elements are behind the overwhelming popularity of the electronic spreadsheet as a business tool. First, the screen layout of columns and rows closely resembles the design of the spreadsheet's manual counterpart, presenting a format familiar to even the most reluctant computer novice. Second, there's a direct connection between the words, numbers, or formulas you place in the cells and what appears on the screen. Put another way, constructing an electronic spreadsheet is concrete rather than abstract. Finally, the spreadsheet gives you instant feedback. Because you can see each entry on the screen as it's entered, you can correct it immediately if it's wrong.

In addition, a spreadsheet program automatically calculates a formula or a function, then displays the results. You can change assumptions as often as you like in order to quickly answer "what if" questions.

Every electronic spreadsheet contains a set of commands (such as Copy, Move, and Format) to construct and modify data. A spreadsheet program usually offers a menu of letters or words from which you select commands and make the choices needed to complete a specified command. You also need commands to move the worksheet cursor around the screen. Because an electronic spreadsheet exists entirely within the PC's memory, the program must provide a way to generate printed copies and save files for later use.

The typical spreadsheet program includes a library of functions that perform routine computations such as adding a set of numbers, finding an average, or determining the largest or smallest number in a range. More sophisticated programs calculate standard deviations and variances; financial functions such as net present value, internal rate of return, and mortgage payments; and functions that display the current date on a worksheet and permit you to do calculations involving dates.

To improve the clarity and professional appearance of a spreadsheet, a program should offer a variety of easy-to-use format options. Spreadsheets should be able to display currency denominations, negative numbers in parentheses, and numbers as integers to a specified number of decimal places. Programs should also include formats that align labels to the left, right, or center of a cell. The better programs provide "soft" cell boundaries, which allow text to extend beyond the border of a cell (useful when entering long labels).



Many spreadsheets feature timesaving keyboard programs (variously called macros, typing alternatives, or execute commands) that allow you to devise and execute a given sequence of keystrokes, thus automating repetitive tasks. Keyboard programs can also be created to perform a complex series of commands without the risk of error.

You might also want to look for a spreadsheet program capable of translating files created by other programs (such as *dBASE II*) into spreadsheet files. Some programs can also import standard text files created by a word processing program directly into an electronic spreadsheet. Other programs can assign names, in words, to ranges or sets of cells. This naming feature lets you construct comprehensible formulas and specify ranges, such as print ranges, that are defined once but are used repeatedly.

Today's electronic spreadsheets have evolved far beyond the first simple version of *VisiCalc*. Two trends now dominate the field, typified by *1-2-3* and *SuperCalc 3*. Both spreadsheet programs have been augmented with data management and graphics capabilities. Compared with a package such as *Symphony*, which integrates many tasks, these programs are easy to learn and use. Still, they offer all the commands, functions, and conveniences anyone using a spreadsheet would want.

The other trend is toward the "program family" that promises upward compatibility. Spreadsheets created with a simpler program in the family can be used with its more sophisticated members. In addition, commands and procedures learned for the less complex program work just as well with the heavy-duty members of the clan. The *SuperCalc*

family and the Lotus duet are examples of this emerging direction in software.

The development of program families is particularly important now that prices of entry-level software are decreasing. As more manufacturers follow suit, it will be easy to purchase a program with the features you require today and then move up as your needs expand. Stand-alone spreadsheet packages haven't been forgotten, either; they're packing more features and flexibility even as they drop in price. And that's good news for anyone with a personal computer.

Andrew T. Williams is a Contributing Editor for PC World. His latest books include The Know How Guide to SuperCalc 1, 2, and 3 and 1-2-3 From A to Z.

Multiplan

With its data sorting feature, *Multiplan* can be used as a simple data base manager as well as a 255- by 63-cell worksheet. Spreadsheets can be linked, allowing automatic updating of one spreadsheet by another. *Multiplan* provides for varied formatting of the display and reports, and includes window commands that show multiple windows in color. The program features help menus, protected cells, individual column widths, and print options. List price: \$195. Requirements: with DOS 1.10 64K, one disk drive; with DOS 2.00 or 2.10 128K, one disk drive. Microsoft Corp.

10700 Northup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088
Alaska and Washington

"Multiplan is easy to learn, easy to teach, and requires fewer keystrokes than VisiCalc or 1-2-3 to accomplish a given function." Laurence Wingerter, Jr., San Antonio, Texas

"Multiplan is a powerful program, and I wouldn't use anything else. However, it is very slow when more than one screen full of columns is used. External Copy and Use are unique and useful, but there is no provision for a global unlink." Ken Gardner, Laguna Niguel, California

ScratchPad Plus

Featuring a virtual memory system, *ScratchPad Plus* allows unlimited window splitting and flexible grid dimensions (up to 999 units in either direction). Other program features include consolidation and merge functions, title locking, and built-in sum, sine, cosine, tangent, and square root functions. List price: \$195. Requirements: 128K, one disk drive.

SuperSoft, Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

Ezvisi

A *VisiCalc* accessory, *Ezvisi* converts direct (random) files into *VisiCalc* format and produces a *VisiCalc* model. The program reads fields selectively into columns and generates a reusable program. List price: \$70. Requirements: 64K, one disk drive, *VisiCalc*.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

VIS/Bridge/Sort, VIS/Bridge/Report

A *VisiCalc* accessory, *VIS/Bridge/Sort* sorts the rows or columns of *VisiCalc* spreadsheets. You can sort all or part of a worksheet, using up to five rows or columns as sort keys. Sorts can be in alphabetic or numeric and in ascending or descending order, and all expressions and references are preserved. *VIS/Bridge/Report* is designed to improve the report-printing capabilities of *VisiCalc* and provides all the capabilities of the advanced version of *VisiCalc*. List price: *VIS/Bridge/Sort* \$89, *VIS/Bridge/Report* \$79, Requirements: 64K, one disk drive, *VisiCalc*.

Solutions, Inc.
13 State St.
P.O. Box 989
Montpelier, VT 05602
802/229-0368

Peachtree Connection

You can make spreadsheet templates for *VisiCalc*, *Multiplan*, or 1-2-3 with *Peachtree Connection*. The program reads *Peachtree General Ledger* data disks and builds a comprehensive data base. Templates are preformatted to include report titles, column headings, and total and subtotal formulas. List price: \$175. Requirements: 64K; two disk drives; *Peachtree General Ledger*; *VisiCalc*, *Multiplan*, *BPT*, or 1-2-3.

Sofstar, Inc.
1330 S. Killian Dr. #2
Lake Park, FL 33403
305/848-7054

Viz-a-con

You can consolidate a series of spreadsheets into multilevel summaries with *Viz-a-con*, which combines multiple "pages" of data from a model, sums the corresponding cells, and uses the labels from a format file. *Viz-a-con* makes summations over periods of time or consolidations by organizational divisions such as departments or companies. Information from up to 4000 reports with similar spreadsheet parameters can be consolidated without replicating the model in memory or building formulas to sum the cells. List price: \$139.95. Requirements: 64K; one disk drive; *VisiCalc*, 1-2-3, *Multiplan*, or *SuperCalc*.

Abacus Associates
6565 W. Loop South #240
Bellaire, TX 77401
713/666-8146

Viz-a-merge

Designed to cut and paste sections of spreadsheets, *Viz-a-merge* automatically forms new reports and reorganizes existing ones. *Viz-a-merge* combines sections, rows, columns, or single cells based on your answers to a series of questions. Information from up to 1500 reports can be merged during one session. A math option allows addition, subtraction, multiplication, or division of the data being "pasted" into a report. You can set up a system of individual reports based on any number of models. List price: \$139.95. Requirements: 64K; one disk drive; 1-2-3, *VisiCalc*, or *Multiplan*.

Abacus Associates
6565 W. Loop South #240
Bellaire, TX 77401
713/666-8146

PlannerCalc

A spreadsheet with English syntax for program operations, *PlannerCalc* lets you add comments to program commands and perform calculations using conventional mathematical logic. The program includes 25 worksheets for home, business, and professional applications such as personal budgeting, calculating mortgages, and lease-versus-purchase analysis. List price: \$99. Requirements: 128K, one disk drive, DOS 2.00 or later version. Also distributed by IBM.

Comshare

5901-B Peachtree-Dunwoody Rd. #275
Atlanta, GA 30328
404/391-9012

Plan 80

A financial modeling system, *Plan 80* uses English prompts and names instead of numbers to address rows and columns. Spreadsheet functions include table lookup, consolidation, and "what if" analysis. Financial functions include depreciation, net present value, amortization, internal rate of return, and accelerated cost recovery. *Plan 80* adds, subtracts, multiplies, divides, and performs trigonometric and IF... THEN... ELSE functions. List price: \$295. Requirements: 128K, two disk drives.

Digital Marketing Corp.
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

"Very good product, especially at the price. Allows complex consolidations, linking, and 'Master' models and row files, reducing duplicate file models for slight variations on report formats. It also has good documentation." Walter F. Travers, Canoga Park, California

Target Financial Modeling

Using English syntax for program operations, *Target Financial Modeling* offers a report writer, variable column width, multiple model consolidation, automatic formula replication, and forward referenc-

ing. It has a maximum size of 1000 by 5000 cells. The program includes on-line help and lets you build models that prompt for data during calculations. List price: \$325. Requirements: 128K, one disk drive.

Comshare

5901-B Peachtree-Dunwoody Rd. #275
Atlanta, GA 30328
404/391-9012

CalcStar

A 255-row, 127-column spreadsheet program with column and decimal width variation, *CalcStar* offers conditional logic and advanced math capabilities. An automatic forms mode lets you designate a specific cell pattern for the cursor to follow. Data can be printed in text file format and merged or edited with *WordStar*. *CalcStar* provides business forecasting functions, password protection, and a choice of up to six colors for custom formatting. List price: \$195. Requirements: 128K, two disk drives.

MicroPro International Corp.

33 San Pablo Ave.
San Rafael, CA 94903
415/499-1200

PlanStar

A financial modeling program, *PlanStar* offers financial analysis and forecasting beyond basic spreadsheet capabilities. The program uses English calculation commands rather than formulas, consolidates up to 1000 spreadsheets per project, and has a capacity of over 32,000 cells per spreadsheet. Data is stored separately from worksheets, eliminating replication of entries. Financial functions include net present value, internal rate of return, amortization, and moving averages.

PlanStar allows arithmetic calculations between spreadsheets, generates up to 14 reports for any spreadsheet, and produces graphs such as bar charts and line plots. The program writes text files for use with *WordStar*, accepts input from data files, and reads DIF files. List price: \$695. Requirements: 128K, two disk drives.

MicroPro International Corp.

33 San Pablo Ave.
San Rafael, CA 94903
415/499-1200

Virtual Planner

Functioning as a general-purpose spreadsheet calculator, *Virtual Planner* provides mathematical capabilities including exponentiation, standard deviation, minimum and maximum selection, and net present value computations. Data and formulas can be entered into single or multiple locations with one command. Conditional statements such as IF... THEN... ELSE can be used in a model, and the program handles text across multiple columns.

Multiple formats for 50 reports can be defined from a single worksheet. Reports can include, exclude, or duplicate any row or column in the matrix. *Virtual Planner* generates both bar and cluster graphs from values in the worksheet. List price: \$295. Requirements: 192K, two disk drives.

SOLVation, Inc.

150 Flanders Rd.
Westborough, MA 01581
617/366-6621

Medallion Spreadsheet

A financial planning tool, *Medallion Spreadsheet* offers 48 mathematical functions, including net present value, internal rate of return, and linear regression. The spreadsheet has up to 200 rows and 100 columns. The program allows split-window viewing, merges worksheets, handles variable column widths, sorts by row, and produces bar graphs. Reports include cash flow comparisons, expense statements, depreciation schedules, tax tables, balance sheets, income statements, and analyses of sales, loans, unit price and volume, and growth rate. List price: \$195. Requirements: 192K, two disk drives.

Timberline Software

7180 S.W. Fir Loop
Portland, OR 97223
503/644-8155

ProCalc

The *ProCalc* worksheet comes with a separate text processor on the same disk and includes a calculator function. Spreadsheet functions include single-cell as well as data-channel linking, partial row or column insertion and deletion, variable column widths, and numeric formatting. Up to six windows can be used, and up to four can be viewed at one time. *ProCalc* can be used as a data management program, retrieving and sorting data from lookup tables. List price: \$275. Requirements: 64K, one disk drive, UCSD p-System. Software Products International 10343 Roselle St., Ste. A San Diego, CA 92121 619/450-1526

SuperCalc, SuperCalc 2

With single-key on-screen help, *SuperCalc* provides variable column widths and text fields that can extend into adjacent blank cells. The program creates a 254- by 63-cell worksheet with two windows and performs "what if" calculations on up to five years of data. It saves files in a format compatible with *WordStar* and has copy commands that adjust formulas. A color display draws attention to protected fields and negative numbers.

SuperCalc 2 is an expanded version of *SuperCalc* that provides sorting, automatic merging and consolidation, in-line editing, variable column widths, adjustable decimal places, and protected cell areas. Other functions include comma-separated values, a calendar, tab and template capabilities, and the ability to view all formulas simultaneously. The package includes the SuperData program, which exchanges ASCII files between *SuperCalc 2* and other programs. List price: *SuperCalc* \$195, *SuperCalc 2* \$295. Requirements: 64K, one disk drive. Sorcim/IUS Micro Software 2195 Fortune Dr. San Jose, CA 95131 408/942-1727

The Planner

With help screens available at all times, *The Planner* is a spreadsheet that contains as many as 16,320 cells, arranged as 64 columns and 255 rows. The program features named cells or cell blocks, protected cells or cell blocks, and functions to move and copy blocks. It can join spreadsheets and perform mathematical functions. List price: \$99.95. Requirements: 128K, one disk drive. Hayden Software, Inc. 600 Suffolk St. Lowell, MA 01853 800/343-1218, 617/937-0200

VisiCalc, VisiCalc IV

A planning and forecasting package, *VisiCalc* creates a 254- by 63-cell worksheet. The program provides for replication, automatic recalculation of all values and formulas, and evaluation of "what if" scenarios. Worksheets can be divided into two windows to permit simultaneous manipulation of different sections of the table. Cursor controls permit scrolling in four directions.

A combination of *VisiCalc* and a program previously called *StretchCalc*, *VisiCalc IV* provides keyboard redefinition, sorting, and graphics. The program builds four types of charts—bar, stacked bar, pie, and high/low/close—and four types of graphs—line, scatter, dot, and area. The Keysaver command lets you recall the last 80 characters entered and define them as a macro. Each file holds up to 66 macros; adding new files allows an unlimited number of macros. *VisiCalc IV* permits permanent and temporary sorting or rearrangement of rows and columns. The program includes a data base management system that lets you treat spreadsheet rows as records. List price: *VisiCalc* \$99, *VisiCalc IV* \$250. Requirements: *VisiCalc* 64K, one disk drive; *VisiCalc IV* 192K, two disk drives. VisiCorp 2895 Zanker Rd. San Jose, CA 95134 408/946-9000

"VisiCalc IV's graphics are good, and the key macro feature is excellent." Bob Stephan, Pebble Beach, California

The Thinker

You can create large spreadsheets that can be transferred to word processing files by linking tables with *The Thinker*. Each table holds up to 14 columns and 60 rows, with nine characters per cell. Twenty tables can be linked in the 128K version. *The Thinker* creates numeric relationships with 16 mathematical functions, answers "what if" questions, and automatically recalculates values when one number is changed. Colors and intensities are variable. List price: \$75. Requirements: 64K or 128K, one disk drive. TexaSoft 1028 N. Madison Ave. Dallas, TX 75208 214/946-7912

"A cost-effective and easy-to-use spreadsheet." Patrick Ong, Daly City, California

PC-Calc

A general-purpose spreadsheet program, *PC-Calc* allows up to 255 rows and 26 columns. The program includes on-screen prompts, definable colors, and support for 40- or 80-column displays. Column widths are independently variable, and formulas can be up to 64 characters long with values up to nine decimal places. Options include printing of contents or formulas, recalculation by row or column, formatting for a cell or a range of cells, and column or row insertion, deletion, or replication. *PC-Calc* can exchange files with *PC-File III* data bases. List price: \$45. Requirements: 128K, one disk drive. Jim Button P.O. Box 5786 Bellevue, WA 98006 206/746-4296

"We're using PC-Calc to get familiar with spreadsheet concepts and capabilities. It works well for simple projects and is well worth the price." George L. Hopkins, Greensboro, North Carolina

"The 49-page instruction book is very clear." Paul Peak, Denver, Colorado

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EasyCalc

You can compute budgets and project investments, returns, and taxes with *EasyCalc*. The 52-column spreadsheet program provides pagination, on-screen help, variable column widths, natural logarithms, and global addressing. *EasyCalc* comes with four templates, including one for IRS Form 1040. List price: \$99.95. Requirements: 64K, one disk drive. Norell Data Systems Corp. 3400 Wilshire Blvd. Los Angeles, CA 90010 213/257-2026

BOS/Planner

A financial planning and modeling system, *BOS/Planner* offers "what if" analyses, budgets, cash flow forecasting, and other financial calculations. The worksheet contains up to 10,000 lines of 60 columns, with size restricted only by disk storage space. The program uses data files and includes consolidation, merging, and sorting functions. *BOS/Planner* operates on sets of rows and columns rather than on cells only. A graphics function allows tables to be printed or displayed for selected lines in a plan. List price: \$550. Requirements: 64K, two disk drives, BOS operating system. BOS National, Inc. 2560 Royal Ln. Dallas, TX 75229 214/484-2717

Format-1-2-3

A general-purpose utility routine, *Format-1-2-3* converts standard ASCII reports and data files for direct loading into 1-2-3 and *Symphony*. The program features function-key support, help messages, processing time estimates, color terminal support, and a real-time clock display. You can convert reports by identifying the source and destination files or by specifying variables or columns to be converted. List price: \$100. Requirements: 64K, one disk drive. Reliable Software P.O. Box 849 Marina, CA 93933 408/384-4005

3-Plus

A financial planning and forecasting template for building 1-2-3 spreadsheets, *3-Plus* is designed for users with a working knowledge of 1-2-3 who don't have time to develop models from scratch. *3-Plus* analyzes cash flow requirements and lets you enter revenue and expense details by location, product, or person. List price: \$289. Requirements: 256K, two disk drives, 1-2-3. Phoenix Consulting Group, Inc. P.O. Box 2951 Abilene, TX 79604 915/676-8208

UniCalc, Version 3.0

UniCalc, version 3.0, handles up to 16,322 numeric fields and texts in a 255-row by 64-column worksheet. Fields can be designed as calculations of other fields using arithmetic or relational operators. Field formats and column widths are variable. Functions include net present value, "what if" tests, and lookup tables. *UniCalc* includes on-line help. List price: \$195. Requirements: 64K, one disk drive. Lifeboat Assoc. 1651 Third Ave. New York, NY 10128 212/860-0300

COPE

A menu-driven modeling system, *Computerized Operations Planning and Engineering (COPE)* uses virtual memory for unlimited matrix size. The program includes a report generator that formats reports in any fashion, a goal-seeking function that searches the starting conditions for a desired end result, and automatic trend and regression analysis. *COPE* underlines all input variables and includes financial planning functions. List price: \$395. Requirements: 128K, two disk drives. Antech, Inc. 788 Myrtle St. Roswell, GA 30075 404/993-7270

MergeCalc

You can combine *VisiCalc* models with other models or constants, using *MergeCalc* to add, subtract, multiply, or divide. Segments of business records are added into a consolidated model using equations with up to ten levels of brackets. The menu-driven program handles up to 14 files on each pass, with no size limitation when files follow the same template and are on line during the pass. *MergeCalc* creates percentage and time-change reports, investment and variance analyses, and incremental sales reports. The program includes a currency converter. List price: \$125. Requirements: 96K, one disk drive, *VisiCalc*. Micro Decision Systems P.O. Box 1392 Pittsburgh, PA 15230 412/276-2387

Visualize

Providing hard-copy documentation of *VisiCalc* templates, *Visualize* includes file information, size statistics, and global parameters in each report. The four reports produced are Layout, which prints each cell and describes each process; Calculation, which sorts worksheet calculations by rows; Anomalies, which lists redundant format entries; and Map, which provides a summary of the spreadsheet. *Visualize* includes three annotated templates: Balance Sheet and Operating Statement, Check Register, and Cash Flow. List price: \$100. Requirements: 64K, one disk drive, *VisiCalc*. Norell Data Systems Corp. 3400 Wilshire Blvd. P.O. Box 70127 Los Angeles, CA 90010 213/257-2026

Freecalc

Simple formulas can be selected with a cursor for use in the user-supported *Freecalc* spreadsheet program. For beginners *Freecalc* provides three sample spreadsheets and a tutorial. Features for experienced users include an area for formula entry and the ability to handle unlimited expressions with as many nested parentheses as necessary. The spreadsheet has 100 rows and 25 columns. Suggested contribution: \$35; you can send a blank formatted disk and a postage-paid return mailer to receive a free copy. Requirements: 128K with DOS 1.10, 192K with DOS 2.00 or later version, one disk drive. Stilwell Software Products
16403 N. 43rd Dr.
Glendale, AZ 85306

Reports by Example

A report writer for *VisiCalc* or 1-2-3, *Reports by Example* does not require complex syntax and command structures. There are no commands to learn, and on-

line help screens are included. The program controls the format of cells, rows, columns, and pages of a report. *Reports by Example* works with more than 25 printers and can use font, type size, and print-quality features on a cell-by-cell basis. List price: \$89. Requirements: 128K, two disk drives. Solutions by Example, Inc.
375 Concord Ave.
Belmont, MA 02178
617/489-4740

ViewComp

With commands analogous to UNIX commands, *ViewComp* provides natural column and row addressing. It uses absolute or relative addressing modes, C-style definable macros, named expressions, and numeric, named, and computed coordinates. The program's Escape Works function allows you to reduce typed entries and cell location tracking. Data is stored in character file format, making *View-*

Comp compatible with other UNIX programs, such as UNIX editors and the "awk" utility. List price: \$395. Requirements: 256K, hard disk, UNIX or VENIX.

Unisource Software Corp.
71 Bent St.
Cambridge, MA 02141
617/491-1264

Electronic Spreadsheet

Designed for large-scale spreadsheet applications, *Electronic Spreadsheet* performs mathematical calculations in three dimensions with a descriptive file for each dimension. The program handles up to 2 million numbers. Reports can be printed with full-row descriptions and 6-line column headings. Intermediate text can be placed anywhere in a final report. *Electronic Spreadsheet* includes interspreadsheet communications, multiple indent levels, and audit trail capabilities. List price: \$1500. Requirements: 64K, hard disk.

American Planning Corp.
4600 Duke St. #425
Alexandria, VA 22304
703/751-2574

DocuCalc

A utility that works with a spreadsheet, *DocuCalc* prints *VisiCalc*, 1-2-3, and *Symphony* models in grid form and shows underlying equations for reference or explanation. The program includes seven formats with global details and forward reference warnings. Any size model can be documented. *DocuCalc* calculates the appropriate column spacing and grid size to print an entire spreadsheet, if required. It also reads spreadsheet files directly. List price: \$95. Requirements: 128K, one disk drive.

Micro Decision Systems
P.O. Box 1392
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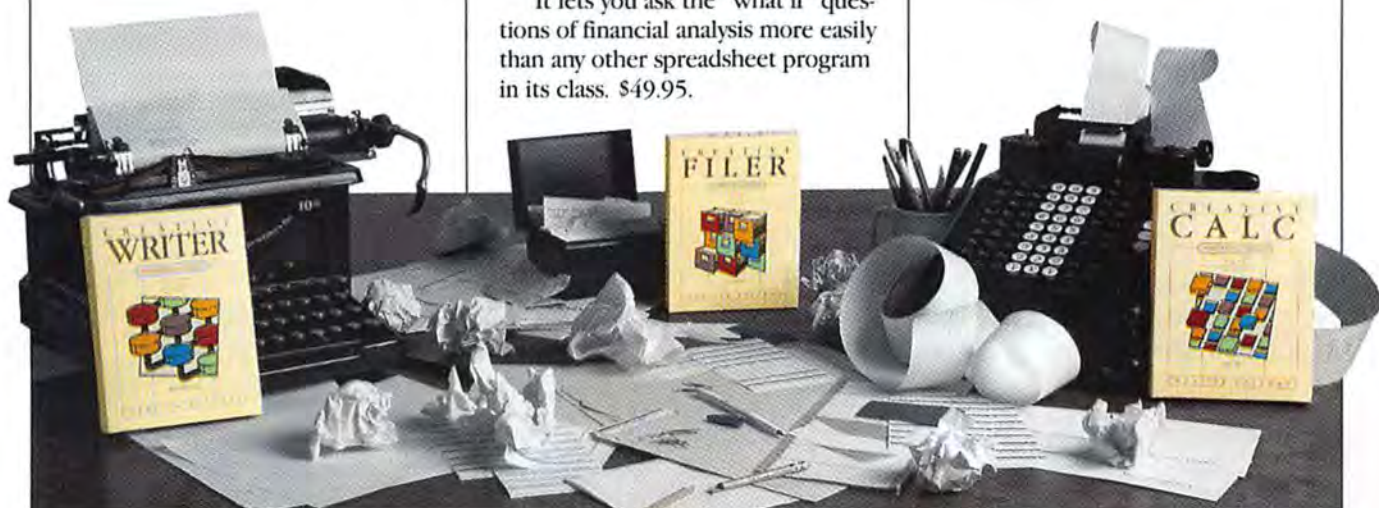
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Data Management

Warren Sirota

Data management programs are among an office's most important software purchases, and probably the most confusing. Programs wage war in the advertising pages based on capacities, sort speeds, and the colloquial character of their programming languages. Spreadsheet and integrated programs lay claim to the title of data base management system (DBMS) as well.

Data management software organizes data into three basic units: files, records, and fields. A card catalog in a library is an example of a nonautomated data base. The catalog itself is the file, which contains a record (a card) for each book in the library. Each card includes several fields of specific information, such as the author's name, the publisher, the Library of Congress classification number, and a description of the book. Every card includes the same fields.

In a library each card appears at least three times, once each in the title, author, and subject catalogs. In an electronic card catalog, or data base, only one copy of each card is kept on disk. You use the software to organize the data in any order.

A data management program exists to fill any data management need, from a simple electronic box of index cards for random notes to a complex inventory system for a small factory. Unfortunately,

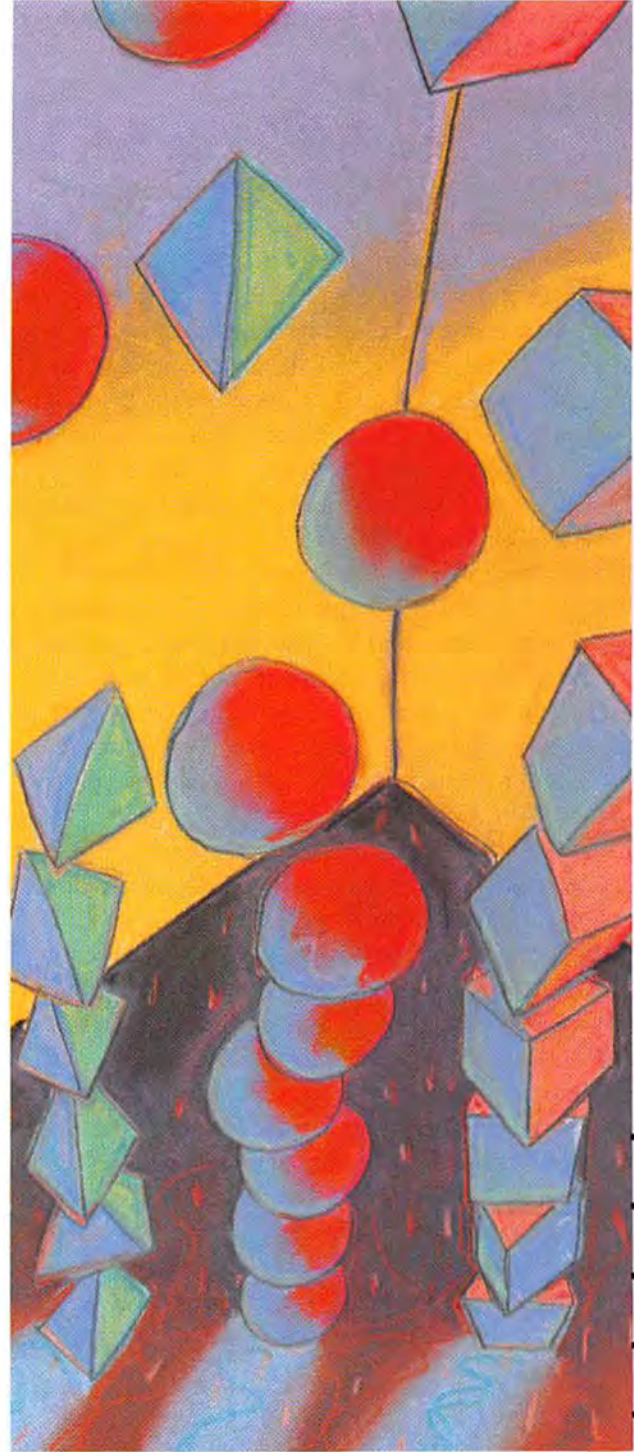
no single DBMS is the best product for all situations. Ease of use is the most important criterion for some applications, while power and flexibility are the priorities for more complex jobs. It is common to find several systems in use for different purposes on a single PC. For instance, while an executive might use a simple file manager for keeping a tickler file, the staff might use a professionally written application to track inventory, and an analyst in the organization might use a spreadsheet program to project inventory figures for the next year. Therefore, the ability to create files in a standard format that can be used by other programs is an important feature of a DBMS.

At one end of the data management spectrum are file managers, which generally handle the most basic data management tasks and emphasize ease of use; no programming knowledge is necessary to use them. File managers typically allow you to design a

template, or form, that defines the data to be entered. When you want to add records, the form is displayed on the screen, and you simply fill in the blanks with data. File managers generally include searching, sorting, and screening capabilities. These enable you to perform tasks such as finding the record for part number 17543, sorting a file alphabetically, or finding the names and addresses of all employees in Cleveland who are enrolled in Medical Plan C.

File manager systems are differentiated by capacity and ease of use. Capacity relates to the number of fields that can be stored in a record and the number of records that can be stored in a file; the trend is toward capacities so large that the typical user won't ever have to worry about them. Ease of use is a subjective judgment and can be determined only by a good 2-hour session with a program and its manual.

Most file managers lack two important features that more sophisticated systems provide. One is a programming language, which allows a programmer to tailor actions and screens to specific tasks. For example, an application written for a specific



task might present a menu choice to 'Enter an incoming shipment' rather than 'Add a record'.

A stripped-down version of a programming language, a macro language enables you to automate some simple tasks and can be a great convenience, but it does not give you the flexibility that a true programming language provides. For systems that don't provide a macro capability, separate keyboard macro programs may be a handy alternative.

The other advanced feature, critical to large applications, is the ability to relate data from different files. A company that has many repeat customers would waste disk space and risk error if customer address and credit information had to be reentered with each order. In a "relational" DBMS general information about customers can be kept in a separate file from records of specific orders. To produce reports and mailing labels, the DBMS can use information from both files at once.

Many traditional problems in data base management are quickly being solved. Systems are becoming more powerful as products written for mainframes are adapted to work on personal computers. Processing speed, sometimes excruciatingly slow, is becoming less of an issue; more powerful hardware is being used for larger applications, and established systems are continually being rewritten with more functions and greater efficiency (many software publishers offer inexpensive upgrades as new versions are released). Fourth generation programming languages allow programmers to create applications much more quickly and cheaply—a boon for businesses, since programmer time is generally more expensive than hardware for custom applications.

New ideas are adding to the usefulness of data management software; integrated business graphics will become a standard feature, and data management functions are already being integrated with word processing, spreadsheet, and communications software in single packages. Pull-down menus and graphic aids will make operating even the most complex DBMS easier as software designers turn their attention to improving the user interface. The line between the easy-to-use and the powerful is becoming thinner. Within the next few years, choosing data management software will no longer be a matter of bravely taking on complexity for the sake of features but of simply choosing the features you need.

Warren Sirota is a data base consultant in Oakland, California. He has programmed several projects for PC World.

PC-File

A data management program, *PC-File* offers simple math calculations on fields, search options to locate data, sorting, merging of files, and exporting of files to spreadsheet and word processing programs. You can update and delete large quantities of data in one operation. The program's files hold up to 10,000 records each. A browse mode shows you one line per record for 20 records at a time and lets you scroll forward and backward through all records. *PC-File* is menu-driven with full-screen data entry and leads you through each step of file creation and report or screen formatting. You can back up, copy, and delete files without exiting the program and assign data or commands to keys for use during file editing. List price: \$49. Requirements: 128K, one disk drive.

Jim Button
P.O. Box 5786
Bellevue, WA 98006
206/746-4296

"You would have to look long and hard to find a more practical and flexible system for anywhere near the price. I've used it for conference preparation, household inventory, birthday and telephone lists, business contacts, and a host of other applications. PC-File is great news for beginners on a limited budget." Dr. Mary L. Winningham, Columbus, Ohio

"PC user groups in Boston, Washington, D.C., and New York are enthusiastic about PC-File." Davis Carter, Gloucester, Massachusetts

"One of the best-supported software packages available." James E. Love, Topeka, Kansas

Info-Gen

Applications from mailing lists to inventory systems can be generated with *Info-Gen*, a data management system and application generator. The menu-driven program lets beginners create, edit, and report files and design data entry screens. Totals, subtotals, and simple calculations can be performed on field data. A query function lets you select data using English-like statements. *Info-Gen* includes a limited report-writing capability and a

help facility. List price: \$245. Requirements: 64K, two disk drives.

Info-Pros, Inc.
2102 Business Center Dr.
Irvine, CA 92715
714/851-8975

Golden Retriever

A data management program for librarians and researchers, *Golden Retriever* is also designed for anyone who needs to store and retrieve large amounts of information. The program uses logical operators in searching for keywords throughout fields in a file. Files can be sorted or indexed, and two report formats are available: a catalog format that shows record fields, with or without tags, formatted in columns on a page; and a reference format that suppresses field labels and prints data in a block format with commas between fields. List price: \$1800. Requirements: 128K, hard disk. Cooperative Library Agency for Systems and Services

1415 Koll Circle #101
San Jose, CA 95112-4698
408/289-1756

EazyFile

You can search for words or phrases across all data categories in all files with *EazyFile*, an electronic file cabinet with a comprehensive search function. The program displays or prints a report listing all occurrences of the searched-for items. A limited full-screen editor lets you enter and edit text, using the PC editing keys. The system is suited for storing and organizing bibliographies, articles, receipts, recipes, and other non-field-oriented data items. List price: \$35. Requirements: 64K, one disk drive.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Next Systems' Manager's Data Base

You can access data through sorts and relational, logical, and conditional selections with *Next Systems' Manager's Data Base*. Field entries can be repeated from one record to the next with one keystroke. Help files are on line. File size is limited to 65,000 records of up to 504 characters and 50 fields each. The program is written and compiled in MBASIC, and a large portion of the source code is provided. *Next Systems' Manager's Data Base* is available in several configurations, including Order Entry/Accounts Receivable, Inventory, Mailing Lists, and Manufacturing Bill of Materials. List price: \$350, Manufacturing Bill of Materials configuration \$450. Requirements: 192K, 10MB hard disk.

Next Systems, Inc.
P.O. Box 2671
Toledo, OH 43606
419/475-0099

Savvy PC

A data base with a natural-language command system, *Savvy PC* helps you develop a variety of applications for relational data bases. The program offers search, indexing, data manipulation, and automatic new file and report design systems. Pattern recognition lets you communicate with the computer using your own words and phrases. *Savvy PC* scans each command for meaning and can accept misspellings and rephrasings of commands with which it is familiar. New words or phrases can be used as synonyms for existing names. The *Savvy PC* command language contains 200 words and phrases and can be expanded with your own words. Line numbering, syntax checking, loop indentation, and memory allocation are automatic. List price: \$395. Requirements: 64K, one disk drive.

Excalibur Technologies Corp.
800 Rio Grande Blvd. NW, Mercado 21
Albuquerque, NM 87104
505/242-3333

Mailing List I

You can sort and select records by any name or address fields for list or label printing with *Mailing List I*. The program has prestructured fields for addressee information, including phone number, attention line, date, and ten-digit zip code. The program prints single- or double-width labels on Epson and IBM printers. *Mailing List I* can print a master list of all records or a screened list of selected data. List price: \$49.95. Requirements: 64K, one disk drive.

Alphanetics Software
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

EZLabel +

A mailing label program that prints one-up or two-up pressure-sensitive mailing labels, *EZLabel +* uses predefined fields for entry and updating of record information. The program searches and sorts by last name, zip code, or record number and lets you define five single-character codes with each record. Field information can be repeated from one record to the next with a single keystroke. Files can contain a maximum of 2000 records. List price: \$49.95. Requirements: 64K, two disk drives.

Systemics
3050 Spring St.
West Bloomfield, MI 48033
313/851-2504

dB Window

An application generator, *dB Window* uses multiple *dBASE II* files and simultaneously processes up to five indexes per file. Since the free-form report generator does not restrict cursor movements, you can customize reports. *dB Window* can produce reports up to 160 characters wide. The menu-driven program includes an interactive query language designed for nonprogrammers. List price: \$249. Requirements: 128K, one disk drive.

Tylog Systems, Inc.
9805 S.W. 152nd Terrace
Miami, FL 33157
305/253-5942

Data Plotting Software

A data management package for engineers, statisticians, data analysts, and scientists, *Data Plotting Software* provides building blocks for creating customized data management programs. These programs can include output for data plotting and chart production. The disk has program modules written in BASIC for the PC; a book explains how to put modules together to create data management programs. Knowledge of programming is helpful. List price: disk \$29.95, book \$28.50. Requirements: 64K, two disk drives, color graphics board.

Kern Publications
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

"Data Plotting Software is very useful for analyzing lab test data. A good mathematics background is necessary to use the program." Hung-Yi Pao, Indianapolis, Indiana

Member

A mailing list program designed for clubs and groups, *Member* flags memberships about to expire and prints renewal notices and membership forms. In addition to name and address fields, the program allows up to 64 characters of supplemental information about each addressee. Up to 1000 names and addresses can be included on one list. List price: \$80. Requirements: 64K, two disk drives.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Info-Reporter

A menu-driven report writer, *Info-Reporter* works with standard BASIC files or the *Info-Gen* data base. The program reads and sorts files, calculates field values, generates up to five subtotals, and writes a report based on the data in the

file. *Info-Reporter* can be used with *Info-Gen* to produce report formats more complex than those *Info-Gen* produces. Up to four related files can be used at once with selected data fields for the report output. Help screens display all report format options. List price: \$125. Requirements: 64K, two disk drives.

Info-Pros, Inc.
2102 Business Center Dr.
Irvine, CA 92715
714/851-8975

DAX Plus

For extensive information storage and retrieval, *DAX Plus* offers a maximum capacity of 32,762 records and permits up to 1020 characters per record, 255 characters per field, and 255 fields per record. The program's Enquiry Processor understands and processes commands written in plain English. *DAX Plus* sorts, edits, creates subset files, counts, records, and prints reports and mailing labels. Reports can be reformatted by changing a command. The program includes a text editor to create data files. Text files can be formatted for letters and mass mailings. List price: \$549. Requirements: 128K, two disk drives.

SuperSoft, Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

DB-FABS

A data manager for creating files, forms, and reports, *DB-FABS* automatically updates indexed files for additions, deletions, and edits; when any file is altered, the program automatically changes all associated data files. The program allows up to 64 fields per file, 255 characters per field, 8160 characters per record, and a maximum of 65,535 records. *DB-FABS* can sort on up to ten fields, and fields can be indexed at any time. A run-time mode operates within BASIC. It can locate the cursor, change colors, and provide underlining and inverse video; you can use BASIC yet perform full-screen data manipulation. You can also convert BASIC data files to *DB-FABS* files and vice versa

with the run-time mode. List price: \$295. Requirements: 196K, two disk drives, DOS 1.10, BASIC (for run-time mode). Computer Control Systems, Inc. 298 21st Terrace SE Largo, FL 33541 813/586-1886

EazyMail

Prestructured screens for entering and editing addressee information can be displayed with the list management program *EazyMail*. Output includes mailing lists, one-up and two-up labels, and envelopes. When used with Miracle Computing's *Qusort* program, *EazyMail* can also sort, search, and select for specific record processing. List price: \$50. Requirements: 64K, two disk drives. Miracle Computing 313 Clayton Ct. Lawrence, KS 66044 913/843-5863

Please

Depending on the amount of storage in a system, the data management program *Please* can manipulate up to 99 fields per record and several million records per data base. A Quick List feature retrieves selected information from the data base. *Please* can import and export data from sources such as word processing programs, spreadsheets, and data base management systems like *dBASE II*. The program can also perform calculations and dial a record with a modem. Four templates help you shape output to specific needs. List price: \$349. Requirements: 128K, two disk drives. Hayes Microcomputer Products, Inc. 5923 Peachtree Industrial Blvd. Norcross, GA 30092 404/449-8791

Optimum

Designed to be used in a local area network, *Optimum* is an application development tool, an application host, and an information manager, providing a tu-

torial, help screens, and menus for beginners. Its programming language and dictionary editor help programmers create complex file relationships and applications. *Optimum* can handle up to 50 fields and 12,500 bytes per record and as many records as fit in 8MB. The program lets you open up to ten files simultaneously. Other features include on-line updating and retrieval, arithmetic operations with up to 14 places, cross-referencing, and record locking. The program also offers an English-like inquiry language that allows up to 14 levels of sorting and verb definition and can be changed or expanded. List price: \$595. Requirements: 128K, two disk drives. Uveon Computer Systems, Inc. 300 S. Jackson #250 Denver, CO 80209 303/831-7000

Database Management

You can manipulate data by filling in options on menu screens with *Database Management*. The program lets you design screens for data entry and inquiry. A report generator allows formatting of headers and footers, subtotalling, and totaling. Labels can be printed from standard or custom-designed formats. Each record can contain up to 14 fields and 255 characters. List price: \$145. Requirements: 64K, two disk drives. Data*Easy Data Consulting Group 12 Skylark Dr. #18 Larkspur, CA 94939 415/927-0990

Telephone Directory

Names, addresses, and telephone numbers can be kept in *Telephone Directory*. The program's prestructured fields include two telephone numbers, one date, and a 20-character comment per file. Four directories let you classify listings. You can browse backward and forward through files. List price: \$35. Requirements: 64K, one disk drive. Data*Easy Data Consulting Group 12 Skylark Dr. #18 Larkspur, CA 94939 415/927-0990

MAG/base 1, 2, 3

An upgradable data management system, *MAG/base* consists of three modules. *MAG/base 1* offers list management capabilities; *MAG/base 2* features file merge, calculations, and record selection capabilities; and *MAG/base 3* provides application development capabilities. The *MAG/base 1* module is menu-driven and has error-trapping features. Up to 999 fields per record are allowed, and the number of records in a file is limited by disk space, with a maximum of 999,999. Records can have up to 2500 characters. A report generator produces form letters and mailing labels.

MAG/base 2 has all the capabilities of the first module as well as a report-writing feature that allows field calculations, conditional selection of records, and sorting on ten key fields. The program allows definition of report headers, footers, control breaks, subtotals, and grand totals. An advanced report-writer option is available, permitting simultaneous processing of up to five files.

MAG/base 3 has all the features of the other two modules as well as menu definition, password protection, and a data management language for application development. List price: *MAG/base 1* \$295, *MAG/base 2* \$495, *MAG/base 3* \$795. Requirements: 128K, two disk drives. MAG Software, Inc. 21054 Sherman Way #305 Canoga Park, CA 91303 818/883-3267

Auto Dialer

A telephone data base designed for home or office, *Auto Dialer* stores over 1800 names and telephone numbers on a double-sided disk. With the Hayes Smartmodem, Smart-Cat modem, or compatible, *Auto Dialer* dials numbers automatically. It alphabetizes names and needs only a partial description to search for an entry. The program also stores and dials access codes. List price: \$49.95. Requirements: 64K, one disk drive, modem. Alphanetics Software P.O. Box 339 Forestville, CA 95436 707/887-7237

Subject Indexer

You can organize diverse data with *Subject Indexer*, building indexes on subjects ranging from family and friends to stocks and bonds. The program cross-references and produces lists by categories and sub-categories of data. Index records hold up to 64 characters in a free-form or four-field format. You can assign alphanumeric and numeric fields, summarize numeric data by month, and calculate subtotals and totals. *Subject Indexer* strings together separate indexes for listings. List price: \$34.95. Requirements: 64K, one disk drive.

Personal Software Co.
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

InfoStar

A data management program that lets users design data entry screens, *InfoStar* offers two levels of complexity for beginners and for experienced application developers. The program's files can hold up to 65,535 records; each record can hold up to 255 characters and can be assigned up to 25 key fields. The program can access 16 files simultaneously. *InfoStar* can produce a list and description of each field. You can restructure a data base by adding, deleting, and changing the order of the fields without reentering data or replacing the data base. A report generator prints selected records with headers, footers, titles, and page numbers. Print enhancements include boldface, underlining, superscripts, and subscripts. *InfoStar* can be used with MicroPro's *MailMerge* program to produce form letters. List price: \$595. Requirements: 96K, two disk drives (hard disk recommended).
MicroPro International
33 San Pablo Ave.
San Rafael, CA 94903
415/499-1200

F.C.M.

A mailing list program that can be used with several word processing programs, *F.C.M.* helps create custom applications with its menu-driven format. Mailing list and label components are included and can be edited and sorted by multiple fields. Files hold up to 25,000 records, and records hold up to 132 characters. List price: \$124.95. Requirements: 128K, one disk drive.
Arrays, Inc./Continental Software
11223 S. Hindry Ave.
Los Angeles, CA 90045
213/410-3977

MegaFinder

A filing system and report generator that works with *MegaWriter* and *MegaSpell*, *MegaFinder* uses one-key commands such as E for entering information and F for finding forms. The program lets you design forms by "painting" them onto the screen but also provides forms for home, business, and other uses. *MegaFinder's* indexes maintain files in up to four sorted orders, which can each be divided into five sublevels for more specific sorting. *MegaFinder* can select forms based on different criteria. List price: \$250. Requirements: 128K, two disk drives.
Megahaus
5703 Oberlin Dr.
San Diego, CA 92110
619/450-1230

Courtney Database

You can transfer data to or from word processors, spreadsheets, and graphics packages with *Courtney Database*. The program features multiple-field editing, posting from one file to another, and combining or separating of files. Specific codes trigger automatic entries; for example, when you enter a zip code, *Courtney Database* automatically enters the appropriate city and state. The program can print data on preprinted forms. List price: \$495. Requirements: 192K, two disk drives.
Courtney Business Systems, Inc.
710 W. Main
Arlington, TX 76013
817/265-2132

Form Manager

An electronic filing system, *Form Manager* also has arithmetic, trigonometric, and statistical capabilities. Data can be entered, updated, retrieved, and printed through custom-designed screens and reports. Error checking can be included for data entry tasks. The program makes full use of the PC's function and cursor keys. When used with the numeric and function keys, the <Alt> key provides editing functions for manipulating data. The program can handle up to 32,765 records per file. *Form Manager* also converts files between ASCII and DIF formats. List price: \$195. Requirements: 256K, two disk drives.
BIT Software, Inc.
1048 Nicklaus Ave.
Milpitas, CA 95035
408/262-1054

Formula II

A data management program, *Formula II* consists of building-block structures for creating files, menus, reports, and data processing operations. Your instructions allow the program to set up files and to define relationships among them. In addition to creating and reporting on files, the program lets you set up job streams so that menus can be linked for entering data and writing reports. A report format module lets you design screen and report formats. Text highlighting, underlining, and pagination are provided. A query language facility uses English commands. The program works with word processors and spreadsheets. List price: \$695. Requirements: 64K, for DOS 2.00 or later version 96K, two disk drives.
Dynamic Microprocessor Assoc.
545 Fifth Ave. #1103
New York, NY 10017
212/687-7115

PhD

A relational data base management system, *PhD* can work with Micro Business Applications (MBA) accounting programs, such as *General Ledger* and *Accounts Receivable*, or function as a stand-alone product. Predefined "views" of major MBA accounting files are included. *PhD* calculates totals, subtotals, and averages from information in the files and lets you view and report information in definable formats. The program's "virtual files" design makes data available to users from multiple files without taking up additional disk space. List price: \$495. Requirements: 256K, two disk drives. Micro Business Applications
12281 Nicollet Ave. S
Burnsville, MN 55044
612/894-3470

Sapana:Cardfile

The electronic filing system *Sapana:Cardfile* helps you store and retrieve information about new products, services, important ideas, conversations with customers, minutes of meetings, and speeches. Each entry has 11 prestructured fields. You can change the names and lengths of all fields and increase the number of fields to 24 using the EDLIN line editor. Each entry can include up to 255 lines of 60 characters each. *Sapana:Cardfile* lets you browse through data files and edit or delete the entries. You can search for numerical items by a given numerical value, by a given range of values, or by the complete possible range. The program also lets you search for non-numeric fields, such as author, by a given pattern or by the entire range. List price: \$195. Requirements: 128K, one disk drive.

Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

B.O.S.S.

An application development system, *B.O.S.S. (Business Oriented Software System)* includes data management and screen-formatting programs, data base utilities, and the MegaBASIC language processor. The menu-driven data management program includes B-tree indexing, multiple file processing, error checking, an inquiry subsystem, and a report generator. Selections are made through conditional, relational, and logical operations. Additional capabilities provide enhanced screen formatting for designing menus and input screens and a direct language interface. Advanced application developers and programmers can use the MegaBASIC language processor with the data management program and utilities to develop integrated applications. *B.O.S.S.* also provides automatic file and record locking in a multiuser or network environment. List price: \$990, multiuser or network system \$1895. Requirements: 192K, two disk drives. American Planning Corp.
4600 Duke St. #425
Alexandria, VA 22304
800/368-2248, 703/751-2574

Mail-Track-I With LetterMerge

You can maintain mailing lists and print labels and form letters with *Mail-Track-I With LetterMerge*. Record fields are prestructured and can be repeated with one keystroke. You can make selections for display or printing on any field. New addresses are automatically entered in zip code order and checked against existing entries for duplications. Suspected duplicates are displayed. Each file can hold up to 3000 records. The program runs on the PCjr as well as the PC. List price: \$49.95. Requirements: 128K, one disk drive.

Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

Datahandler

Since *Datahandler* uses only as much space as a field requires for stored characters, you don't have to specify the number of characters for each record field when you are setting up a file. You can sort on up to ten fields at a time in ascending or descending order. Record selection can be done on any field by using wild cards and numeric ranges. You can print one-up mailing labels and columnar reports with up to 255 characters per horizontal line. List price: \$59.95. Requirements: 64K, one disk drive, MMSFORTH. Miller Microcomputer Services
61 Lake Shore Rd.
Natick, MA 01760
617/653-6136

OmniBase

A data base management system with a built-in data manipulation language, *OmniBase* gives you almost all the capabilities of the Statistical Analysis System. The program, which has full-screen data entry and a full set of math functions, manipulates multiple data bases simultaneously; each data base can have any number of records and variables. *OmniBase* runs on UNIX and DOS and is designed to work with optional statistics and graphics packages (*OmniStat* and *OmniGraph*). List price: *OmniBase* \$720, *OmniStat* \$420, *OmniGraph* \$365. Requirements: 256K, two disk drives (hard disk recommended). Conceptual Software, Inc.
P.O. Box 56627
Houston, TX 77256
713/667-4222

UltraFile

File management, report writing, and graphics capabilities are combined in *UltraFile*. The program lets you browse forward and backward through files. You can highlight, sort, perform calculations on, and format selected records. The graphics component lets you create three-dimensional bar, circle, or area graphs that can be manipulated for financial projections. *UltraFile* exchanges data with most popular word processing and spreadsheet programs, such as 1-2-3, *WordStar*, and *VisiCalc*. List price: \$195. Requirements: 128K, two disk drives. Arrays, Inc./Continental Software 11223 S. Hindry Ave. Los Angeles, CA 90045 213/410-3977

Under-Control

Nonprogrammers can define data collection and reporting applications with *Under-Control*. The program automatically generates data entry screens from designated data fields. Menu prompts aid in the design of fields, reports, record selection, sort sequences on up to six fields, generation of new fields, summary totals, and report column headings. The program has a letter-writing feature that allows record variables such as name and address to be inserted into letters. Multiple files can be merged into a new file, and DIF files can be generated to exchange data with other programs, such as 1-2-3. List price: \$125. Requirements: 128K, two disk drives. A+ Software, Inc. 16 Academy St. Skaneateles, NY 13152 315/685-6918

Correspondence Management System

A mailing list program with definable fields, *Correspondence Management System* accommodates lists of up to 999,999 addresses. Up to 108 variables per address can be included and used for record retrieval before displaying or printing. A form letter feature is included, and 9999 letters can be produced from one file at a

single printing. Labels and reports can also be printed. List price: \$495. Requirements: 64K, two disk drives. American Business Systems, Inc. 3 Littleton Rd. Westford, MA 01886 617/692-2600

Pony Express, Pony Express XL

A mailing program, *Pony Express* produces mailing lists, labels, and phone lists. It has codes so that data (such as titles and cities, states, and zip codes) can be entered with a single keystroke. An auto-repeat command duplicates field entries from record to record. Information can be printed on labels up to five across or in single lines for master lists; multiple labels of each record can be printed. Sorting can be done by name, zip code, zip-name, or zip-address, and specified zip codes can be printed. The program's files can contain a maximum of 2800 records on one disk, and up to ten files can be merged. The program works with most word processors and includes a phone list option. A PCjr version of *Pony Express* is also available. *Pony Express XL* includes additional sort routines for commercial mailings or long lists. List price: *Pony Express* \$169, *Pony Express XL* \$238. Requirements: 64K, one disk drive. Computech 418 Yeshiva Plaza Lakewood, NJ 08701 201/364-3005

CDI/100

A relational data base manager, *CDI/100* helps you create a structure, build applications, and customize menus and procedures for those applications. The program offers a prompted interface for the novice, an enhanced BASIC language and compiler for writing applications, a full-screen text editor with word processing features, and utilities to transfer data between text and data base files. Other utilities allow additions to the program's data base dictionary, creation of custom menus, and storage of frequently used

procedures. *CDI/100* accommodates variable-length files, records, and fields that expand or contract depending on actual data storage requirements. List price: \$595. Requirements: 384K, two disk drives, DOS 2.00 or later version. CDI Information Systems, Inc. 1309 114th Ave. SE Seattle, WA 98004 206/455-5117

Mail Lists and Labels

A mailing list manager, *Mail Lists and Labels* sorts by any field and lets you print all or selected records based on definable codes. The program can print one- to three-up labels, oversize packing labels, and up to 999 copies of any label. Browsing backward and forward through a file is possible. List price: \$95. Requirements: 64K, two disk drives. Data*Easy Software Data Consulting Group 12 Skylark #18 Larkspur, CA 94939 415/927-0990

Revelation

A relational data base management system, *Revelation* includes an application generator, structured BASIC, and communications and terminal emulation capabilities. Applications created with the program are compatible with software running on mainframes or minicomputers under the Pick operating system. The program allows any number of files to be used and updated simultaneously. The number of records per file is limited only by disk space, with up to 65,000 fields per record and 65,000 characters per field. *Revelation* uses a report generator, a 255-character type-ahead buffer, a 64K printer buffer, and "data dictionaries" to organize data on the disk. The program works with the Intel 8087 math chip and comes with a *dBASE II* file converter. List price: \$950. Requirements: 320K, one disk drive, 8087 coprocessor. Cosmos, Inc. 19530 Pacific Hwy. S Seattle, WA 98188 206/824-9942

Data Entry and Edit

You can create custom screens for entry, delete, change, and inquiry functions with *Data Entry and Edit*. Records can contain up to 14 fields with up to 255 characters per record. The program lets you assign sort keys for record selection to view data and permits browsing forward and backward through files. File data created by this program can be used with word processing and other programs. List price: \$75. Requirements: 64K, one disk drive. Data*Easy Software
Data Consulting Group
12 Skylark #18
Larkspur, CA 94939
415/927-0990

The Address

You can use *The Address* to store, find, update, and delete addresses; print mailing labels; and otherwise manage your mailing lists. The program prints duplicate labels, a telephone directory, and labels or address ledgers sorted by name or zip code. It handles foreign addresses and 10-digit zip codes and can split or merge lists, search by full or partial name, and browse through files. Information can be retrieved by any combination of name, first and second address line, city, state, zip code, and phone number. List price: \$49.95. Requirements: 128K, one disk drive. Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

Mail-X

A mailing list program, *Mail-X* lets you determine the size of record and field variables such as number of lines and number of characters per label. The program has a report writer, a sort/merge package, and a field that indicates entry, last-used, or expiration dates on a label. *Mail-X* prints up to four labels across a page. A word processor module is optional. List price: \$198, word processor module \$58. Re-

quirements: 128K, one disk drive. Micro Architect, Inc.
6 Great Pines Ave.
Burlington, MA 01803
617/273-5658

Mail Master

A menu-driven list manager, *Mail Master* runs with word processing programs including *Multimate*, *EasyWriter*, *Benchmark*, *VolksWriter*, and *WordStar*. Fields for data entry are predefined except for a 4-character, definable code. Zip codes and state abbreviations are validated automatically during entry. A utility allows records to be copied or moved between disks. *Mail Master* has a recovery program for files damaged during disk handling or power failure. List price: \$120. Requirements: 192K, two disk drives. Micro Research, Inc.
6938 S. Yukon Ct.
Littleton, CO 80123
303/973-5289

MDBS III

A system for experienced application developers, *MDBS III* consists of a base program and optional modules. The central program is the *Data Definition Language/Data Management System (DDL/DMS)*, which lets you set up a data base or write a program in a language such as C, COBOL, or Pascal. The base system includes one language of your choice; additional languages are optional. You can have up to 255 record types and an unlimited number of record occurrences. Each record type can have up to 65,535 fields and 65,535 characters per field for a theoretical limit of 4.2 billion bytes. The program is available in a single-user mode or for up to 127 simultaneous users in a multiuser environment such as UNIX or MP/M-86.

Optional *MDBS III* modules include a query and retrieval program that lets you define reports and screens; an interactive data manipulation language that helps nonprogrammers select and process data in files; a utility that lets you create screens for input and editing; a menu-driven design utility that permits the modification of file structure, file size, and security settings; and a communications

program that allows data transfer among microcomputers, minicomputers, and mainframes. List price: *DDL/DMS* single-user program \$3900. Requirements: 128K, two disk drives. Micro Data Base Systems
Application Development Products
85 W. Algonquin Rd. #400
Arlington Heights, IL 60005
800/323-3629

Personal Pearl

A relational data base management program, *Personal Pearl* accepts commands and questions in standard English. Data forms can be designed to your specifications, and up to ten forms can be hooked together to organize information for reports. The program performs simple math calculations and includes a sort utility and a starter library of standard data forms and reports, such as a "people" data base, a mailing list, an appointment calendar, and a cash disbursement journal. An optional *File Load* module allows files from other programs such as *1-2-3* or *VisiCalc* to be transferred into *Personal Pearl*. List price: \$295, *File Load* \$100. Requirements: 128K, two disk drives. Pearlsoft, Inc.
P.O. Box 638
Wilsonville, OR 97070
503/682-3636

Power-base

A multifile data base management system, *Power-base* is designed for nonprogramming business executives. It provides on-screen help, a tutorial with model applications, and error and instruction messages. Other features offer access to data stored in related files, a mailing label generator, a multisort report writer, and global recalculation and replacement of data. *Power-base* can exchange data with *1-2-3*, *Multimate*, *WordStar*, *MailMerge*, *pfs:file*, *pfs:report*, *dBASE II*, and *VisiCalc*. List price: \$395. Requirements: 256K, two disk drives. PowerBase Systems, Inc.
12 W. 37th St.
New York, NY 10018
212/947-3590

R:base 4000, R:base 6000

An information manager, *R:base 4000* lets you build data bases of up to 2.5 billion records per file and 100 billion records per data base. With a single command the program lets you retrieve records, sort desired information, or specify column widths for word wrap on text fields. You can draw forms and report formats on the screen using cursor control keys. Screen forms can be used for data entry, data base updates and queries, and transfer of formatted input from other software packages or transmitted data files. You can create command files within the program and test them using the program's text editor. *R:base 4000* recognizes English-like commands and lets you fill in default blanks via screen prompts. It has an interface for *Multiplan* and can work with other spreadsheet, word processing, and graphics packages using ASCII, formatted text, or DIF files.

R:base 6000 offers additional capabilities for multiple users in a local area network. The program uses password security to restrict users' ability to read or modify data at any level. List price: *R:base 4000* \$495, *R:base 6000* \$1595. Requirements: *R:base 4000* 256K, two disk drives; *R:base 6000* 256K, two disk drives, DOS 2.00 or later version. Microrim, Inc.

3380 146th Pl. SE
Bellevue, WA 98007
206/641-6619

"I am a consultant with clients who use R:base 4000. The program is extremely easy to use, even for users without prior data base management experience. The program interface allows the DBMS to be integrated into an existing programming language such as Pascal; this is vastly superior to creating a simple and primitive programming language for use within the DBMS as is required by programs like dBASE II. The Extended Report Writer is excellent but should be integrated into R:base 4000. Also, data files should be stored separately from files storing input forms, reports, rules, and so on. All data of this type is stored in a single file; that makes improvements to a data base difficult to install when the same data base is used in a number of different locations." David Shewmaker, Stockport, Ohio

"I use R:base and Extended Report Writer for historical research and writing. It provides a fully relational data base program that will take blocks of text—up to 1500 characters—rather than just short strings. I wish, however, that it had more search functions." David L. Clark, Malibu, California

R:base Extended Report Writer

A formatting utility, *R:base Extended Report Writer* extends *R:base 4000* capabilities to meet complex reporting requirements. In addition to *R:base 4000*'s features, *R:base Extended Report Writer* retrieves data from multiple files, changes uppercase characters to lowercase and vice versa, arranges reports in either linear or columnar format, and prints sections within a report under specified criteria. The program can align columns on the decimal point, replace leading zeros with spaces, print a dollar sign directly to the left of a value, or print special labels. *R:base Extended Report Writer* can also suppress printing of leading and trailing blanks in text fields, extract substrings of text fields, perform operations on date and time field types, and print text fields in paragraph format. The program provides arithmetic operations, combines math expressions using parentheses, and calculates percentages based on a range of values. List price: \$150. Requirements: 256K, two disk drives, *R:base 4000*.

Microrim, Inc.
3380 146th Pl. SE
Bellevue, WA 98007
206/641-6619

Clout

You can question an *R:base 4000* data base in free-form English words and phrases without regard to command syntax or data base structure with *Clout*. The program converts standard English questions into the proper *R:base* commands, using an internal dictionary of approximately 300 inquiry phrases to which you can add up to 500 words or phrases of your own. The program recognizes words regardless of distinctions in uppercase or lowercase, singular or plural forms, or verb conjugations. If you ask a

question using an unfamiliar word or phrase, the program initiates a dialogue with you until it understands, adds the new word or phrase to its dictionary, and resumes the inquiry. *Clout* also lets you automatically retrieve information from up to five files. List price: \$195. Requirements: 256K, two disk drives, *R:base 4000*.

Microrim, Inc.
3380 146th Pl. SE
Bellevue, WA 98007
206/641-6619

Informa

Designed as a multiuser application generator, *Informa* also runs in a single-user environment. The program is a relational data base management system with a report generator that offers up to ten security levels. *Informa* can handle up to 8000 fields per record, 50 key fields per file, and 65,000 records per file. List price: single-user \$795, multiuser \$995. Requirements: 64K, two disk drives, DOS 2.00 or later version.

Unlimited Processing, Inc. (formerly Abacus Data, Inc.)
8382 Bay Meadows Rd. #8
Jacksonville, FL 32216
800/874-8555, 904/731-8330

"If you want to learn to program, get dBASE II. If you want to create a sophisticated data base system in one day, get Informa. Informa's ease and speed of queries, data entry, and data revision make it ideal for on-line data base applications. Limitations are a lack of batch processing capability and an inability to create calculated fields in the report writer." Marick Payton, Menlo Park, California

VersaForm

A data base manager and report generator, *VersaForm* produces typical business forms such as purchase orders and invoices. The program allows free-form screen design of fields for transaction processing. The report generator can be customized to accommodate special report

formats and preprinted forms such as checks. Records can be designed with error-trapping features and automatic fill-in of field information. Ten optional pre-designed application templates tell the program how to check data, what calculations to make, where to print on the form, and what management reports to produce. List price: \$389. Requirements: 64K, two disk drives.

Applied Software Technology
170 Knowles Dr.
Los Gatos, CA 95030
408/370-2662

"This program is a complete order-entry program that can be adapted for any application that uses preprinted forms."
Stephen Hysick, Grosse Point Woods, Michigan

Nutshell

You can store and cross-reference business information with the *Nutshell* data base manager. The program orders files alphabetically, numerically, chronologically, by state, by zip code, or any other way. *Nutshell* automatically cross-indexes files; its "embedded prefix matching" feature finds a record when given incomplete search information. If you change a figure or a formula on any record, the program automatically updates all calculated fields to help you answer "what if" questions or summarize numerical information for taxes, dues, profits, or expenses. Within disk space limitations *Nutshell* lets you create up to 16 million characters per field or record, 60,000 fields per record, 2 billion records per file, and any number of files per disk. You can add or delete fields without reorganizing existing files or creating new records. The program can exchange data with word processing and spreadsheet programs that are in standard text file format. You can design your own invoices, expense reports, and sales records or use the program's layout. *Nutshell* permits wide reports, reports of various combinations of fields, and headers and footers. List price: \$395. Requirements: 256K, one disk drive.

Leading Edge Products, Inc.
21 Highland Circle
Needham Heights, MA 02194
800/343-3436, 617/449-4655

CIP

You can design office forms and produce reports to fit your needs with *CIP* (*Concentric Information Processor*). The program cross-indexes all records, can search on partial fields, checks data for errors, and lets you assign up to eight attributes to any field. You can change existing file formats by inserting or removing fields, changing field lengths, or changing field attributes without creating a new file. Report formats can be named and saved for future use. *CIP* allows up to five lines of headers and footers for footnotes, titles, dates, page number, or report descriptions. The program performs numeric calculations such as profit or loss projections and automatically recalculates and adjusts all affected figures whenever data is added, deleted, or changed. The program can save and recall up to 76 reports per file and allows on-screen reports of up to 132 columns and 66 lines. List price: \$395. Requirements: 128K (with DOS 2.00 or later version 192K), two disk drives.

Concentric Data Systems, Inc.
18 Lyman St.
Westboro, MA 01581
617/366-1122

Condor Jr.

You can manage files and write reports with *Condor Jr.* The program balances a checkbook, totals purchase orders, averages grades, and monitors tax-deductible expenses in addition to maintaining mailing lists and performing other file management tasks. The program handles up to 65,000 records of up to 1K each and permits 127 fields per record; maximum file size is 4MB. *Condor Jr.* allows you to upgrade to *Condor 3* as your data management needs grow. List price: \$195. Requirements: 128K, two disk drives.

Condor Computer Corp.
2051 S. State St.
Ann Arbor, MI 48104
313/769-3988

Condor 3

A relational data base manager, *Condor 3* handles personnel management, inventory control, billing, manufacturing systems, and other office, school, or home needs. The program lets you set up your own data base and sort, select, compute, and post information. *Condor 3* can compare multiple files, join information from several data bases, and index up to eight data items for quick reference. You can transfer information to your word processor's mail merge function or from a spreadsheet. The program handles up to 65,000 records with a maximum capacity of 1K and 127 fields per record and a maximum file size of 4MB. List price: \$650. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Condor Computer Corp.
2051 S. State St.
Ann Arbor, MI 48104
313/769-3988

filepro 16

A relational data base manager and application development tool, *filepro 16* lets you create an integrated system according to your own specifications. With little programming experience, you can set up a filing system or use the program's default selections. *filepro 16's* relational structure allows data to be automatically transferred among files, and figures can be recalculated for an entire file. Error checking allows only certain types of data to be entered in each field. *filepro 16* provides up to 12 indexes for record searching. It lets you design reports, forms, and labels and can print them individually or together. The program maintains up to 16 million records per file, 999 fields per record, and 4608 characters per record, depending on disk space. *filepro 16* can transfer files to *Multiplan* and *WordStar*. List price: \$495. Requirements: 256K, hard disk, DOS 2.00 or later version. The Small Computer Co., Inc.
230 W. 41st St. #1200
New York, NY 10036
212/398-9290

"You can change your file layout without losing data. This is the best relational data base I have ever used—really beats dBASE II and Data Ace." Tom H. Jones, Rochester, Minnesota

dREG

A program that provides statistical calculations and projections not available in *dBASE II*, *dREG* performs linear and quadratic regression on any two numeric variables within a *dBASE II* data file. Output includes coefficients for both regression equations and an analysis of variance table indicating the significance of both regressions. Additional output of all sums and sums of squares is available for use in further analysis; a square-root function is also included. All programs are furnished in *dBASE II* source code. List price: \$79.95. Requirements: 128K, one disk drive, *dBASE II* or *dBASE II RunTime*.
Feller Assoc.
550 CR PPA, Rt. 3
Ishpeming, MI 49849
906/486-6024

File Clerk* Reporter

A program generator and file management system, *File Clerk* Reporter* helps with filing and data retrieval programming. It responds to questions and commands in plain English and creates six types of BASIC programs, for file maintenance, reports, labels, menus, file updating, and file conversion. The file maintenance programs search for any field. List price: \$249. Requirements: 64K, one disk drive, Microsoft BASIC.
Landrum Software, Inc.
P.O. Box 842
Palm City, FL 33490
305/286-1324

Magictable

Retrieval of information from *Magictable* may be based on text, string, syntax, greater than, less than, equal to, not equal to, or any combination thereof. The program features 64 characters per field and 32 fields per record and has a capacity of over 32,000 records with 512 characters per record. Data can be displayed horizontally as a multiple record table or vertically with each record in a single column. Fields or columns can be reordered by eliminating or rearranging column numbers. With the program you can write a letter and merge it with a mailing list without using a word processor. *Mag-*

ictable is compatible with *WordStar*, *Spellbinder*, *EagleWriter*, *dBASE II*, *Multi-mate*, and *Personal Editor*. List price: \$159. Requirements: 64K, one disk drive.
Presta Digital
45 Merrimack St. #218
P.O. Box 7192
Lowell, MA 01852
617/458-4070

Instant Recall

Each record in *Instant Recall*'s data base retains entry "histories" for review purposes. The number of histories for each record is limited only by disk space. Old histories can be purged to reduce file size; purged histories are automatically printed out. Each history shows what the entry was, when it was made, and by whom. You can search for any history by date of entry, initials, nature of entry, or any combination of the three. The program can produce mailing lists and form letters for any number of customers. Records can be 52, 116, 244, or 500 bytes long with up to 30 fields per record. List price: \$195. Requirements: 128K, two disk drives.
Intelligent Systems, Inc.
490 Hickorynut Ave.
Oldsmar, FL 33557
813/785-0378

SuperSort II

With *SuperSort II* you can merge up to 32 files into a single file. The program can sort, merge, and retrieve customer lists, employee records, pricing and supplier records, inventory, or financial information. *SuperSort II* lets you specify input format and exclude any unwanted categories when sorting. The program uses files from other MicroPro programs such as *DataStar* and *InfoStar*. Data can be justified and include floating decimals, exponential notation, and uppercase and lowercase letters. List price: \$200. Requirements: 64K, one disk drive.
MicroPro International Corp.
33 San Pablo Ave.
San Rafael, CA 94903
800/443-0100 ext. 948, 415/499-1200

Qbase

You can establish a data base format for *Qbase* so that it refuses such erroneous entries as misspellings, misplaced decimal points, inconsistent abbreviations, or incomplete data. The program performs math calculations and handles mailing labels in any format up to four across. *Qbase* formats reports in columns, sorts data three ways, and produces subtotals for each group of items. Report formats can be saved. *Qbase* is upwardly compatible with Applied Software Technology's *VersaForm* program. List price: \$189. Requirements: 128K, two disk drives, Pascal.
Applied Software Technology
170 Knowles Dr.
Los Gatos, CA 95030
408/370-2662

WATFILE

A data file manager, *WATFILE* is designed for people with little programming experience. The program manages inventory, analyzes and records student marks, maintains mailing lists, analyzes corporate data, prepares budgets and expense accounts, and keeps client records. Most operations can be performed with only a few of the program's 50 commands. *WATFILE* provides facilities to enter, sort, merge, and edit data files; perform arithmetic, character, and logical calculations; and produce simple reports. Built-in ASCII terminal emulation allows micro and mainframe versions of *WATFILE* to be operated simultaneously from a PC. List price: \$295. Requirements: 192K, one disk drive.
WATCOM Products, Inc.
415 Phillip St.
Waterloo, Ontario
N2L 3X2 Canada
519/886-3700

Next Step

You can store, retrieve, and report information with *Next Step*. The program requires little programming skill to set up an accounts receivable system, perform market research analysis, track advertising programs or freight schedules, or follow

up sales leads. Programmers can use *Next Step* to create more powerful programs to enter and manipulate the data base. Generated programs can be compiled with Microsoft's BASIC Compiler to reduce processing time for reports. Reports can be up to 66 lines long and 132 columns wide. Multiple column headings and up to 20 calculations and totals can be placed on each report. Two levels of password protection are available. List price: \$345. Requirements: 128K, two disk drives, DOS 2.00 or later version. Execuware, Inc.
4018 Country Club Rd.
Winston-Salem, NC 27104
919/760-3576

Probase

A data manager, *Probase* can print data from up to six files simultaneously. The program computes record counts, sums, averages, subtotals, and totals; offers batch programming and posting; and performs basic math calculations. *Probase* allows up to 64 fields and 1024 bytes per record and 65,536 records and 10 indexes per file. List price: \$650. Requirements: 192K, one disk drive.
Data Technology Industries/GBS
431 McCormick St.
San Leandro, CA 94577
415/638-1206

Omnifile

A single-file data management system, *Omnifile* lets you design forms for data entry, with full-screen editing and error correction. The program offers multiple field indexes, password protection, a global editing function, four levels of sorting, and a report generator that lets you customize reports and change data fields from report to report. Records are painted forms that can have up to 20 screens and 64 fields each, with up to 1828 characters per field. *Omnifile's* ability to read and write ASCII and DIF files lets it share data with spreadsheet, word

processing, and graphics programs. List price: \$425. Requirements: 128K, two disk drives.
SSR Corp.
1600 Lyell Ave.
Rochester, NY 14606
716/254-3200

"Omnifile is very easy to use for those with no programming experience yet offers powerful data handling capabilities. There can be two indexes per file, with up to five key fields per index. Unindexed smaller files can be searched quickly on any field; wild-card characters make left as well as right truncation possible. Omnifile is a reasonable value at \$425 compared to programs of similar power. This fine program has not received the attention and popularity it deserves." Patrick W. Costigan, Minneapolis, Minnesota

Manager

A relational data base management program, *Manager* has an automatic program generator that can store a sequence of commands for future use. *Manager* features help screens, on-screen editing of file structures without loss of data, a text editor, search modes, and math calculation abilities. It also makes use of the function keys and offers optional full-color operation. A forms generator lets you create custom-designed data entry and editing screens. Data can be transferred from *Manager* to any software program that uses ASCII files. *Manager* can serve as the master system for preparing, editing, and formatting data files to be used by large, number-crunching programs in languages such as FORTRAN and Pascal. List price: \$195. Requirements: 128K, two disk drives.
Call Manager Inc.
1961 Old Middlefield Way
Mountain View, CA 94040
800/227-2400, 800/772-2666

"This program is very well designed. I never had to consult the manual to use the forms generator or the file design and reformatting features. The commands and programming language are flexible, logical, and concise. Manager does things with fewer steps than dBASE II, and its mathematics functions make it invaluable for my scientific data calculations."
Christopher W. Klein, Berkeley, California

T.I.M. IV

A data manager for the nontechnical business user, *T.I.M. IV* can display 20 fields on the screen simultaneously. A report generator permits heading titles on each page of a report, groups data together to give breaks and subtotals, can print from two files at once, and saves report formats for future access. The program allows up to 60 characters per field, 40 fields per record, and over 32,000 records per file. Data can be transferred from one file to another. *T.I.M. IV* works with spreadsheet programs such as *VisiCalc*, *Multiplan*, and *1-2-3* and with word processors such as *WordStar* and *PeachText*. List price: \$395. Requirements: 128K, two disk drives.
Innovative Software
9300 W. 110th St. #380
Overland Park, KS 66210
913/383-1089

"T.I.M. IV is simple to use and very easy to learn for an average person with no computer background. It is our preferred micro data base where special screens or extensive calculations are not required."
Lawrence Wingerter, Jr., San Antonio, Texas

Day One

A menu-driven application generator, *Day One* is geared toward small-business owners, professionals, and the corporate environment. The program provides information safeguards, two report generators with screen and printer control, and arithmetic functions. Up to nine files can be opened simultaneously. The program handles as many as 254 characters per field, 891 fields per record, and 65,534 records per file. Fields, records, and indexes can be added without affecting data. List price: \$695. Requirements: 128K, one disk drive.
Day One Software, Inc.
618 Shoemaker Rd. #201
King of Prussia, PA 19406
800/438-3291, 215/337-8255

dBASE II

The relational data base management program *dBASE II* has a built-in application development language. The program obeys English-like commands to add, delete, edit, display, manipulate, and print information. It includes Boolean logic, string operators, relational comparisons, sums, subtotals and totals, sorting, and indexes for record selection. A limited report generator is built in, and reports are partially customizable. The application development language helps create screens and menus. *dBASE II* lets you import and export ASCII files. Files contain up to 65,535 records that can each have 32 fields of up to 254 characters, with a maximum of 1000 characters per record. No more than two files can be processed simultaneously. List price: \$495. Requirements: 128K, one disk drive.

Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/204-5570

"dBASE II is far too wordy—it reminds me of COBOL. It would never be a success if it were introduced today." Frances Mendelsohn, Rockville, Maryland

"Version 2.4 still has too many bugs. Service is poor—it takes forever to get a call-back. Service reps don't know their product well." George Roukas, New York, New York

"dBASE II is a programmer's delight. Great improvements have been made in the manual and on-line documentation." Patrick S. Powell, Paducah, Kentucky

Advanced DB Master

With *Advanced DB Master*, data base files can reside on as many as 44 floppy disks each, with 16MB per file. Each record can have as many as 250 fields with a maximum of 250 bytes per field. The program offers 15 sort levels and lets you specify 20 criteria when searching for data. A browse feature lets you view and edit information from up to 20 records simultaneously. You can store as many as 99 sets of up to 255 keyboard characters and commands in single-keystroke macros. Selected fields from an entire record can be arranged, viewed, and edited on a single screen. Using *Advanced DB Mas-*

ter's text editor, you can write up to 100 pages of text that can be inserted into reports. You can design up to 250 reports to be printed on any form, such as invoices, insurance reports, labels, and purchase orders. Files can be transferred back and forth between hard and floppy disks to simplify file backup from a hard disk. The program allows information in ASCII format to be transferred between any computer and *Advanced DB Master* through a serial port. List price: \$595. Requirements: 256K, two disk drives. Stoneware, Inc.
50 Belvedere St.
San Rafael, CA 94901
415/454-6500

"An extremely flexible package for a non-relational file manager. Advanced DB Master's report writer allows the use of headers, footers, embedded comments, and mail merge." W. R. Jenney, Los Altos, California

Rubix

A relational data base management system, *Rubix* is designed for UNIX-based multiuser operating systems such as PCIX. The program has a "view" feature that provides multiple perspectives of the same data base for different classes of users. It automatically searches across data bases for required data. The program offers an English-like command language, a relational programming language that can be compiled, and a C-language interface. *Rubix* can output graphics directly from the data base. An optional program, *Prefix*, provides a *Multiplan*-like interface for generating on-line data base applications. *Prefix* offers standard and custom screens, on-line help, and browsing and search facilities. It also provides such mainframe features as transaction record keeping, data base recovery, and data validation. List price: \$975, *Prefix* \$175. Requirements: 128K, hard disk, PCIX operating system. ITI Infosystems Technology, Inc.
6301 Ivy Ln.
Greenbelt, MD 20770
301/345-7800

TMP/FreeForm, TMP/Manager I

A file management program, *TMP/FreeForm* can be used by salespeople, writers, doctors, lawyers, or businesspeople for tasks ranging from inventory control to appointment scheduling. The program allows data to be entered "free form," with no structural limitations, into electronic index cards. *TMP/FreeForm* provides editing capabilities, keyword and wild-card searches, and word wrap. *TMP/Manager I* provides an English-like command language for sorts and a "dot" language for designing report formats. The program performs various tasks, from tracking a client or inventory list to printing invoices or form letters. You can define the structure of a *TMP/Manager I* data base, enter records, transfer data to and from *TMP/FreeForm*, and define various reports, such as a label format, by following program prompts. The program offers 150 fields per record with 50 characters per field. List price: *TMP/FreeForm* \$225, *TMP/Manager I* \$365. Requirements: *TMP/FreeForm* 64K, one disk drive; *TMP/Manager I* 128K, two disk drives.

The United Software Co.
2431 E. Douglas
Wichita, KS 67211
316/684-5281

Main Street Filer

A file management program, *Main Street Filer* lets you order files numerically or alphabetically and arrange them to fit specific needs. You can change the file design or indexing system without sorting, reentering, or losing existing data. *Main Street Filer* automatically saves information after every tenth record entry to help avert data loss. The program works with word processing programs such as *WordStar*, *EasyWriter*, and *Multimate*, letting you create columnar and mailing list reports. You can also use the program to print Cheshire labels, one-up labels, or envelopes. List price: \$199. Requirements: 128K, two disk drives.

Main Street Software
1 Harbor Dr.
Sausalito, CA 94965
800/824-8757, 415/332-1274

KeyMailer

A mailing list management system, *KeyMailer* uses a menu-driven format for data entry. Data fields include first name, last name, title, two address lines, city, state, zip, phone number, salutation, comments, and a line for adding up to seven identifiers. Labels can be printed by zip code or any other field. String search capabilities allow you to find a previous entry based only on a portion of any field's data. You can use the program to write form letters, print mailing labels up to five columns across, and add, delete, or change information on the data base.

KeyMailer works with MicroPro's *MailMerge* to create sorted and categorized *MailMerge* files and will run on the PCjr. List price: \$149. Requirements: 128K, one disk drive, DOS 2.00 or later version. SoftKey Software Products, Inc.

411 Shaw St. #1
Toronto, Ontario
M6J 2X4 Canada
416/530-1931

SSIData

A relational data base manager, *SSIData* lets you go anywhere in the data base with on-screen indexes instead of menus. Multiple records can be viewed simultaneously. Data forms and report forms are defined by selecting options, answering questions, pointing at places on the screen, and typing text. Field information can be shared by more than one record without duplicating the field. If more than 250 fields are required per record, you can chain one record to another. Up to 65,000 records per file are allowed. All types of information, including free-form text of up to 8000 characters, can be stored. The program also offers such text editing features as word wrap, replace and insert, delete word, delete to end of line, and automatic reformat. List price: \$195. Requirements: 128K, one disk drive.

Satellite Software International
288 W. Center
Orem, UT 84057
801/224-8554

X-Cell

A data base and information retrieval system, *X-Cell* lets you allocate field space for any combination of alphanumeric and numeric data entries. The program's search and sort capabilities allow for inclusive and exclusive retrievals and sorts by as many as 15 fields at the same time. A report generator defines and builds report formats that you can save and modify. An editor enables you to define new records from existing records. The program allows up to 30 fields per record and record lengths of from 1 to 256 bytes. List price: \$49.95. Requirements: 64K, one disk drive, DOS 2.00 or later version. Indecs Services
9 Pinecrest Dr.
Taunton, MA 02780
617/822-3173

Zim

The information management program *Zim* provides its own application development language. Applications can be compiled for maximum processing efficiency. The program can be used in multiuser mode on operating systems such as UNIX or QNX that support local area networks. *Zim* features a data dictionary for storing keyword commands, data maintenance and query functions, a facility that lets you design your own forms, and a report writer. List price: \$975. Requirements: 320K, two disk drives, DOS 2.00 or later version. Zanthé Information, Inc.
1785 Woodward Dr.
Ottawa, Ontario
K2C 0R1 Canada
613/727-1397

Notebook

For large data base needs, *Notebook* allows 32,000 characters per record, 20 fields per record, and 4000 characters per field. Field space is dynamic; since no fixed amount of space is stored according to field size specifications, disk space is saved. *Notebook* uses *WordStar*-type commands, keyboard cursor-control keys, and full-screen editing. Relational operators assist in the selection of records for processing. Reports are limited to 80-col-

umn formats. All commands are displayed at the bottom of the screen during program use. List price: \$150. Requirements: 128K, two disk drives. Digital Marketing Corp.
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

Data Base Manager II

You can design input screens and reports with *Data Base Manager II*. The menu-driven program has a form letter generator and calendar. It permits up to 60 characters per field and 40 fields per record and includes sorting, summing, and sub-totaling capabilities. Only one file at a time can be opened for processing, but multiple files can be merged prior to processing. *Data Base Manager II* can transfer data to and from spreadsheet programs (such as *VisiCalc*, *1-2-3*, *Multiplan*, and *SuperCalc*) and word processing programs (such as *WordStar*, *VolksWriter*, and *EasyWriter II*) that use ASCII files. List price: \$295. Requirements: 128K, two disk drives.

Alpha Software Corp.
30 B St.
Burlington, MA 01803
800/451-1018, 617/229-2924

Mass Mailer

A menu-driven list processor that prints labels, envelopes, and mailing lists, *Mass Mailer* works with word processors to create form letters. You can change the program's prompts and menus. The program permits ten alphanumeric fields and 112 on or off category codes per name. Features include multiple file merging and high-speed sorting by any field. *Mass Mailer* has a capacity of 1000 names per floppy disk and 30,000 names for each file on hard disk. List price: \$199.95. Requirements: 128K, one disk drive, DOS 2.00 or later version. Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

ResQ

A menu-driven data base manager, *ResQ* offers alphanumeric, numeric, date, and calculated field types. The program sorts in ascending or descending order by up to eight criteria. You can design report headings and labels. *ResQ* includes help screens and prompts throughout the program. It can exchange ASCII files and export files to 1-2-3 and *MailMerge*. List price: \$295. Requirements: 128K, two disk drives.

Key Software, Inc.
1000 Skokie Blvd.
Wilmette, IL 60091
312/256-6776

dB Door

A *dBASE II* report generator, *dB Door* allows data from one or two data bases to be included in a tabular or free-form report. Ten accumulators are available for totaling, subtotaling, averaging, counting, and other cumulative arithmetic. *dB Door* is written in *dBASE II* and includes

source code. List price: \$149. Requirements: 128K, one disk drive, *dBASE II*.
Tylog Systems, Inc.
9805 S.W. 152 Terrace
Miami, FL 33157
305/253-5942

MailStar-I

A menu-driven list manager for up to 327,000 addresses, *MailStar-I* features zip code validation, state abbreviation validation, and other types of error trapping. There is a 56-character definable field in addition to fields for name, title, phone number, and address. Any field can be sorted and selected for printing lists, labels, forms, and letters. Math and statistical functions are included. List price: \$195. Requirements: 128K, one disk drive.

Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

Soft-Cardfile-Index-I

A file manager that keeps track of information from magazines and books, *Soft-Cardfile-Index-I* includes prestructured fields for titles, volumes, numbers, and other bibliographic information. Abstracts can be printed in any page size. Error-trapping routines are included. Lists of categories and subcategories can be selected by definable codes. The program has templates for different applications. List price: \$95.95. Requirements: 128K, one disk drive.

Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

Xtrieve

A window-oriented query tool, *Xtrieve* allows users of *Btrieve* and *Btrieve/N* to enter and retrieve data without writing a program. *Xtrieve* helps build relational models for data by linking multiple *Btrieve* files. The menu-driven program

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uses successive windows to guide you in constructing data base queries. All information needed to build the query, including help files, is displayed on the screen. List price: \$195. Requirements: 256K, one disk drive.
SoftCraft, Inc.
P.O. Box 9802, #590
Austin, TX 78766
512/346-8380

10-Base

A relational data base management package, *10-Base* is derived from the Sequel (SQL) data base management system language, which originally ran on IBM mainframes. *10-Base* lets you create, edit, delete, query, manipulate, display, and print all or part of data files using one-key English commands. You can access up to 16 files simultaneously. The program features B-tree file indexing, logical views, and a definable help facility. The number of records per data base and fields per record is limited only by storage space. Designed to work with Fox's 10-NET local area network, *10-Base* accepts files from other programs such as *1-2-3*, *WordStar*, and *MailMerge*. List price: single-user version \$495, 10-NET version \$895. Requirements: 192K, one disk drive, DOS 2.00 or later version.
Fox Research, Inc.
7005 Corporate Way
Dayton, OH 45459
513/433-2238

A.I.M.

A simplified data base manager, *A.I.M.* (*Attribute Inquiry Method*) is designed for quick response to English-language queries. The program accepts records of 15 fields and fields of 30 characters. A separate table holds 300 definable attributes (such as month, year, area, color, model, and type) that are coded into each record. *A.I.M.* searches for 10 attributes simultaneously and displays records as soon as they are found. A file holds 2000

to 4000 records, depending on disk capacity. List price: \$250. Requirements: 128K, one disk drive.

CompuSoftware
6350 LBJ Frwy. #271
Dallas, TX 75240
214/392-0051

LAN:Datastore

A relational data base manager, *LAN:Datastore* lets 16 PCs in a network simultaneously share information on a hard disk. The menu-driven system has a maximum size of 16MB; each record can contain up to 16K and over 500 fields.

LAN:Datastore provides report generation, print spooling, programmable function keys, and flexible selection criteria. Security features include automatic record locking, password protection, and a hidden internal audit that tracks who last changed a record and when. A data integrity check automatically detects hardware failures that corrupt the data base. *LAN:Datastore* supports Omninet, MultiLink, ShareNet, PCnet, and EtherSeries and comes in a single-user version. List price: \$1945, for five users \$945, for single user \$495. Requirements: 192K, one disk drive.

Software Connections
1800 Wyatt Dr. #17
Santa Clara, CA 95054
408/988-3704

ELFI/PC

Statements, mailing labels, reference cards, and form letters are generated by *ELFI/PC*. You can create files, enter and retrieve data, and print reports. You can select and sort up to ten fields per file and define screen and hard copy formats. Formulas can be incorporated for calculated fields. Any two files can be connected so you can switch from one to the other. List price: \$190. Requirements: 64K, one disk drive.

Software Options, Inc.
P.O. Box 5150
Vallejo, CA 94591
707/557-1691

dBASE II Multi-User

A network version of *dBASE II*, *dBASE II Multi-User* adds record, index, and file locking. It runs from the network's file server, operating under TurboDOS or MP/M-86. The program works on EtherSeries, Omninet, Netware, and PCnet networks. You can program password security. The package comes in a four-user version that can be augmented four stations at a time. List price: four users \$1000, four additional users \$500. Requirements: 128K, one disk drive.

Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/204-5570

MBS Mailing Label Program

A system for creating and printing mailing lists or directories, *MBS Mailing Label Program* stores 600 names on 160K drives, 1200 names on 320K drives, and 8000 names on a hard disk. Fifteen predefined fields include name, address, phone, city, state, zip code, and two comment lines. Each record can be stored under 3 of 15 definable categories, and you can sort on any two conditions. You can create subfiles to use with word processing programs for generating form letters. List price: \$95. Requirements: 96K, two disk drives.

MBS Software
12729 N.E. Hassalo St.
Portland, OR 97230
503/256-0130

The DataFiler

A filing system for storing data bases with up to 45 fields each, *The DataFiler* sorts on up to five selection criteria three levels deep. You create a data base, input screens, and up to ten report formats per file. You can specify input validation criteria, assign values to function keys to increase input speed, and update records automatically and globally. *The DataFiler*

allows control breaks on up to three fields and reports with totals and subtotals. List price: \$195. Requirements: 192K, two disk drives.

MBS Software
12729 N.E. Hassalo St.
Portland, OR 97230
503/256-0130

dBASE III

A relational data base manager, *dBASE III* has a mode with menus and prompts to assist novices with commands. The program accommodates over 2 billion records per data base, 128 fields per record, and 4000 bytes per fixed-length record or 512 kilobytes per variable-length record. You can use ten data base files simultaneously. With the programming language you can develop applications using English-like commands. Designed specifically for 16-bit computers, *dBASE III* offers quick sorting and indexing of data, with context-sensitive help available at any time. The program includes report and mailing-label facilities that can be modified. List price: \$695. Requirements: 256K, two disk drives, DOS 2.00 or later version.

Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/204-5570

RL-1 Relational Database Management

A B-tree-indexed relational data base, *RL-1* includes operators such as join, selection, and projection. The program provides a data definition language, a query language, a relational editor, a report generator, and a program interface that allows data base function calls to be accessed from any high-level language. List price: \$495. Requirements: 128K, one disk drive.

ABW Corp.
P.O. Box M1047
Ann Arbor, MI 48106
313/663-3011

Personal Mailer

A mailing list data base program for large business mailings, *Personal Mailer* searches and sorts up to 12 automatically indexed data fields. You can select records with keyword match, no match, or close match and string search and define the type and the size of fields. Each file can have up to 65,535 records with up to 68 characters per field. You can print mailing labels or lists with up to 132 characters per line, and you can create ASCII files for use with *MailMerge* or other word processing programs. Files can also be written for *dBASE II* and *VisiCalc*. The program works with a hard disk. List price: \$79.95. Requirements: 64K, one disk drive.

Software Strategies
7412 Washington Ave. S
Eden Prairie, MN 55344
612/941-4044

QINT/SQL

For integrating microcomputer data processing with IBM mainframe data bases, *QINT/SQL* is compatible with IBM's *SQL/DS* and *Database 2* systems. The English-like query language is identical to SQL (Structured Query Language), the IBM mainframe language. The relational data base accommodates an unlimited number of records and fields; you can sort on any number of fields and speed the process with up to 16 levels of indexes. When creating a data base, *QINT/SQL* automatically generates the optimal structure of tables based on information use. Each copy of the program comes with a unique "signature" chip that prevents data theft. *QINT/SQL* comes in three versions: *Query* for data retrieval; *Query + Update* for data entry and retrieval, and *Administrator* for data base creation and maintenance. Multiuser versions are also available. List price: *Query* \$1000, *Query + Update* \$1350, *Administrator* \$2400. Requirements: 640K, hard disk.

QINT Database Systems Corp.
50 Waban Hill Rd. N
Chestnut Hill, MA 02167
617/527-9329

Aladin

A relational data base manager, *Aladin* has integrated modules for entering data, reporting, querying, performing calculations, working with statistics, and interacting with word processing packages. *Aladin* automatically sorts and indexes records when they are entered. The menu-driven program accommodates records of variable length and allows up to 2 million records per data base, up to 32 files and 512 fields per data base, up to 16MB per file, and up to 192 key fields. A modified B-tree structure speeds searches, including wild-card searches. Passwords and IDs can be assigned at device, function key, file, module, and field levels. *Aladin* can exchange files with programs such as *WordStar*, *VisiCalc*, 1-2-3, and *dBASE II*. It works with both DOS and the p-System operating systems. A set of Pascal routines called *Genie* lets programmers build specific applications for an *Aladin* data base. List price: \$795, *Genie* \$500. Requirements: 128K with DOS 1.10, 192K with DOS 2.00, two disk drives.

Advanced Data Institute Inc.
1215 Howe Ave.
Sacramento, CA 95825
916/925-2229

ASAP Five

A data base manager, *ASAP Five* uses English commands and includes a text editor and a form generator. The program is a "universal relation" data base; once you name items, the system automatically indexes and arranges them into files and arranges files into data bases that are limited in size only by disk space. You can modify screen formats after data entry and generate reports using one keystroke. The program's report generator features headers and footers, automatic page numbering and page breaks, and automatic column wraparound. List price: \$275. Requirements: 192K, two disk drives.

ASAP Systems, Inc.
2425 Porter St.
Soquel, CA 95073
408/476-3935

Friday!

Computer novices can use *Friday!* as a file management system for office files such as mailing lists, invoices, paychecks, sales, or inventory. The program uses a circular set of menus, so you can move to another task without retracing your steps. Input screens, file structures, and report layouts can be changed without loss of data. *Friday!* simultaneously sorts files by five items and automatically performs calculations on data as it is entered. The program works with *WordStar*, *1-2-3*, and *dBASE II*. List price: \$295. Requirements: 128K, two disk drives.

Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/204-5570

Savvy PC

An integrated data base manager, programming language, and operating system, *Savvy PC* uses adaptive pattern recognition processing (APRP), which interprets and "learns" user commands. The *Savvy PC* programming language includes a command dictionary of 100 everyday words that is automatically updated when you modify commands. The data base provides random and sequential access, decimal arithmetic, and a 20MB program capacity. *Savvy PC* accommodates up to four floppy disk drives, a 20MB hard disk, and either serial or parallel printers. List price: \$395. Requirements: 64K, one disk drive. Excalibur Technologies Corp.
800 Rio Grande Blvd. NW, 21 Mercado
Albuquerque, NM 87104
505/242-3333

The Itemized Calculator

A multipurpose system that produces itemized listings, *The Itemized Calculator* generates lists for inventory, stock portfolios, expenses, revenues, sales, or any other application that requires an itemized listing with price extensions and totals. Each list can be broken into categories with subtotals. Other features include file maintenance, screen displays, and backup and recovery facilities. List price: \$39. Requirements: 128K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

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392 Concord Avenue
Belmont, MA 02178
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Circle 881 on reader service card

Communications

Eric Brown

On August 3, 1984, the New York Stock Exchange enjoyed its heaviest day of trading in history. Over 70 million shares changed hands in a single hour. Many factors were responsible for this money maelstrom, but one of the most significant was the increased use of data communications. Now that brokers and investors can receive the latest market information over a modem and can quickly analyze stocks on their PCs, they can respond to tips and trends instantaneously, causing a snowball effect that can avalanche in a single day.

Stocks trading is only one telecommunications application. You can also search great libraries, shop through electronic catalogs, play games, tap the power of mainframe computers, contact special interest groups, and make friends on bulletin board services (BBSs).

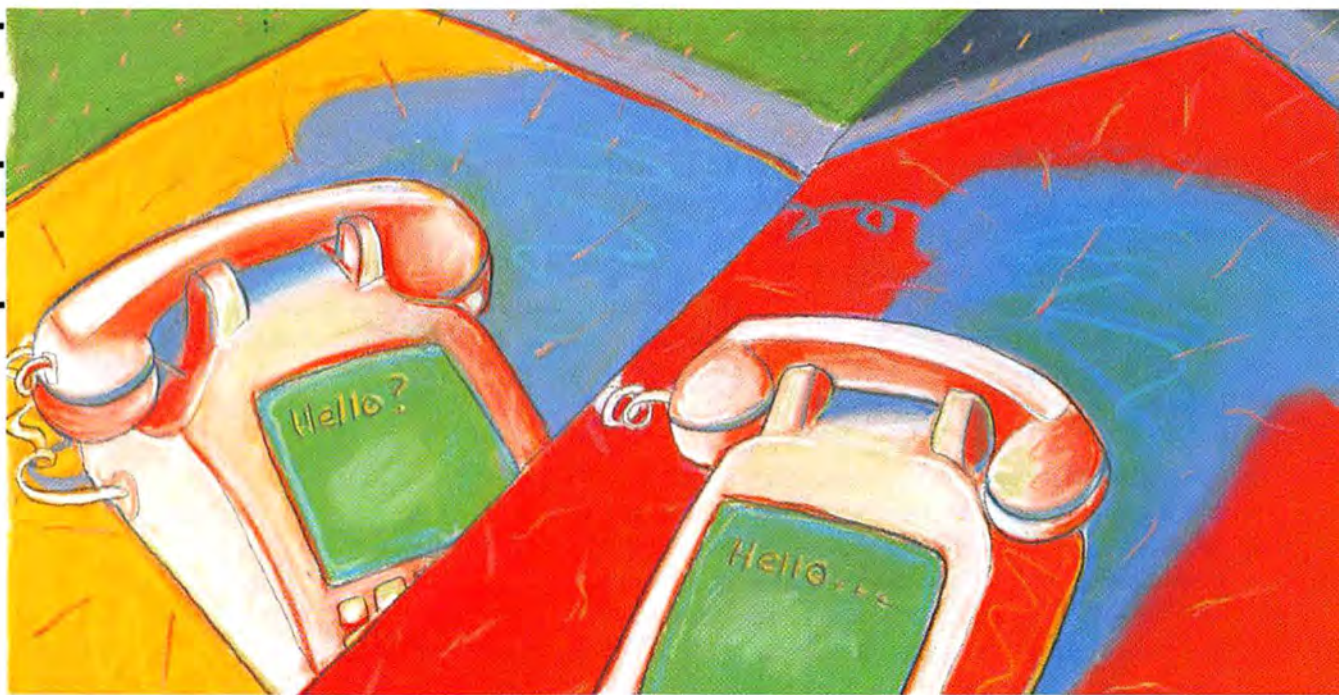
In order to log on to the electronic highways, you will need good communications software. A communications program organizes data from a computer's keyboard and disks and sends it out through the serial port. There the data encounters a modem, which translates the digital signals into analog waves so the information can travel through the

phone lines. On the receiving end, another modem translates the analog waves back to digital signals, and a second communications program directs incoming data to the screen, to the printer, or to disk.

A communications program works with a modem to match the protocol of the system on the other end of the phone line. The most important format variable to be agreed on is the speed of transmission, measured in bits per second (bps). The most common transmission speeds for personal computers are 300 bps and 1200 bps, although modems and communications software that can handle speeds of 2400 bps and higher are becoming more common.

The communications programs at each end also need to agree on other transmission parameters: the number of data bits and stop bits that constitute and separate each byte of serial data and the type of parity that will be used. The most common set of parameters is 300 bps, even parity, seven data bits, and one stop bit (300,E,7,1).

The ability to send and receive files according to certain parameters is the minimum that a communications program offers. A good "smart terminal" communications program can also handle file management chores like uploading (sending) files from disk, downloading (receiving) files to disk, displaying disk directories, and simple editing of files. If



you want to print information as you download it, you will need a program that provides a print buffer, so you won't lose any data in the transition between the different throughput speeds of the modem and the printer.

The telephone system was not built for data communications, so errors sometimes occur during transmission. Most communications programs now include error-checking protocols such as Ward Christiansen's Xmodem, Columbia University's Kermit, Communications Research Group's Blast, and

Microcom's Microcom Networking Protocol (MNP). The essential function of an error-checking protocol is to run a calculation on each block of data that is sent and received. If the calculation results do not match at each end of the transmission, the block is sent again.

Almost all modems and communications packages now support auto-dialing, which lets you dial

from the keyboard instead of from a telephone.

Most programs allow you to store names, phone numbers, parameters, and other information on a dialing directory so you can dial a number by pressing only one or two keys. Some programs let you store macros that contain command sequences for logging on to a particular remote host computer.

More sophisticated programs allow you to automatically redial a number, a feature that is helpful when you are trying to log on to a busy BBS. Other programs allow you to set the order in which phone numbers are called.

Most people won't require any more power than is provided by a general-purpose smart terminal communications program. However, more exotic software is available for special purposes. If you want to set up your PC as an auto-answer BBS, you will need unattended host software, which allows callers to log on, leave messages, and download and upload files while you are away from your PC. A variation on unattended host software, called remote access, allows a caller to log on to your PC, give a password, load programs, and use the PC as if the remote caller were sitting in front of it. Some software also offers unattended dialing. You can program your computer to call a number at a certain time, redial if necessary to ensure logon, upload or download certain files, and log off. Unattended dialing helps you save on phone costs by sending long documents at night when telephone rates are lower.

As PC software moves toward integration, communications is being tied into other applications. Some packages combine unattended communications features with a data base management system (DBMS) so a central data base can be shared by members of an electronic mail network.

A trend is micro-to-mainframe communications. An increasing number of communications packages provide terminal emulation for mainframe systems so your PC can communicate with a mainframe as a dumb terminal.

Another growing phenomenon in PC communications is NAPLPS (North American Presentation Level Protocol Syntax) videotex—the interactive communication of color graphics information. A number of software decoder packages for the PC let you convert a PC and a high-resolution color graphics monitor into a videotex terminal that can download and display color frames from a videotex data base. Although there are few major videotex data bases in America so far, in the future NAPLPS videotex may replace the currently popular character-based, scrolling ASCII telecommunications.

A modem and a smart terminal communications program can connect you to an immense network of friendship, knowledge, and fun and provide an information link faster than the fastest delivery service. Without communications your PC is an effective, but limited, tool. With it, you can summon the world.

Eric Brown is an Assistant Editor at PC World.

Intellicom

You can transfer ASCII and binary files between the PC and information services, mainframes, and other microcomputers with *Intellicom*. The menu-driven program offers XON/XOFF handshaking, RCPM block checksum with the Xmodem protocol, CompuServe A protocol, and standard Intel hexadecimal formatting. Minicomputer support code for RCPM block checksum protocol is included for DecSystem 10 and DecSystem 20. *Intellicom* provides half- and full-duplex modes and a printer toggle. List price: \$89.95. Requirements: 64K, one disk drive, serial port.

Computer Toolbox
1325 E. Main St.
Waterbury, CT 06705
203/754-4197

Intercom 101

With *Intercom 101* an IBM PC or PC compatible can mimic a Burroughs MT983/TD830 terminal and communicate with a Burroughs mainframe. The program features bidirectional file transfers at speeds of up to 38,400 bps, 40 programmable keys, nine pages of screen storage, and the ability to redirect printer output to disk. *Intercom 101* simultaneously supports four terminal addresses and a separately addressable printer port. The program lets you run other programs while maintaining communications with a host computer. *Intercom 101* is available in five packages, called Texpaks, each with different capabilities. List price: Texpaks \$325 to \$675 each. Requirements: 128K, one disk drive, DOS 2.00 or later version. Intercomputer Communications Corp. 3195 Linwood Ave. Cincinnati, OH 45208 513/321-3199

Intercom 300/300B

A PC equipped with *Intercom 300/300B* communications software can share information with a Burroughs mainframe computer. *Intercom 300B* resides in the

mainframe, and *Intercom 300* resides in each PC connected to the mainframe. The programs perform batch file transfers, message transmission, and multiple unattended file transfers when system demand is low. Virtually any type of file, including binary and executable files, can be transferred at speeds of up to 38,400 bps. List price: *Intercom 300* \$250, *Intercom 300B* \$600. Requirements: 128K, one disk drive, DOS 2.00 or later version, *Datacomm*, serial port. Intercomputer Communications Corp. 3195 Linwood Ave. Cincinnati, OH 45208 513/321-3199

LogOn

A menu-driven program that allows transmission of ASCII or binary files, *LogOn* supports auto-dial and auto-redial, column settings of 1 to 80 characters, and definable dialing directory files. Other features include message exchange, electronic mail, connection to most information services, and graphics image transfer. *LogOn* will operate only on micros running UCSD Pascal. List price: \$150. Requirements: 128K, one disk drive, serial port. Ferox Microsystems, Inc. 1701 N. Fort Myer Dr. #611 Arlington, VA 22209 703/841-0800

Mail-COM

A menu-driven program for the U.S. Postal Service's Electronic Computer-Originated Mail (E-COM) system, *Mail-COM* implements all features available on E-COM. *Mail-COM* works with *Word-Star*, *MailMerge*, *dBASE II*, and other programs. *Mail-COM*'s text insertion feature lets you send personalized messages for direct mail advertising, bills, and credit notices. The program also stores up to 36 phone numbers. List price: \$195. Requirements: 128K, two disk drives, modem. Digisoft Computers, Inc. 1501 Third Ave. New York, NY 10028 212/734-3875

MicroGate/FT

You can exchange ASCII and binary files between remote PCs with *MicroGate/FT*. The program offers interactive or batch command mode operations. The interactive command mode lets you display statistics, list the disk directory, and delete or send files or messages. The batch command mode lets the program operate unattended. The program can run, send, or request files and check for success or failure of previous operations. You can create and store a set of instructions for the program to use to retry a file or run another procedure. *MicroGate/FT* has a switch-selectable TTY emulator that accesses The Source, CompuServe, and other information services; captures files; and retains and allows forward and backward scrolling of up to eight pages of data. PCs equipped with *MicroGate/FT* can be set up in a local area network, with one PC controlling the others. The program supports Hayes 300/1200 and Concord Data Systems CDS auto-dial modems. List price: \$179.95. Requirements: 128K, one disk drive, modem. Gateway Microsystems Inc. 9501 Capital of Texas Hwy. #105 Austin, TX 78759 512/345-7791

Micro Link II

You can communicate with information services, time-sharing computers, and other microcomputers with *Micro Link II*. The menu-driven program can send or receive data in text, object, or source code and capture it to either disk or printer. Control characters, including linefeeds, can be stripped from received files, and block transfers are checked with the Xmodem protocol. *Micro Link II* saves up to 20 programmable strings for automatic logon to mainframes and bulletin boards and requires no installation. List price: \$99. Requirements: 32K, one disk drive, serial port. Digital Marketing Corp. 2363 Boulevard Circle Walnut Creek, CA 94595 800/826-2222, 415/947-1000

Modem-86

While the PC is connected to mainframes, information services, or microcomputers, *Modem-86* captures data to disk or buffer. The program has XON/XOFF handshaking, Xmodem error detection and correction, and on-line file manipulation. Installing *Modem-86* requires knowledge of system hardware; however, the installation is adaptable for other microcomputers such as the Zenith 100 and the DEC Rainbow. List price: \$120. Requirements: 48K, one disk drive, serial port.

CompuView Products, Inc.
1955 Pauline Blvd. #200
Ann Arbor, MI 48103
313/996-1299

Passport

Designed for corporate communications, *Passport* supports error-free transmission of ASCII and binary files between PCs (and compatibles) and computers such as the IBM/CMS, MVS/TSO, Series 1, DEC-10 and DEC-20, HP 3000, and PRIME. The program provides pre-assigned communications parameters for automatic logon and definable command files for automatic interactive operation. *Passport* supports wild-card file names, packeted data, blank compression, and sequence checking during file transfer. The program can be configured to any specific host environment. List price: \$260 per micro, \$2000 per host computer. Requirements: 192K, one disk drive, serial port.

The Datalex Company
650 Fifth St. #406
San Francisco, CA 94107
415/541-0780

PC-Dial

A general-purpose communications program, *PC-Dial* can exchange both text and binary files with other computers. Features include speeds of up to 9600 bps, optional Xmodem protocol, use of modems with or without auto-dial, and continuous redial of a number until connection is established. *PC-Dial* can cap-

ture all or part of a session to disk, has filters to strip or translate incoming data, and can alter its transmission speed to suit the receiving computer. The program offers automatic logon sequences of any length, selectable display colors, support for subdirectories on hard disks, and the XON/XOFF protocol. List price: \$25. Requirements: 128K, one disk drive, serial port.

Jim Button
P.O. Box 5786
Bellevue, WA 98006
206/746-4296

PC/InterComm

Emulation of the DEC VT-100 and VT-102 data terminals, including full-screen cursor addressing and data-to-disk paging, is provided by *PC/InterComm*. The smart-terminal, menu-driven program captures and transmits ASCII and binary files at speeds of up to 9600 bps and uses the Xmodem error-protection protocol. Time-delay throttling, XON/XOFF handshaking, and linefeed deletion and addition facilitate uploading from a host computer. The program allows specific terminal configurations to be stored on disk for easy logon and provides up to 30 programmable keys of 20 characters each. List price: \$99. Requirements: 64K, one disk drive, serial port.

Mark of the Unicorn
222 Third St.
Cambridge, MA 02142
617/576-2760

"*PC/InterComm is easy to use due to very clear menus and built-in help information.*" Robert A. Lerche, Menlo Park, California

PC-PROFS

An interface to IBM's mainframe Professional Office System (PROFS), *PC-PROFS* works with icons that represent conventional office fixtures such as in/out trays, notepads, trash cans, desk calendars, and file cabinets. You manipulate the icons to

retrieve documents from files, browse through letters and memos, and send and receive mail. *PC-PROFS* automatically dials in and logs on to the host mainframe. You can edit notes and formatted documents on the PC and send them to other PROFS users or file them in the PROFS data base. The program's terminal services also allow access to other computers and information services. List price: \$295. Requirements: 256K, one disk drive, Hayes Smartmodem or compatible.

Applied MicroSystems, Inc.
P.O. Box 832
Roswell, GA 30077
404/475-0832

PC-Talk III

Designed to allow ASCII and binary file transfers, *PC-Talk III* uses XON/XOFF handshaking or Xmodem error prevention protocols. The 60-entry dialing directory with auto-dial and redial capabilities permits designation and storage of parameter information, character stripping, and time-delay pacing. *PC-Talk III* provides 40 programmable input strings of up to 126 characters each and includes 70 pages of documentation on a separate disk. List price: requested contribution \$35. Requirements: 64K (compiled version 128K), one disk drive, modem.

Freeware
The Headlands Press, Inc.
P.O. Box 862
Tiburon, CA 94920

"*Painless and versatile; the best communications software for the PC—and the price is right. The interface with the Smartmodem is tops, and every feature is well thought out. The ability to modify the source code is a real plus for adding features. Freeware is a brilliant concept.*" David A. Basskin, Toronto, Ontario, Canada

"*We used to use IBM's Asynchronous Communications Support. PC-Talk is far easier to use and works faster. For our computer-timid types, we can set up a disk with auto-boot and function key macros to simplify sign-ons.*" George L. Hopkins, Greensboro, North Carolina

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P.O. Box 673, Waltham, MA 02254
(617) 890-2518 • 1-800-343-1813

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Telios

A command-driven program that captures ASCII and binary files at speeds of up to 9600 bps, *Telios* features a 20,000-character screen buffer that lets you scroll through up to ten screens of received data. You can stop and restart the downloading process with a single keystroke. Command files allow you to store telephone numbers, communications parameters, and interactive logon information for specific host systems. The program permits time-delayed and host-prompted file transmission, filtering of control characters, and linefeed insertion and deletion. Other features include Kermit, Xmodem, and XON/XOFF transfer protocols, elapsed time display, and on-line file manipulation. List price: \$119.95. Requirements: 96K, one disk drive, serial port.

Genasys

11820 Parklawn Dr.

Rockville, MD 20852

301/468-6900

UAP-Link

Designed for commercial and corporate users, *UAP-Link* transfers binary and ASCII text files between a PC and mini-computers or mainframes running the same program. The program's protocol corrects line errors and compresses transmitted data. You can store a remote time-sharing system's commands in a local file, enabling *UAP-Link* to automatically log on to the host system, perform file transfers, log off, and terminate the connection. The program provides independent device defaults, file protection, and unattended remote operation with the DEC VAX, DEC PDP-11, IBM CMS and TSO, DG MV8000, and mainframes using UNIX. List price: \$250. Requirements: 64K, one disk drive, serial port.

Unique Automation Products

15401 Redhill Ave., Ste. G

Tustin, CA 92680

714/730-1012

VDTE 2.1

The PC can emulate a Hewlett-Packard HP 2624B, HP 2648A, or a DEC VT-52 terminal with *VDTE 2.1*. The program supports the HP 2624 Block/Format mode for most HP 3000 software. *VDTE 2.1* provides file transfer, seven-page scrolling, and eight programmable keys. Other features include cursor control arrow and scrolling keys, full printer functions, transfer speeds of up to 9600 bps, and some HP 2648 vector graphics plotting functions. List price: \$200. Requirements: 128K, one disk drive, serial port.

Inner Loop Software

5456 McConnell Ave. #120

Los Angeles, CA 90066

213/822-2800

Xtract II

Rekeying mainframe data into your microcomputer is not necessary with *Xtract II*. The program allows Burroughs system users to select elements of information in the DMS II data base, collect that information in a mainframe file, reformat it for use in spreadsheet programs, and download it to the PC. *Xtract II* retains up to 500 sets of parameters for extraction operations and provides on-screen explanations for all forms contained in the program. Password protection limits access to restricted information within the data base. List price: \$5000. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Intercomputer Communications Corp.

3195 Linwood Ave.

Cincinnati, OH 45208

513/321-3199

MicroGate 940

A Texas Instruments Model 940/931 EVT terminal emulator, *MicroGate 940* allows PCs to be used as terminals on TI DS990 and Business System computer systems. It offers local operations at up to 9600 bps and remote operations with 1200-bps auto-dial or manual-originate modems. *MicroGate 940* lets you exit the program

to perform PC processing and reenter as though uninterrupted. An optional TI host file transfer package uses Gateway Microsystems' proprietary Full-Duplex Asynchronous Host Access (FLASH) protocol for bidirectional exchange of binary and ASCII files. FLASH provides error-correcting transfer protocol and overlaps data communications and disk input/output. A command interface permits single or multiple file transfers. List price: \$195, file transfer software \$295. Requirements: 128K, one disk drive, modem.

Gateway Microsystems Inc.

9501 Capital of Texas Hwy. #105

Austin, TX 78759

512/345-7791

MicroGate 6530

A Tandem Computer 6520/30 terminal emulator, *MicroGate 6530* links PCs to any Tandem computer system and provides access to Tandem NonStop computer systems and Expand networks. It provides a 384-line display memory, scrolling and paging keys, and function key mapping. The program offers local current-loop operation and local or remote operations at up to 19,200 bps. You can exit *MicroGate 6530* to perform PC processing and later resume as though uninterrupted. An optional file transfer mode uses Gateway Microsystems' proprietary Full-Duplex Asynchronous Host Access (FLASH) protocol for high-speed bidirectional data exchange of binary and ASCII files. Operating within Tandem file security restrictions, authorized users can transfer files between the PC and the host using simple host commands. List price: \$895, file transfer software \$2500. Requirements: 128K, one disk drive, serial port.

Gateway Microsystems Inc.

9501 Capital of Texas Hwy. #105

Austin, TX 78759

512/345-7791

ComNet-16, ComNet-16N, Communicator-1

You can send and receive mail, messages, and any data or text file on local area networks with *ComNet-16*. The program files all incoming mail and messages in memory for you to read at your convenience. All messages can be sorted automatically and stored by phone number, date, place, or person. You select messages by keywords, such as account numbers or people's names. *ComNet-16N* links different networks under the *ComNet* system. *Communicator-1* combines the features of *ComNet-16* and *16N* with a word processing program in a package that links a single remote PC with a *ComNet*-equipped network. The programs work with Molecular, Orchid, OSM, Corvus, Xcomp, Eagle, and InterLand networks. List price: *ComNet-16* \$750, *ComNet-16N* \$495, *Communicator-1* \$375. Requirements: 128K; one disk drive; DOS 2.00 or later version; Hayes, Ventel, or compatible modem. Action Technologies
1804 Broadway
San Francisco, CA 94109
415/775-9396

dBASE/Answer

With *dBASE/Answer* a business manager can selectively access, upload, and download IBM mainframe data base information in a format compatible with other Ashton-Tate software such as *dBASE II*, *dBASE III*, *Friday!*, and *Framework*. The program lets you specify which parts of the data base are accessible to each user. *dBASE/Answer* can access all IBM-supported mainframe data bases, including IMS/DLI, VSAM, ADABAS, TOTAL, and IDMS through an asynchronous protocol, and can emulate a 3270 using DCA's IRMA board. A typical configuration consists of software for one mainframe and 50 microcomputers. List price: \$45,000. Requirements: for each PC 256K, two disk drives, modem, serial port. Ashton-Tate
10150 W. Jefferson Blvd.
Culver City, CA 90230
213/376-6978

R/Net, R/Upload

Using the communications protocol of the Pick operating system, *R/Net* emulates the ADDS Regent 100 terminal. The program observes the cursor addressing schemes of the Reality, Ultimate, Mentor, Evolution, and Information relational data base machines. The program captures files to printer or disk and is completely transparent. *R/Net* permits you to change communications parameters, including character translation codes. An accessory program, *R/Upload*, is designed to complement the download feature of *R/Net*. The program transmits data from a DOS file to a local or remote minicomputer that uses the Pick operating system or a look-alike. *R/Upload* sends attribute, value, and subvalue marks and converts carriage return-line feed sequences to attribute marks during the process. List price: *R/Net* \$200, *R/Upload* \$100. Requirements: 64K, one disk drive, serial port. Cosmos
19530 Pacific Hwy. S
Seattle, WA 98188
206/824-9942

DIO31

An IBM 3270 terminal emulation program, *DIO31* provides full-screen mainframe capabilities on a PC, using a dial-up link between the PC and the host computer. By communicating asynchronously, the program bypasses the complexity and expense of bisynchronous lines, registered modems, and 3270 protocols. *DIO31* uses standard asynchronous host and PC telecommunications software such as TSO, CMS, or ASYNC. Report capture logic enables reports to be printed while other on-line processing is taking place. The program provides a screen painting facility and requires no programming knowledge. List price: mainframe software \$9750, PC software \$475. Requirements: 128K, one disk drive, DOS 2.00 or later version, asynchronous modem.

Data Interface Systems Corp.
827 Harris Ave.
Austin, TX 78705
512/346-5641

OneShot

With *OneShot* you can download data from any mainframe, microcomputer, time sharing system, or information service. The program immediately translates the data for use with programs like *1-2-3*, *dBASE II*, *VisiCalc*, *SuperCalc*, and *Multiplan*. Data can be in the form of reports, queries, or other information that can be transmitted by communications software such as *Smartcom II*, *ASYNC*, *IRMA3270*, and *PC-Talk III*. List price: \$195. Requirements: 64K, one disk drive, modem. DataViz, Inc.
P.O. Box 1319
Norwalk, CT 06856
203/847-7724

SNA/SDLC 3270

An IBM 3270 terminal emulation program, *SNA/SDLC 3270* communicates over point-to-point or multipoint telephone lines with any compatible IBM peripheral. The program features hardware diagnostics, line trace, error checking and correction, carriage control decoding, and file transfer in both directions at speeds of 75 to 4800 bps. The software is designed to run with Frontier Technologies' AdCom2 communications boards. List price: \$695. Requirements: 64K, one disk drive, AdCom2 board. Frontier Technologies Corp.
P.O. Box 11238
Milwaukee, WI 53211
414/964-8689

Compac

A program that uses a variety of communications protocols and character sets, *Compac* lets a PC communicate with different host computers and other PCs. *Compac* offers asynchronous, bi-synchronous, synchronous, HDLC,

SDLC, and X.25 protocol support and ASCII, EBCDIC, and Transcode character sets. All ten function keys can be defined with up to 200 characters each. The program also allows a dual-page display. *Compac* is available in three versions with different data transfer rates (300, 1200, and 9600 bps). The software is designed to run with Frontier Technologies' AdCom2 communications boards. List price: *Compac 300* \$40, *Compac 1200* \$60, *Compac 9600* \$195. Requirements: 128K, one disk drive, AdCom2 board. Frontier Technologies Corp. P.O. Box 11238 Milwaukee, WI 53211 414/964-8689

PC 102

Keyboard and screen emulation of the DEC VT-102, VT-101, VT-100, and VT-52 terminals is possible with *PC 102*. The program lets you access each VT terminal key equivalent with a single keystroke. The ten PC function keys can each be assigned a 40-character instruction. Both XON/XOFF and Pause/Kick protocols are included for half- or full-duplex operation. *PC 102* operates with auto-answer, auto-dial modems, and either the COM1: or COM2: port can be used for direct or modem connection to the host computer. Multiple character sets include special line graphics and United States and European ASCII. Data transfer rates range from 100 to 9600 bps, and a 2K buffer is provided. List price: \$135. Requirements: 64K, one disk drive, serial port. General Micro Systems 7525 Mitchell Rd. #101 Minneapolis, MN 55344 612/937-9194

TRS-80 to IBM File Transfer Program

As its name implies, the *TRS-80 to IBM File Transfer Program* moves data files from a TRS-80 computer to an IBM PC. The program works for TRS-80 Models I, II, III, 4, 12, 16, and 100 and transfers

files one way only, from the TRS-80 to the PC. Any electronic file, including ASCII, binary, BASIC, Pascal, or FORTRAN, can be transferred at rates of up to 9600 bps. The program does not convert files for use on the PC but has utilities to help with program conversions. The program includes an adapter that connects the TRS-80 and PC serial ports. List price \$129.95. Requirements: 64K, one disk drive, serial port. Personal Computer Products 1400 Coleman Ave. #C-18 Santa Clara, CA 95050 408/988-0164

ReadiTerm

A command-driven program that captures binary or ASCII files, *ReadiTerm* can emulate both the Perkin-Elmer 1251 and the DEC VT-100 terminals. *ReadiTerm* provides auto-dial, auto-redial, and the Xmodem error-checking protocol. Command files can be configured with phone numbers, communications parameters, and specific logon sequences to facilitate logging on to host systems. Pre-configured files are included for The Source, the Dow Jones News/Retrieval service, and CompuServe, and the program has 40 programmable function keys. List price: \$75. Requirements: 96K, one disk drive, serial port. ReadWare Systems P.O. Box 680 West Redding, CT 06896 203/431-3521

Personal Communications Manager

With the *Personal Communications Manager*, an IBM PC can exchange information with compatible computers over phone lines. You can send and receive electronic mail at any time of day. The program accesses the data files of larger computers and various information networks such as the Dow Jones News/Retrieval service, The Source, and CompuServe. You can link a sequence of commands so that one keystroke performs a series of functions. List price: \$100. Requirements: 128K, one disk drive, modem.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

IBM 3101 Emulation Program

By providing preassigned specification files as well as user-designed files, the *IBM 3101 Emulation Program* enables an IBM PC to emulate a 3101 terminal. The specification files let the PC operate with the following systems: VM/370, MVS/TSO, IBM 8100, IBM System/34, IBM System/38, IBM 7426 Terminal Interface Unit, Yale IUP for Series/1, 3101 Pass-through, and information services such as The Source and CompuServe. The program captures and sends ASCII files to and from host computers and converts ASCII files to and from binary format. List price: \$140. Requirements: 64K, one disk drive, serial port.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Acculink

You can use *Acculink* to capture binary or ASCII files from microcomputers, minicomputers, and mainframes, including the DEC-10, DEC-20, VAX, and PDP-11. The menu-driven program supports wild-card file names while sending or receiving files and provides its own error-correction protocol. Other features include auto-dial and auto-redial, programmable key strings, optional menu screens, and emulation of DEC VT-100, DEC VT-52, or IBM 3101 terminals. List price: \$245. Requirements: 128K, one disk drive, serial port. IE Systems Inc. P.O. Box 359 Newmarket, NH 03857 603/659-5891

BIS-3270, BIS-3280

Terminal emulation programs for the IBM 3270 and 3280 series, *BIS-3270* and *BIS-3280* use the BSC protocol. The programs allow communications over point-to-point or multipoint phone lines. *BIS-3270* features full-screen and keyboard emulation of the 3270 terminal, local print-key support, and 3284 and 3286 printer support. *BIS-3280* provides Remote Job Entry console command support, printer forms-control capability, and translations needed to exchange text and binary files. Diagnostic functions for both programs include ALTEST to check operations of the microcomputer, the modem, and the cable and a software line trace to assist with configuration problems. List price: each program \$695. Requirements: 128K, one disk drive, IBM Bisynchronous Adapter Card.
IE Systems Inc.
P.O. Box 359
Newmarket, NH 03857
603/659-5891

Postman

With *Postman* you can send and receive telexes, mailgrams, E-COM letters, and other messages through EasyLink, Western Union's electronic mail service. The program supports the *WordStar* and *Multimate* word processors and can also transmit files from any word processor that produces an ASCII file. The program provides templates for each of the EasyLink address types, receives messages automatically, and offers a complete one-key mailbox service. Features include archive organization and control, itemized batch transmissions, message tracking, a personal directory, and the ability to dial into other telecommunications systems. List price: \$295.95. Requirements: 64K, two disk drives, serial port.
Cappcom Software
One World Trade Center
New York, NY 10048
212/938-5702

Postman

An electronic mail program with word processing abilities, *Postman* accesses Western Union's priority mail services. Once you have set up an account with Western Union, you can send computer letters, mailgrams, and E-COM transmissions. Your messages are processed by Western Union and delivered by the U.S. Postal Service. List price: \$44.95. Requirements: 64K, one disk drive, modem.
Sydney Dataproducts, Inc.
11075 Santa Monica Blvd.
Los Angeles, CA 90025
619/231-1775, 213/479-4621

Barr/HASP

A synchronous communications package, *Barr/HASP* (*Houston Automatic Spooling Priority System*) transforms a PC or XT into a Remote Job Entry work station. The program simultaneously transmits jobs to and receives printouts from IBM's MVS/JES2, MVS/JES3, and VM/RSCS operating systems. *Barr/HASP* offers print speeds of 1600 lines per minute, carriage control support, data transfer speeds of 1200 to 19,200 bps, print spooling, host plotter support, communications scope, a self-testing loopback mode, data compression, and support for color. List price: \$890. Requirements: 128K, one disk drive, synchronous modem.
Barr Systems, Inc.
2500 Blue Ridge Rd. #315
Raleigh, NC 27607
800/227-7797, 919/782-4462
North Carolina

VTerm

With *VTerm* an IBM PC can emulate the DEC VT-100 and VT-52 terminals and transfer ASCII or binary files asynchronously at speeds of 50 to 9600 bps. The program provides full cursor addressing and keyboard emulation and supports the VT-102 printer port. *VTerm* can be commanded from the local or host end and supports any PC-compatible printer. List price: \$125. Requirements: 64K, one disk drive, serial port.
Techland Systems, Inc.
25 Waterside Plaza
New York, NY 10010
212/684-7788

MultiLink

A program that transforms a PC or XT into the central processing unit of a multitasking, multiuser network, *MultiLink* uses inexpensive terminals as work stations. Up to eight dumb terminals can be connected to a single PC through serial ports and modems. All work stations can share the PC's printers, disks, and most nongraphics software. *MultiLink* lets you switch among your own and others' programs, review other people's work, and even assist them from your keyboard. You can post messages on a bulletin board, dump printouts in a queue, and customize the keyboard by redefining the keys. List price: \$295. Requirements: 64K, one floppy disk drive (hard disk recommended), serial ports.
The Software Link, Inc.
8601 Dunwoody Pl. #336
Atlanta, GA 30338
404/998-0700

Omniterm2

Files of preset communications parameters can be accessed directly from DOS to connect *Omniterm2* to a remote system with one keystroke. The program provides DEC VT-100 and VT-52 terminal emulation. You can transfer files at rates of from 50 to 19,200 bps with Xmodem error checking. *Omniterm2* stores up to 38 macros for each system and supports auto-dial and auto-logon for smart modems. A scroll-back feature lets you review old text while on line. You can configure I/O devices using the program's translation tables. A Host mode allows callers on another computer to communicate with an unattended PC. List price: \$175. Requirements: 128K, one disk drive, modem.
Lindbergh Systems
49 Beechmont St.
Worcester, MA 01609
617/852-0233

Forthcom

Designed for use with the MMSFORTH operating system, *Forthcom* transfers data from Miller Microcomputer's *Data-handler* and *Forthwrite* and can send FORTH blocks to computers not running *Forthcom*. Two systems running *Forthcom* can transfer files with full error checking and data compression at speeds of up to 1200 bps. The menu-driven program provides print spooling and includes source code. List price: \$39.95. Requirements: 64K, one disk drive, MMS-FORTH, serial port. Miller Microcomputer Services 61 Lake Shore Rd. Natick, MA 01760 617/653-6136

TieLine

A file transfer system, *TieLine* is designed to move data between an Apple II and an IBM PC. The program supports communication between the two computers using only their standard hardware. Only one display is required to operate the program. No communications adapter or serial port is necessary because *TieLine* uses the cassette port on the PC and the built-in I/O facilities of the Apple II. The program permits data transfer rates of up to 10,000 bps, automatically checks for errors during file transfer, and comes with a cable that connects the two machines. List price: \$170. Requirements: 64K, one disk drive, DOS 1.10. TRAX Softworks, Inc. 10801 National Blvd. Los Angeles, CA 90064 213/475-8729

A.C.E.

Using *A.C.E.*, a PC or an XT can emulate the Honeywell VIP7200, VIP7301, or VIP7303 terminals. The menu-driven program offers on-screen help and uses the Honeywell terminal interface without modification. *A.C.E.* offers cursor control and addressing capabilities, works independently of the Honeywell processor and

operating system, and lets you reprogram the keyboard to fit your needs. The program can operate at line speeds of 300 to 9600 bps. List price: \$295. Requirements: 128K, one disk drive, serial port. Insurance Technology Consultants 1432 W. Palmyra, Ste. F Orange, CA 92668 714/773-1754

F.I.L.E.

A file transmission program, *F.I.L.E.* allows data exchange between a PC or XT and any Honeywell GCOS 6 Mod 400 system. The program uploads and downloads data files to specifiable file names, transfers both fixed- and variable-length records, and uses a protocol that eliminates 99.6 percent of data transmission errors. *F.I.L.E.* supports common sequential data structures, including those used by RM/COBOL, *WordStar*, and BASIC, and can accommodate record lengths of 1 to 1024 bytes. The program can be installed either locally on a direct-connect network or remotely over dial-up lines. List price: \$295. Requirements: 128K, one disk drive, serial port. Insurance Technology Consultants 1432 W. Palmyra, Ste. F Orange, CA 92668 714/773-1754

Acom-300

A terminal emulation program, *Acom-300* makes the PC an intelligent terminal on the General Electric Information Services Company Mark III network. The program captures data to disk, printer, or both with the screen display on or off. During file transmission *Acom-300* uses a low-cost connect mode. The program provides on-line file manipulation, enabling you to delete, rename, and view PC disk files while connected to the Mark III network. Ten preassigned function keys are included with a status line that displays each key's operation state. List price: \$49.95. Requirements: 64K, one disk drive, serial port, 300 bps acoustic coupler. Allston Group P.O. Box 831557 Richardson, TX 75083 214/235-1631

Mighty Mail

An electronic mail management system, *Mighty Mail* works with ITT Dialcom, The Source, Western Union's EasyLink, and MCI Mail. While unattended, the program can send and receive files created by other software such as 1-2-3. *Mighty Mail* automatically switches networks when errors occur or lines are down and stamps incoming mail with the time and date. Messages can be composed off line with *Mighty Mail's* editor or another word processing program, then transmitted when rates are lowest. The program includes mail sorting, file management, and password protection. List price: \$349. Requirements: 256K, two disk drives, Hayes Smartmodem 1200 or 1200B. New Era Technologies, Inc. 2025 Eye St. NW #922 Washington, DC 20006 800/368-5787, 202/887-5440

GenTerm

GenTerm provides asynchronous terminal emulation and file transfers at rates of up to 9600 bps. Both ASCII and non-ASCII 8-bit program files can be transferred with error detection and correction. For mainframe communications, you can define almost any handshaking protocol for line-by-line or character-by-character transmission. The program provides modem control with single-digit auto-dial and auto-logon files and can operate unattended for remote file transfers. As a communications terminal, *GenTerm* can appear as a dumb terminal, an IBM 3101 terminal with full block mode operations, a DEC VT-52, DEC VT-100, or Lear Siegler ADM 3A or ADM 31 terminal. List price: \$79.95. Requirements: 64K, one disk drive, serial port. Information Analysis Systems Corp. Mason Rd. #2 West Willington, CT 06279 203/429-1691

Linkup

For those who want to transfer files between a CP/M computer and a PC, *Linkup* emulates a subset of the Televideo 960 terminal functions and lets you hook up the CP/M computer's CRT cable to the asynchronous communications adapter on a PC. List price: \$30. Requirements: 64K, one disk drive, serial port.

PCX

21941 Cayuga
Lake Forest, CA 92630
714/951-8320

Relay

A program that allows the PC to simultaneously send, receive, print, and edit files, *Relay* has extra communications features. These include auto-answer, an auto-dial directory that remembers preset communications parameters, split-screen message communication, provision for running other application programs while on line, and remote operation for transmitting and capturing files. *Relay's* TTY mode lets you transfer files in either informal ASCII text mode or one of two error-checking Xmodem modes, checksum or CRC-16. In its PC mode, *Relay* communicates with other *Relay*-equipped PCs (or with a mainframe equipped with a companion package called *Relay/VM*), using *Relay's* proprietary version of CRC-16 error-checking protocol. *Relay* also supports the 3270-PC. List price: \$149. Requirements: 128K, one disk drive, serial port.

VM Personal Computing
60 E. 42nd St.
New York, NY 10165
212/686-1450

HELIOgraph

A videotex interface package for the PC, *HELIOgraph* includes a NAPLPS (North American Presentation Level Protocol Syntax) videotex decoder for downloading and displaying videotex frames, software for creating high-resolution videotex frames, and a slide show program for giving NAPLPS demonstrations directly from the PC. List price: \$398.95. Re-

quirements: 256K, one disk drive, monochrome and color monitors, Micro Developed Systems Realcolor board.

Microtaure, Inc.
Station J
Ottawa, Ontario
K2A 1T1 Canada
613/230-5265

Microstar Videotex Interpreter

For downloading and displaying videotex frames with the PC, the *Microstar Videotex Interpreter* is a software decoder that conforms to the NAPLPS graphics standard. List price: \$240. Requirements: 192K, one disk drive, color monitor, color graphics board.

Microstar Software, Ltd.
14 Concourse Gate #400
Napean, Ontario
K2E 7S6 Canada
613/727-5696

Picture Painter

Videotex frames can be downloaded and displayed with *Picture Painter*, a software decoder that conforms to the NAPLPS standard. The package also includes a frame creation module for designing NAPLPS screens. List price: \$3000. Requirements: 128K, one disk drive, color monitor, Plantronics Colorplus board.

Cableshare, Inc.
20 Enterprise Dr.
P.O. Box 5880
London, Ontario
N6A 4L6 Canada
519/686-2900

VideoLink 88

A menu-driven communications package, *VideoLink 88* turns a PC into an intelligent terminal that can link with information services. *VideoLink 88* supports the Hayes Smartmodem at transfer speeds of 75 to 1200 bps. The program transmits ASCII or binary files. List price: \$59.95. Requirements: 64K, one disk drive.

Windmill Software, Inc.
2209 Leominster Dr.
Burlington, Ontario
L7P 3W8 Canada
416/336-3353

TVX MacroVision

NAPLPS-standard videotex frames can be downloaded and displayed using the *TVX MacroVision* software decoder. The package also includes a frame creation module for designing NAPLPS screens. List price: \$3000. Requirements: 128K, one disk drive, color monitor, color graphics board, modem.

TVX Corp.
P.O. Box 88364
Atlanta, GA 30356
404/433-4500

PC to Mac and Back

To bridge the gap between the PC and the Apple Macintosh, *PC to Mac and Back* lets you transfer BASIC programs, ASCII text, and binary files from one computer to the other. The package consists of a 5¼-inch disk for the PC and a 3½-inch disk for the Macintosh. Using a direct cable connection or phone lines and a modem, the program transfers data in either direction at 110 to 9600 bps. *PC to Mac and Back* can also link PC to PC, Mac to Mac, or either to any other computer with handshaking or Xmodem communications protocols. The program also enables a PC or a Mac to access distant mainframes, data bases, and information utilities. The program's four transfer protocols include Xmodem and one customized for the Macintosh Finder and the PC's DOS 2.00 (with error checking). Microsoft's mouse can be used for menu selection on the PC. List price: \$99.95. Requirements: PC, XT, or PCjr with 128K, one disk drive, serial port; Apple Macintosh with 128K, one disk drive; modem.

Dilithium Press
P.O. Box 606
Beaverton, OR 97075
800/547-1842, 503/646-2713 Oregon

NetWare Operating System

An operating system for local area networks (LANs), the NetWare Operating System coordinates computers that use the same LAN interface boards. It remains in-

visible to all work stations while allowing them to share software, data, disk storage, and printers. When the system is installed, one computer (or processor) with a hard disk is designated as file server. Up to 24 computers can be added as work stations. The NetWare Operating System currently supports network boards and system topologies from Novell, Gateway Communications, Corvus Systems, 3Com Corporation, Proteon, Orchid Technology, Standard Microsystems, Davong, and Nestar. Each board requires its own version of NetWare Operating System. List price: \$1495. Requirements: 256K (if used as work station and file server 384K), 10MB hard disk, LAN boards and cabling.
Novell, Inc.
1170 N. Industrial Park Dr.
Orem, UT 84057
801/226-8202

EM100

A menu-driven terminal emulator, *EM100* converts a PC (or compatible) into a VT-102 terminal for use with Digital Equipment Corporation or other mini-computers or mainframes. The PC is connected to the host computer directly or by auto-dial modem. *EM100* emulates most features of the VT-100, including selectable speed (to 9600 bps), VT-102 escape sequences, printer functions, graphics and alternate character sets, 132-column horizontal scrolling, keypad modes, and screen save and restore. The program remembers setup configurations for multiple host systems and lets you transfer ASCII or binary files (using Xmodem error-checking protocol) without leaving the emulator. Files can be transferred between PCs as well. List price: \$175. Requirements: 64K, one disk drive, DOS 2.00 or later version, serial port.
Diversified Computer Systems, Inc.
100 Arapahoe Ave.
Boulder, CO 80302
303/447-9251

"This is an excellent program. It loads and operates quickly and has a very useful 132-column horizontal scroll. File transfer (binary and ASCII) can be controlled from the PC or host (we use a VAX). Support is excellent." Dave Ross, Denver, Colorado

Softerm PC

A communications manager and terminal emulator, *Softerm PC* can be used to access information services and electronic mail systems as well as company mainframes. The program emulates 24 terminals, providing all keyboard and display functions, in both conversational and block modes. *Softerm PC* operates as a stand-alone communications program or with other application software. Features include keyboard macros and a menu for automatic dialing. The program's file transfer capabilities include automatic execution using command files, Xmodem file transfer protocol, and Softrans protocol (with CRC-16 error checking and data compression). The package includes an adaptable source program for the host computer. *Softerm PC* emulates terminals from ADDS, Data General, Datapoint, DEC, Hazeltine, Hewlett-Packard, Honeywell, IBM, Lear Siegler, and TeleVideo. It can also emulate a user-defined terminal. All emulations are TTY compatible. List price: \$295. Requirements: 128K, one disk drive, modem.
Softtronics, Inc.
3639 New Getwell #10
Memphis, TN 38118
901/683-6850

VTerm II

An asynchronous micro-to-mainframe communications program, *VTerm II* emulates the DEC VT-100, VT-101, VT-102, and VT-52 terminals. With *VTerm II* you can connect a PC to any Digital Equipment Corporation mainframe and run all host software unchanged at speeds of up to 9600 bps. You can also link the PC with information services or exchange files with other PCs. A DOS-VTerm toggle lets you leave *VTerm II* to execute DOS commands or run software, then return with the communications link intact. Twenty programmable function keys can store logon parameters for various remote systems. Its four file transfer protocols include ASCII (with XON/XOFF speed matching), Xmodem, and Coefficient Sys-

tems Corporation's VTrans 7- and 8-bit protocols (with CRC-16 and checksum error detection). The *VTerm II* package also includes source-code versions of the error-checking protocols for transfer to the host computer. List price: \$160. Requirements: 96K, one disk drive, modem.
Coefficient Systems Corp.
611 Broadway
New York, NY 10012
212/777-6707

Conexus

A computer teleconferencing and bulletin board system for up to 1000 users, *Conexus* lets a PC function as a remote, unattended host for electronic meetings, joint authorships, inquiry-response networks, or on-line data bases. Seven levels of access, from system operator to read only, can be assigned to users. The system allows for private or public teleconferences and message exchange. Bulletin board postings can be searched by keyword. *Conexus* is written in the manufacturer's *MIST+* communications language and includes its text-oriented data base manager *Resources*. List price: \$624. Requirements: 256K, hard disk, Hayes Smartmodem.
New Era Technologies, Inc.
2025 Eye St. NW #922
Washington, DC 20006
800/368-5787, 202/887-5440

Data Capture/pc

A menu-driven program that supports popular modems and serial ports, *Data Capture/pc* lets you capture data in a buffer and print it simultaneously. Any portion of the buffer can be edited before printing or saving to disk. You can use handshaking to exchange files with remote systems, and you can filter unwanted control characters from the text you receive. The program, which is written in BASIC, comes in 64K and 128K versions. List price: \$39.95. Requirements: 64K or 128K, one disk drive, BASIC.
Southeastern Software
7743 Briarwood Dr.
New Orleans, LA 70128
504/246-8438, 504/246-7937

Move-It

Using *Move-It*, a computer can connect with dial-up bulletin boards and information utilities or exchange data with any micro, mini, or mainframe computer. If both systems are equipped with *Move-It*, they can make error-free exchange of any type of data, including binary and bit-mapped files, and can use DOS's wild-card designators (an asterisk or a question mark) for batch transfers. The computers need not be attended. If one system lacks *Move-It*, they can exchange only ASCII characters, without error checking or remote operation. Should disk space run out during transfer, another disk can be inserted without data loss. The program supports most auto-dial modems and incorporates a dialing menu, directory display, and a help key. List price: \$150. Requirements: 32K, one disk drive, modem. Woolf Software Systems
6754 Eton Ave.
Canoga Park, CA 91303
213/703-8112

Asynchronous Communications Support 2.00

A menu-driven asynchronous communications program, *Asynchronous Communications Support 2.00* lets you connect with information services, mainframes, and other microcomputers. The program captures data to disk from any ASCII system (at speeds of from 75 to 9600 bps) and can store communications parameters for various host systems. The menu offers selections for the Dow Jones News/Retrieval service, The Source, VM/370, and TSO. List price: \$60. Requirements: 64K (for DOS 2.00 or later version 128K), one disk drive, modem. IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

The Apple-IBM Connection

An audio cassette that comes with *The Apple-IBM Connection* tells you how to use this menu-driven program to ferry data or binary files between the Apple II+ or IIe and IBM, Eagle, or Columbia microcomputers. You can send and receive files with or without error checking and perform remote transfers from an unattended Apple or IBM. An electronic mail mode lets you send messages to operators on other Apples or IBMs. You can transfer *VisiCalc* data from the Apple to run under 1-2-3 on the IBM and ferry *WordStar*, *VisiCalc*, and *Multiplan* files. Transfers by telephone are limited by the modem's speed, but direct cabling to an Apple with an appropriate serial port allows data transfer at up to 9600 bps. List price: \$250. Requirements: PC with 96K, one disk drive, serial port, modem; Apple II+ or IIe with 64K, one disk drive, serial port. Alpha Software Corp.
30 B St.
Burlington, MA 01803
800/451-1018, 617/229-2924
Massachusetts

The Data Transfer System, The Personal Bibliographic System

Users of *The Data Transfer System* can download records from two on-line library catalogs, OCLC (Ohio College Library Center) and RLIN (Research Library Information Network). *The Personal Bibliographic System*, a companion program, then reformats the data for 20 document types including articles, books, musical scores, maps, and video recordings. The system punctuates the citations according to the ANSI standard for bibliographic references. Features include searching by keywords, variable-length fields, printing options, and a full-screen editor. List price: *Data Transfer System* \$200, *Personal Bibliographic System* \$250. Requirements: 128K, two disk drives, modem. Personal Bibliographic Software, Inc.
P.O. Box 4250
Ann Arbor, MI 48106
313/996-1580

Mite/MS

A menu-driven communications package, *Mite/MS* transfers text and binary files and communicates with information services. The program supports connection with other microcomputers by modem or direct cable. Features include on-line control of communications parameters, ten programmable macro strings, automatic logon and redialing, and on-line file manipulation. *Mite/MS* transfers binary files using Xmodem or *Smartcom II*'s, *Crosstalk*'s, or its own error-checking protocol. Using the character-filter menu, you can automatically strip unwanted characters from incoming material. List price: \$195. Requirements: 96K, one disk drive, serial port. Mycroft Labs, Inc.
P.O. Box 6045
Tallahassee, FL 32314
904/385-1141

In-Search

An information retrieval package, *In-Search* provides an intelligent interface to Dialog Information Services, a collection of over 200 on-line data bases that cover recent literature and information in the fields of engineering, science, medicine, business, government, and law. Using graphics, screen prompts, and on-line help, *In-Search* guides you through research strategy and automatically dials the network. A screen editor permits on-line modification of requests until the desired information appears. List price: \$399. Requirements: 192K; two disk drives; Hayes modem, Novation's Smartcat, or an acoustic coupler. Menlo Corp.
4633 Old Ironsides Dr. #400
Santa Clara, CA 95050
408/986-0200

PC/Net-Link

When using several information services, you can minimize the time on line with *PC/Net-Link*. Designed for use with Genasys's *Telios* communications software, the program stores the protocol for any

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In the beginning, when office automation was in its primordial stage, there arose from the east wise men bearing computers. Wang. They moved their systems into offices everywhere. And became very powerful.

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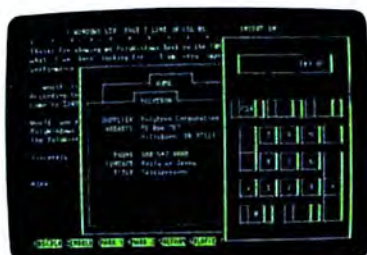
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remote data base, along with access numbers and passwords. You can automatically dial and log on to data bases such as Dialog, Dow Jones, or BRS. *PC/Net-Link* presents data bases in menus; help screens describe each service's commands and can include comments. List price: \$550. Requirements: 128K, hard disk, Hayes Smartmodem 1200 or 1200B, *Telios*. Informatics General Corp.
21031 Ventura Blvd.
Woodland Hills, CA 91364
213/887-9040

Growth Power

A terminal-emulation program, *Growth Power* converts a PC into a work station that can access Computer Solutions' Growth Power systems. Designed for use in manufacturing environments, *Growth Power* offers materials requirements planning (MRP), shop floor controls, and production capacity planning functions. Based on the Hewlett-Packard 3000 financial, manufacturing, and marketing control systems, the program lets you transfer data stored in a Growth Power system into the PC for use with other application programs such as *1-2-3* and *dBASE II*. List price: \$395. Requirements: 96K, one disk drive, serial port. Computer Solutions, Inc.
1 Burlington Woods
Burlington, MA 01803
617/229-2200

m3278/SPF

A communications package, *m3278/SPF* enables a PC to emulate an IBM 3278 work station. With *m3278/SPF* the PC acts as a TSO/SPF distributed work station that can exchange programs with the mainframe, create new files, and edit existing files. The program's full-screen text editor is equivalent to the standard mainframe SPF software. You can switch among interactive, remote, and local processing modes, using one keystroke. List price: \$1595. Requirements: 320K (512K recommended), two disk drives. Phaser Systems, Inc.
353 Sacramento St., 23rd Floor
San Francisco, CA 94111
415/434-3990

PC Complete

A communications program, *PC Complete* lets you transfer any type of file between a PC and information services, mainframes, and other microcomputers. Using a desktop metaphor, *PC Complete* lets you automatically send files with logon sequences up to 20 lines long. The program also features an electronic mail mode with a text editor and an address book, Xmodem error correction protocol, unattended file transfers, and programmable keystrokes. List price: \$229. Requirements: 256K, two disk drives, serial port. Transend Corp.
2190 Paragon Dr.
San Jose, CA 95131
408/946-7400

Perfect Link

You can transfer binary or ASCII files between a PC and information services, mainframes, and microcomputers with *Perfect Link*. The program provides one-key automatic dialing and logon, 20 programmable keys, and predefined macros for information services including The Source and Knowledge Index. You can strip control characters such as linefeeds from incoming transmissions, manipulate files while on line, transmit a true break signal, and estimate file transmission times. The program emulates various terminals including the TeleVideo 920, the DEC VT-52, and the IBM 3101. List price: \$149. Requirements: 128K, one disk drive, serial port. Perfect Software, Inc.
702 Harrison St.
Berkeley, CA 94710
503/344-7638

FileLynx/3278

You can capture data to disk or printer from IBM mainframes with *FileLynx/3278*. When used with any Local Data protocol converter, *FileLynx/3278* can download and upload automatically. All IBM 3278 terminal functions and cursor

keys are supported, as well as four-color 3279 emulation. *FileLynx/3278* also features selective file capture, a parameter configuration mode, and full support for formatted screen applications. With Local Data's optional auxiliary print support, the *FileLynx/3278* program allows a local parallel printer to appear to the host as an IBM 3287 printer. List price: \$200. Requirements: 64K (128K recommended), one disk drive, serial port.

Local Data
2771 Toledo St. #706
Torrance, CA 90503
213/320-7126

Micro-ezLNK

A program that connects computers to EasyLink, Western Union's store-and-forward message service, *Micro-ezLNK* automatically formats and addresses messages on disk in the style required for EasyLink. You can send telexes, TWXs, telegrams, cablegrams, and mailgrams. *Micro-ezLNK* receives and stores electronic mail messages to disk to be read at any time. The program lets you create directories of addresses and use Western Union's *FYI* news service. *Micro-ezLNK*'s text editor provides full cursor movement and insert and delete functions. List price: \$150. Requirements: 48K, one disk drive, DOS 2.00 or later version. Advanced Micro Techniques
1291 E. Hillsdale Blvd. #210
Foster City, CA 94404
415/349-9336

Direct.connect

A menu-driven communications program that captures ASCII and binary files at speeds of up to 9600 bps, *Direct.connect* provides <Alt> key commands, programmable function keys, and a screen paging system to prevent data from scrolling off the screen. Accuracy of data is ensured with Xmodem protocol. List price: \$95. Requirements: 96K, one disk drive, serial port. Direct.aid, Inc.
P.O. Box 4420
Boulder, CO 80306
800/443-8080

MIST +

A communications-oriented application generator, *MIST +* lets you automate micro-to-micro and micro-to-mainframe communications using subroutines rather than programming from scratch. More elaborate than macros, these routines have up to seven levels of nesting and can be edited with *MIST +*'s built-in text editor. *Resources*, an optional data base manager, works with *MIST +* to help build and manage bodies of data for remote access or internal networking. For example, a routine could be set up to enable the main office computer to automatically poll the branch office computers each midnight and update its central data base. The data base can contain up to seven types of fields (including a text field of up to 12,000 characters), whose records are accessible by both indexed and string searching. List price: \$295, with *Resources* \$495. Requirements: 256K, hard disk, Hayes Smartmodem. New Era Technologies, Inc. 2025 Eye St. NW #922 Washington, DC 20006 800/368-5787, 202/887-5440

Instant Mail Manager

Including address list and file maintenance, *Instant Mail Manager* combines communications and word processing. You can connect to as many as 15 information services or corporate mainframes. You can log on to services with one keystroke. List price: \$95. Requirements: 256K, one disk drive, DOS 2.00 or later version, modem. Western Union Corp. 1 Lake St. Upper Saddle River, NJ 07458 201/825-6246

Transporter

A program that allows unattended inter-computer communications, *Transporter* operates from instructions on a task list created in advance. At a preset hour, the program dials up the appropriate computer, performs its tasks, and retains a log of activities. *Transporter* includes the *Crosstalk* communications program, which allows communication with most personal computers, mainframes, and subscription information services. List price: \$295. Requirements: 96K, two disk drives. Microstuf, Inc. 1000 Holcomb Woods Pkwy. Roswell, GA 30076 404/998-3998

The Impersonator

A terminal emulation program, *The Impersonator* can govern such asynchronous communications as access to public data bases, file transfers, and electronic mail. It emulates seven common terminals and includes a programming language for creating other emulation programs. Five protocols are built in, including Xmodem and XON/XOFF. Using the macro command language, you can design one-keystroke logons and transfers. *The Impersonator* handles differences in terminal keyboards and has character filters for swapping text between programs. Features include automatic dialing, unattended file transfers, error detection, and teletype and typewriter modes. The program has preconfigured emulations for the Lear Siegler ADM-3A, DEC VT-52 and VT-1000, Hazeltine Esprit, IBM 3101, Data General D210, and TeleVideo 912. List price: \$195. Requirements: 192K, one disk drive, modem. Direct.aid, Inc. P.O. Box 4420 Boulder, CO 80306 303/442-8080

MicroGate 742

A program that enables PCs to replace Texas Instruments Model 742 terminals, *MicroGate 742* emulates a compatible subset of the TI 742 block mode communications protocol. With it, a PC can operate in the unattended batch environment of the TI Model 700 Terminal Polling System (TPS), Model 704/1 TPS, or other host-controlled 742 polling networks. *MicroGate 742* also allows PCs to replace TI Models 770 and 771 and DS990 Model 1 terminals emulating the 742 protocol. List price: \$395. Requirements: 128K, one disk drive, serial port, modem. Gateway Microsystems Inc. 9501 Capital of Texas Hwy. #105 Austin, TX 78759 512/345-7791

Ascom

A menu-driven communications program, *Ascom* allows ASCII 8-bit file transfers with standard XON/XOFF handshaking protocol, CRLF protocol, and BLOCKV protocol. In CRLF protocol, you can change the standard carriage return and linefeed prompts into different characters for use with specific systems. BLOCKV allows multiple file transmission using *Ascom*'s error-checking protocol. The program also permits unattended remote operation; on-line control of file commands, including Type, Delete, and Run; and printer function toggling. List price: \$195. Requirements: 64K, one disk drive, serial port. Dynamic Microprocessor Assoc. 545 Fifth Ave. #1103 New York, NY 10017

Smart Term 125

A PC can emulate a DEC VT-125, VT-100, VT-102, VT-52, or TTY terminal with *Smart Term 125*. The program transfers ASCII and binary files using either the PDIP or Xmodem protocols. *Smart Term 125* supports DEC and other mainframe graphics products. You can program macro keys, use command files for automatic file transfers, control graphics windows, scroll horizontally, or use a European DOS. List price: \$295. Requirements: 256K, one disk drive, graphics board, serial port, DOS 2.00 or later version.

Persoft Inc.
2740 Ski Ln.
Madison, WI 53713
608/273-6000

Flash-Com

A PC can be converted into a message and teleconference base with *Flash-Com*. The program includes a word processor and form manager. The program can validate data and perform calculations. There are also a library of business letters and forms and a mailing list manager. *Flash-Com* provides communication through services such as E-COM, MCI Mail, EasyLink, IRC, RCA, ITT Dialcom, STCC, PRT, MS-WINC, Envoy-100, and CNCP. It also accesses communication utilities such as The Source, CompuServe, and Delphi. The program works with other word processing, data base management, and spreadsheet programs. List price: \$299. Requirements: 256K, two disk drives.

OMNI Computer System, Inc.
P.O. Box 162
Chestnut Hill, MA 02167
617/965-5585

Smartcom II

With *Smartcom II* you can capture ASCII or binary files from information services, mainframes, and microcomputers. The program lets you designate parameters and macro commands for 25 remote systems and manipulate files on line. Specific macro functions allow the designation of character prompts and time-delay characters from host systems. Other features include page pause during download, line delay, linefeed/carriage return control, error correction, and unattended remote operation with other *Smartcom II* systems. List price: \$119. Requirements: 96K, one disk drive, serial port. Hayes Microcomputer Products, Inc. 5923 Peachtree Industrial Blvd. Norcross, GA 30092 404/449-8791

"Smartcom II works well, but the documentation for telecommunications is very difficult to understand." Nancy DeVries, Oakland, New Jersey

"The manual is difficult to use as a quick reference; it has no index, and useful reference information is embedded in verbose explanatory text. Fairly good on-line help overcomes some of these problems, but it is easy to miss some of the finer points of this versatile program." Bob Stephan, Pebble Beach, California

"Smartcom II is a very practical and easy-to-use system. The documentation is beautiful." Dr. Maryl L. Winningham, Columbus, Ohio

BiComM-3270

A bisynchronous IBM 3270 series emulation package, *BiComM-3270* includes a complete on-line configuration procedure, full visual attribute support, switched or leased line operations, and 25th-line status information. List price: \$895. Requirements: 64K, one disk drive. Packaged Solutions, Inc. 1 Huntington Quadrangle Melville, NY 11747 516/752-1640

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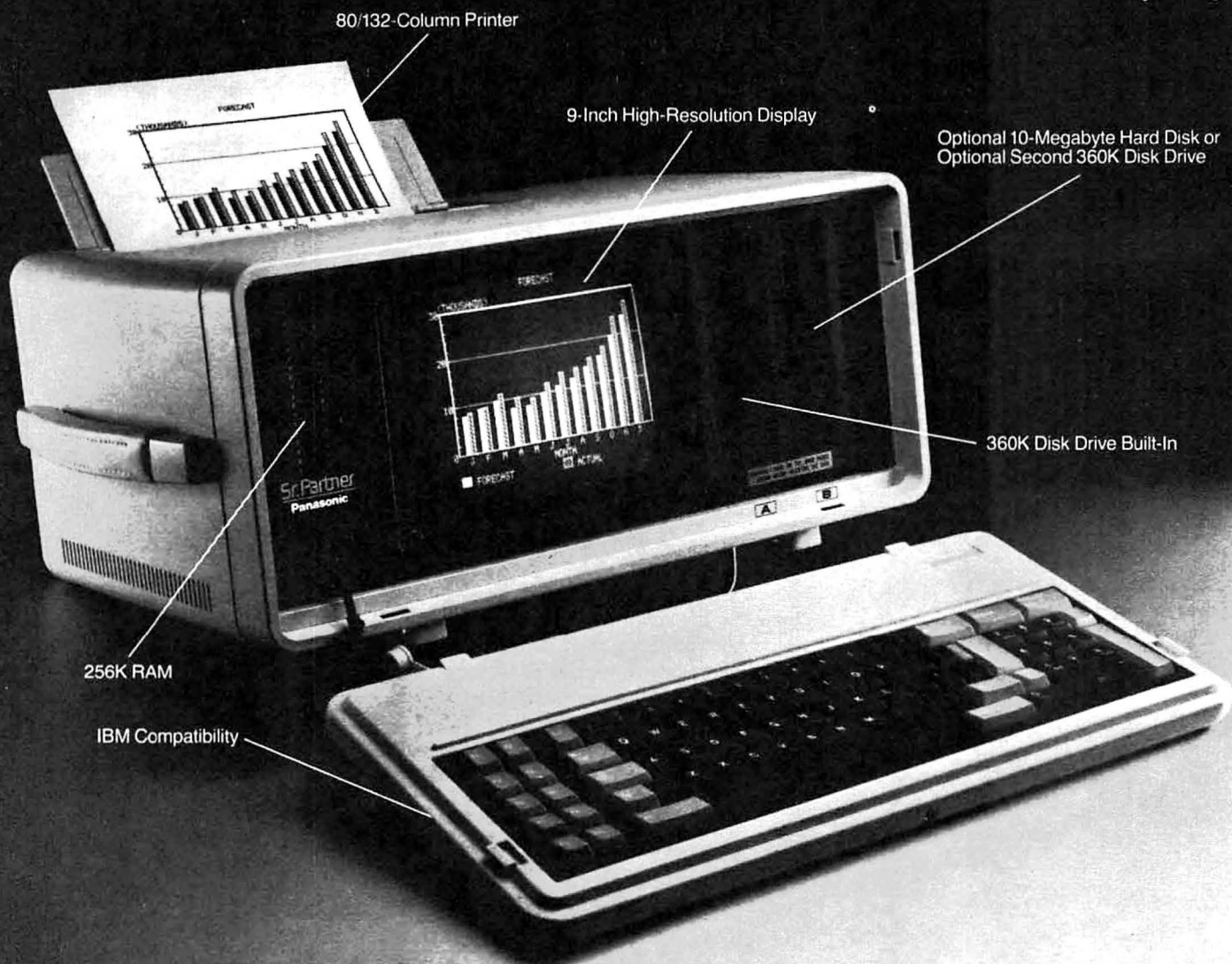
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Crosstalk XVI

A smart-terminal program that captures ASCII and binary files, *Crosstalk XVI* supports the Xmodem error-checking protocol. The software includes auto-dial and auto-answer and 40 programmable function keys for logon to information services or mainframes. *Crosstalk XVI* permits on-line control of communications parameters and speeds of up to 9600 bps. The program displays the amount of data captured, the available disk space remaining, and file transmittal times. *Crosstalk XVI* provides terminal emulation for the IBM 3101, DEC VT-100, DEC VT-52, Televideo 910 and 920, ADDS Viewpoint, and TI 940 computers. List price: \$195. Requirements: 96K, one disk drive, serial port.

Microstuf, Inc.

1000 Holcomb Woods Pkwy. #440
Roswell, GA 30076
404/998-3998

"Crosstalk XVI is supremely flexible and handles any situation. Terminal emulation is excellent. No bugs." George Roukas, New York, New York

Auto-Mail

An electronic mail program, *Auto-Mail* (formerly *E-Mail*) provides functions for most applications but also offers programmable modules and source code for those who know BASIC and wish to add their own functions. *Auto-Mail* provides electronic mail, a bulletin board service, a message maintenance system, definable passwords, programmable function keys, and log files to record daily activity. Files can be captured to disk or printer at speeds of 300 or 1200 bps. *Auto-Mail* will automatically detect a 300- or 1200-bps signal and communicate accordingly. List price: \$99.95. Requirements: 64K, one disk drive, serial port, Hayes 300, 1200, or 1200B Smartmodem.

Jones Engineering Assoc. Inc.
P.O. Box 26134
Charlotte, NC 28221
704/455-9616

Smart Term 100

Letting a PC function as a DEC VT-100, VT-102, VT-52, or TTY terminal, *Smart Term 100* transfers ASCII and binary files using either the PDIP or Xmodem protocols. The program offers DEC terminal features such as the set-up mode, insertion and deletion of characters or lines, modification of terminal characters from the host mainframe, and local printer support. *Smart Term 100* supports DEC's full-screen editors and emulates all VT-100 keys, including the numeric keypad and cursor keys. You can set up eight configurations with 20 programmable keys each. Command files can govern automatic file transfers. List price: \$149. Requirements: 192K, one disk drive, serial port.

Persoft Inc.

2740 Ski Ln.
Madison, WI 53713
608/273-6000

Blast

Designed for corporations, *Blast* transfers binary and text files to other microcomputers, minicomputers, and mainframes. *Blast* provides an SDLC/HDLC-type protocol to transfer files in full duplex over hard-wired circuits, satellite links, packet-switched networks (such as Telenet or Tymnet), and local area networks. In the event of communications line breaks, *Blast* automatically redials the host and restarts file transfer from the point of interruption. The program also allows remote operation, on-line control of communications parameters, and control of linefeed and carriage returns. List price: micros \$250, minis \$495 to \$895, mainframes \$1295 to \$2495. Requirements: 64K, one disk drive, serial port.

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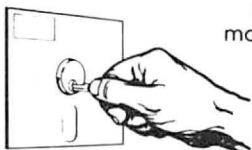
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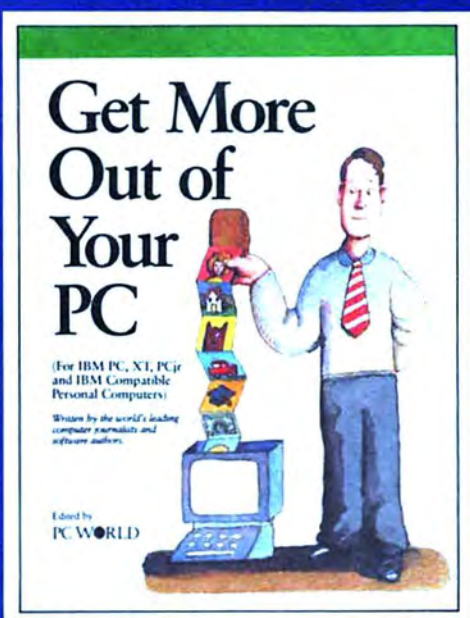


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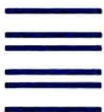
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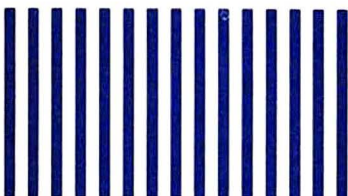
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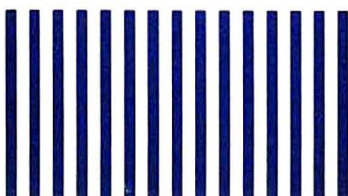
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8008 Girard Avenue, Suite 310,
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Graphics

David McCune

Computers don't solve problems; people do. Computers merely present problems in a more easily understood form. With increasingly sophisticated graphics programs, computers help people comprehend ideas more quickly and solve problems more easily.

The PC graphics explosion has begun. Business graphics software, computer-aided design (CAD) packages, high-resolution displays and video controllers, bit-mapped, icon-based user interfaces, and new input tools such as mice, light pens, and digitizer pads have all contributed. Before long, traditional computer text will be considered a mere subset of a computer's graphics repertoire.

The widest use of PC graphics has been in the production of charts and graphs for analysis and business presentations. The ability to convert data from a spreadsheet or other report into an easily comprehensible chart lends more power to a presentation. Stand-alone business graphics packages compete to offer the widest variety of fonts, colors, scaling options, and chart types. Integrated packages often include elemental business graphics to create bar, line, and pie charts from comparison data taken from elsewhere in the program. When choosing a business graphics or integrated package, you should weigh the ease of importing data into the graphics function against advanced graphics features. Software usually sacrifices one advantage for the other.

Despite the increasing graphics power of software, computer graphics are only as good as the output devices that present them. The recent price cuts on four-color plotters and the arrival of moderately priced laser and ink jet printers make the PC

an increasingly attractive alternative to time-sharing companies that use expensive dedicated graphics systems. For example, using page makeup and graphics software combined with high-resolution displays and a laser printer can often take the place of sending material to a typesetter.

Some of the better packages produce graphics that can be drawn by a plotter but cannot be displayed by the PC's low-resolution color graphics board. Fortunately, most graphics packages can now send their color output directly to a special camera that generates color slides on the spot.

CAD programs for drawing and drafting have finally arrived on the PC. CAD programmers have been liberated by a new generation of relatively inexpensive high-resolution video controllers and monitors capable of displaying designs created on the PC.

Some CAD packages offer two-dimensional drafting capabilities that rival programs running on mainframes and minicomputers. Functions include zoom, scaling, multiple line thicknesses, and layered drawing. Together with high-quality plotters in the \$4000 range, these packages will dramatically change the way small and medium-sized architectural offices work.

Possibly the most important PC graphics software of the past year is Cubicomp's CS-5, the first three-dimensional solid modeling program for the PC. This program dispels the belief that the PC is too slow to perform useful work with shaded three-dimensional objects. Now that this barrier has been



standards offers hope. Several companies (including IBM) now offer PC versions of the Virtual Device Interface (VDI) and Graphic Kernel System (GKS) schemes for encoding graphics. These graphics standards have gained wide approval in the minicomputer and mainframe graphics world.

Another graphics encoding scheme, the North American Presentation Level Protocol Syntax (NAPLPS), has recently appeared in several PC incarnations. NAPLPS is used for compact storage of complex graphics, making it an ideal standard for transmission of graphics between computers. NAPLPS is commonly used by videotex data bases, which allow users to download and display color graphics frames by modem. NAPLPS decoder software and NAPLPS frame-creation software are now becoming available for the PC. (See the Communications section.)

Computer graphics software on the PC has long been a slave to rather crude hardware. But in the past year we have seen a drop in the price and an improvement in the performance of graphics peripherals. Software to take advantage of the new hardware is only now coming to market, signaling the first rumblings of a PC graphics explosion.

David McCune is president of the Proteus Group, a New York consulting firm.

broken, many exciting new three-dimensional CAD packages can be expected.

A few expensive graphics design packages are available for the PC that allow artists to "paint" with a breathtaking array of brush types and colors. Such programs are ideal for graphics designers who need to quickly produce and modify mock-ups. A number of low-cost painting programs are also available but are useful only for rough design work.

The proliferation of graphics packages has been accompanied by a proliferation of incompatible graphics encoding schemes. A pie chart stored to disk by one package cannot usually be read by another. However, recent progress toward graphics

BPS Business Graphics

Charting up to 4000 points of numeric data in a variety of formats, *BPS Business Graphics* provides horizontal and vertical bar charts, full or partial pie charts, line graphs, and scattergrams. Different formats can be combined on the same axes, and graphs can be scaled. Charts and graphs are produced with English-language commands. Data is entered directly from the keyboard or from *VisiCalc*, *SuperCalc*, or *Multiplan* files. Frequently used formats can be stored and retrieved to prepare or update reports. *BPS Business Graphics* can also perform several mathematical functions: moving average and exponential smoothing; curve fitting and specification by constant, line, logarithm, parabola, and sine; and calculation of minimum, maximum, sum, mean, variance, and standard deviation. List price: \$350. Requirements: 128K, two disk drives, color graphics board.

Business and Professional Software, Inc.
143 Binney St.
Cambridge, MA 02142
800/342-5277, 617/491-3377

"A very comprehensive and excellent program. The only problem is that it is written in Pascal, and parts of it hang up with auxiliary memory." H. Sachas, Redondo Beach, California

Color Demonstration

A package of ten demonstration programs, *Color Demonstration* illustrates the PC's graphics capabilities. Kaleidoscope creates a series of symmetrical dot patterns in 16 colors. Logo draws the Ensign logo of a mountain climber, and String Art plots lines. 3-D Hills gives three-dimensional depth. Script writes and saves messages in a special font. Portrait sketches a picture of the author, Star draws stars, and Prism depicts symmetrical geometric figures. Calendar lets you write and save reminders. List price: \$24.95. Requirements: 64K, one disk drive, color graphics board.
Ensign Software
7337 Northview
Boise, ID 83704
208/378-8086

Graph Power

Generating camera-ready, presentation graphics for business, *Graph Power* data can come from the keyboard, DSS/F data files, or DIF data files. Bar charts, stacked bar charts, line and pie charts, as well as text and reports can be produced on paper or transparencies. *Graph Power* features multiple-image overlays, shading combinations, text annotation, and mathematical operations. You can scale graphs automatically or manually with a choice of eight letter sizes. Up to four graphs can be included on a page, and up to 260 points of data can be processed. List price: \$295. Requirements: 128K, one disk drive, color graphics board.
Ferox Microsystems
1701 N. Fort Meyer Dr., Sixth Floor
Arlington, VA 22209
703/841-0800

Video Etch

Designed for engineers, draftspeople, educators, program developers, and graphics artists, *Video Etch* is a graphics editor that generates high-resolution line etchings. The program features single- or multiple-dot drawing and erasing, selectable line length, palette and color selection, and dot/line/figure plotting by axis specification. Lines, circles, and boxes can be executed with single-keystroke commands. Sketches can be output to a printer. List price: \$49.95. Requirements: 64K, one disk drive, color graphics board.

Alphanetics
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

4-Point Graphics

A presentation graphics program, *4-Point Graphics* saves pictures from any program and reads them into a picture file. Images or shapes are manipulated with one of four cursor modes; drawings are created using any image as a brush. Images can be stored in two image buffers for use in overlays. Up to 99 individual segments presented in sequence provide animation. *4-Point Graphics* produces camera-ready art, overhead transparen-

cies, and color separations with both text and images. List price: \$225. Requirements: 128K, one disk drive, color graphics board.

IMSI
633 Fifth Ave.
San Rafael, CA 94901
415/454-7101

"This program is easy to use. I produced free-form graphics within 10 minutes despite slightly obscure documentation. It does a screen capture of 1-2-3 graphics and permits enhancement and then printing on a Diablo ink jet printer." P. L. Overmire, San Francisco, California

Character Generator

You can design graphics character cells for ASCII codes 128 through 255 with *Character Generator*. The work space is shown as a tablet with three rows of eight enlarged cells per row. This multicell grouping allows you to design larger figures composed of several graphics cells. Cells can be inverted from left to right or from top to bottom, rotated 90 degrees, and filled or left blank. Character definitions can be saved and accessed from other BASIC application programs. List price: \$24.95. Requirements: 64K for BASIC version, 96K for compiled BASIC version, one disk drive, color graphics board.

Ensign Software
7337 Northview
Boise, ID 83704
208/378-8086

Graphwriter

A business graphics package with 24 programs, *Graphwriter* can produce over 40 modifiable formats. Formats are divided into two sets. The Basic Set includes standard bar, pie, range, line, scatter, regression, and text charts. The Extension Set includes more elaborate charts such as bubble, organization, Gantt, table, combination pie-bar, and surface charts. *Graphwriter* supports plotters (HP 7475, HP 7550, IBM XY749), printers (Epson

and Okidata), and color film recorders (Polaroid Palette). You can reproduce graphics on paper, transparencies, or 35mm slides. A batch processing capability allows chart production without an operator. List price: Basic Set \$395, Extension Set \$395, both sets \$595. Requirements: 192K, two disk drives, serial port.

Graphic Communications, Inc.
200 Fifth Ave.
Waltham, MA 02254
617/890-8778

"Graphwriter provides software to interface an XT with an HP plotter. It is written in p-System and is slow. Documentation is poor. This program is good for business applications but needs improvements for scientific applications." Philip L. Glick, San Francisco, California

"After using many such packages, I think Graphwriter is the best available. The pre-designed formats are more than adequate for business users; the manual and help menus are designed to appeal to beginners; and the flexibility, for example the overlay function, satisfies the experienced user." Connie Jo Dickerson, New York, New York

Chart-Master

You can produce presentation-quality pie, bar, line, scatter, and area charts with *Chart-Master*. This menu-driven business graphics package operates a variety of pen plotters and printers and the Polaroid Palette. Data can be read from DIF files or keyed in. *Chart-Master* provides options for custom charts, including a choice of eight cross-hatchings, eight line styles, and eight colors. Text can be produced in six fonts and 16 sizes and can be italicized, underlined, and justified. List price: \$375. Requirements: 192K, two disk drives, color graphics board, serial port.

Decision Resources
25 Sylvan Rd. S
Westport, CT 06880
203/222-1974

dGraph

A data base graphics program, *dGraph* displays *dBASE II* data or data entered with the keyboard in pie, line, pie-bar, stacked bar, or side-by-side bar formats. The program supports the following printers and plotters: Epson MX-70, MX-80, and MX-100; Okidata Microline; Xerox 1650; NEC Spinwriter; and HP 7470A plotter. List price: \$295. Requirements: 96K, one disk drive (two recommended), color graphics board.

Fox & Geller, Inc.
604 Market St.
Elmwood Park, NJ 07407
201/794-8883

Big-Print

As the name implies, *Big-Print* prints 8-inch characters on standard 80-column printers. Messages can be of any length and can include letters, numbers, and special symbols. List price: \$49.50. Requirements: 64K, one disk drive.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
205/837-4718

"It's fun to make cards that say 'Welcome Back,' 'Happy Birthday,' or 'I love you' on my PC." David Meyers, Atlanta, Georgia

Grafmatic

Grafmatic is a set of four integrated graphics programs that include 70 FORTRAN and Pascal callable subroutines ranging from cursor movement and pixel setting to three-dimensional solid modeling with hidden line removal. The first program is a utility package written in assembly language (though the commands look like FORTRAN subroutine calls) that lets you draw lines, paint, and set foreground and background colors. The second program is an interactive, two-dimensional graphics program that generates, edits, and merges objects. The third program, a two-dimensional plotting package, draws axes and curves, sets scales, and writes text. Also included are bar charts, pie charts, tabular plots, and

automatic labeling of axes and tic marks. The fourth program draws three-dimensional plots and solid objects that can be rotated and scaled. A wire-frame routine is also available. There are versions of *Grafmatic* that support Hercules, Tecmar, and Plantronics graphics boards. List price: \$135. Requirements: 128K, one disk drive, color graphics board. Microcompatibles
11443 Oak Leaf Dr.
Silver Spring, MD 20901
301/593-0683

Artist

A color or black-and-white graphics program, *Artist* includes a library of standard shapes that can be translated, rotated, erased, or colored in. Shapes can be created and added to the library, and users can determine the size and location of text included in the display. List price: \$95. Requirements: 192K, one disk drive, color graphics board.

Sunshine Computer Software Co.
1101 Post Oak Blvd. #9-493
Houston, TX 77056
713/552-0949

GrafTalk

You can use *GrafTalk* to display data in bar, pie, line, and symbol charts. It works in a menu mode or a direct command mode to generate composite graphs, line drawings, and maps. The program accepts data from the keyboard or from ASCII files. You can custom-design graphs with *GrafTalk*'s Sketch or use the text editor to create a command file for regularly updated graphs. *GrafTalk* supports over 30 plotters, printers, and monitors. List price: \$450. Requirements: 128K, one disk drive, color graphics board.

Redding Group, Inc.
609 Main St.
Ridgefield, CT 06877
203/431-4661



HELP THEM READ BETWEEN THE LINES.

To make a powerful presentation, you should sit in the back row.

Because when you put yourself in the place of your audience, you see that what's simple to you, isn't to them. To help people follow your thinking, you need strong, clear graphics.

You need Graphwriter. The graphics software that brings you closer to that guy in the back row. Graphwriter puts more easy-to-customize charts at your fingertips than any other graphics package.

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You don't have to bend over backwards to reach your audience. Reach for the software built to bring them to you. Before your next presentation, get your hands on Graphwriter at ComputerLand, Entre, or your local computer store. Or call 617-890-8778.

FORMATS

text/word
vertical column
stacked column
clustered column
horizontal bar
stacked bar
clustered bar
pies (1-4)
proportional pies
line
scatter plots
bar-line combination
Gantt
organization
bubble
table
pie-bar combination
surface line
stacked line
line-table
double stacked bars
range
paired bars
3D horizontal bar

FLEXIBILITY

text justification
variable font sizes
variable font colors
22 font styles
adjustable bar widths
pie rotation/placement
unequal line lengths
8 line types
5 frame options
8 fill patterns
axes labels (\$, %, x)
log/semilog scaling
multiple curve fits
floating comments
vertical page plotting
multiple plots per page

EASY-TO-USE

pre-designed formats
chartbook
input forms
1-2-3[®] DIF[®] access
Multiplan[®] file access
on-screen help messages
chart preview
"built-in artist"
batch processing
chart/template storage

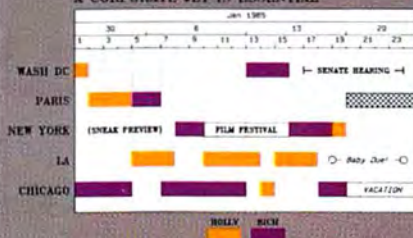
OUTPUT OPTIONS

paper
transparency
35mm slides
Polaroid Palette[™]

COMPUTERS

IBM PC, XT and AT[®]
DEC Rainbow[®]
Tandy 2000[®]
HP 150[®]
NEC APC[®]
Burroughs ET2000[®]
Fortune Systems[®]

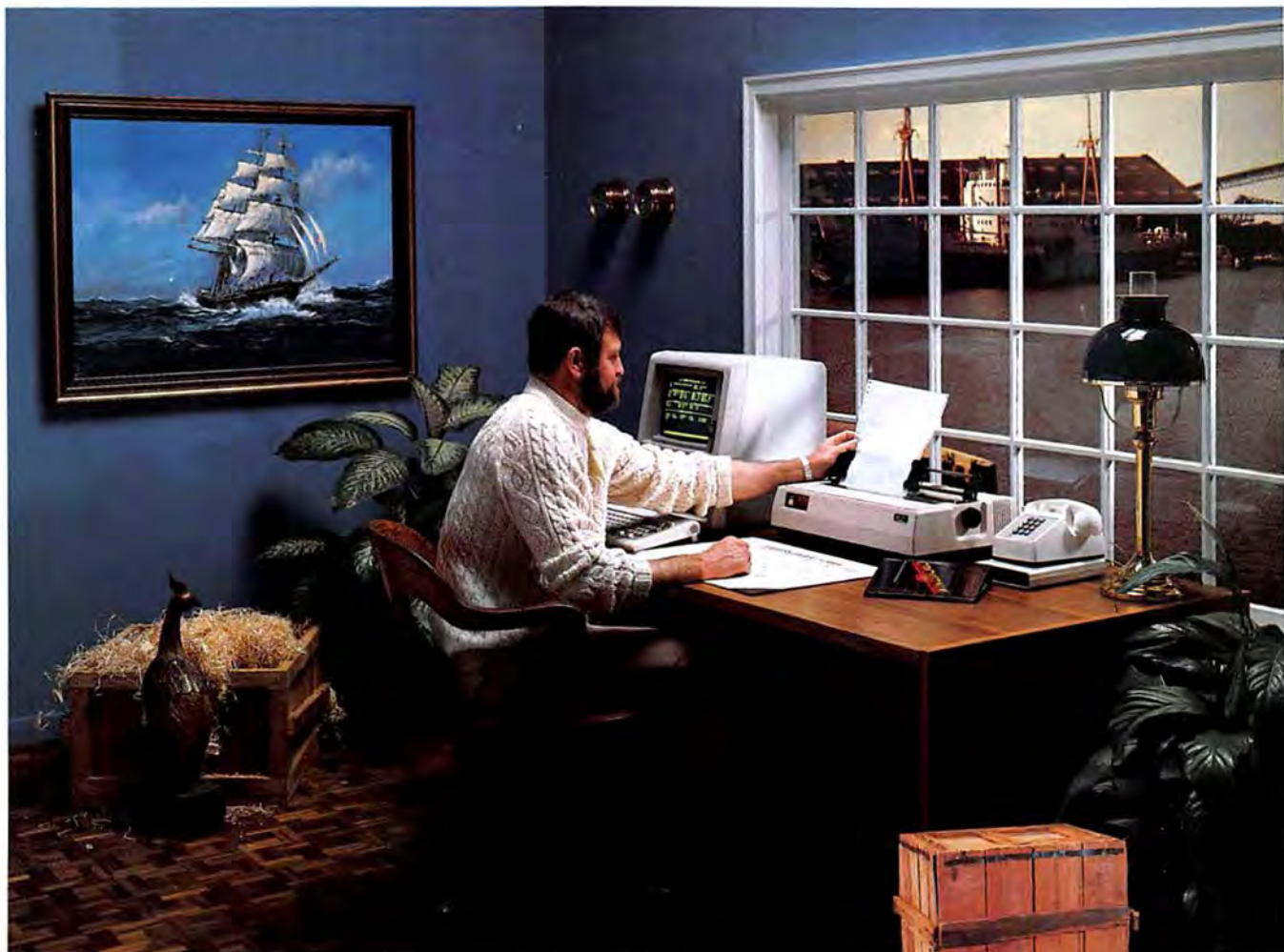
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Graphic Communications Inc.
Waltham, Massachusetts 02254
617-890-8778

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MICROSTUF®

1000 Holcomb Woods Parkway / Roswell, Georgia 30076

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Circle 275 on reader service card

C-Graphics

The *C-Graphics* package contains a manual and a series of programs that show how to use the C language to create graphics. You can learn to plot points, draw lines, translate, rotate, scale, and plot two- and three-dimensional shapes using C. The programs are listed beside BASIC equivalents. The disk also includes the same programs in ASCII format. A compiler is not supplied. List price: \$66. Requirements: 64K, one disk drive.

Kern Publications
433 Washington St.
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

Plotrax

A menu-driven statistics and graphics program, *Plotrax* allows you to enter up to 2000 X-Y pairs, perform eight types of regression analysis, and plot the data and the residuals or saved curves with eight overlays per plot. *Plotrax* features log and semilog plots, accommodates two Y axes, and routes the plots to a dot matrix printer or a plotter. *Plotrax* also generates pie charts with automatically calculated percentages, and two- or three-dimensional bar charts. List price: \$340. Requirements: 256K, one disk drive.

Omicron Software
57 Executive Park S #590
Atlanta, GA 30329
404/325-0124

Overhead Express

Designed to make overhead transparencies using a personal computer with a dot matrix printer, *Overhead Express* features an editor with 12 preformatted fill-in-the-blanks templates. It has complete formatting capabilities and a choice of five sizes of Classic, Popular, Modern, or Script typefaces in roman or italic. *Overhead Express* also offers one-key previewing of page layouts; an editor that reads word

processing files; boxes, lines, and special symbols (stars, arrows, check marks, and trademark symbols); and a "slide show" feature for on-line presentations. List price: \$195. Requirements: 192K, two disk drives (color graphics board recommended).

Business and Professional Software, Inc.
143 Binney St.
Cambridge, MA 02142
617/491-3377

Graphics for the IBMpc

Written in BASICA, *Graphics for the IBMpc* includes a manual with listings of 67 programs for two- and three-dimensional graphics along with theory and equations. The programs show how to use plotting commands, create two- and three-dimensional shapes, translate, rotate, scale, stretch, remove hidden lines, shade, clip, window, and store drawings on disk. The package also includes a disk with the same programs but no help menus. You can modify the programs to meet particular needs. List price: \$50. Requirements: 64K, one disk drive, color graphics board.

Kern Publications
433 Washington St.
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

Graph'n'Calc

You can compare data, make forecasts, and generate graphics with *Graph'n'Calc*. Formats include line charts, stacked bar charts, high/low/close volume stock market charts, and a variety of labeled pie charts. Data is read from *Graph'n'Calc* files or from DIF files. Graphs can be displayed on screen in a consecutive, slide-show fashion. Data analysis features include trend forecasting, statistical analysis, multiple linear regressions, net present value, internal rate of return, and exponential smoothing. List price: \$125. Requirements: 64K, one disk drive, color graphics board.

Desktop Computer Software, Inc.
75 Pasatiempo Dr.
Santa Cruz, CA 95060
408/458-9095

Softplot/BGL

Suited for technical, business, and educational applications, *Softplot/BGL (BASIC Graphics Language)* is a device-independent graphics library for Microsoft BASIC. It runs under DOS or CP/M-86 and provides functions comparable to the CORE and GKS base-level standards. The program consists of two modules: BGL and Emuplot. BGL features two-dimensional viewing with windows, image rotation, three-dimensional plotting, and automatic text justification. It supports a variety of features such as color, area fill, and dashed lines. Emuplot produces high-resolution hard copy on printers that lack graphics hardware. List price: \$200. Requirements: 128K, one disk drive, color graphics board.

Mosaic Software, Inc.
1972 Massachusetts Ave.
Cambridge, MA 02140
617/491-2434

Energraphics

Businesses can create presentation-quality graphics with *Energraphics*. Business functions include exploded pie charts, two- and three-dimensional horizontal and vertical bar charts, multiple scale bar and line charts, linear and polynomial regression, scatter plots, log and semilog scales, and line graphs. *Energraphics* also offers a "slide show" program and an interface to spreadsheet programs such as *VisiCalc*, *1-2-3*, and *Multiplan*. Two-dimensional features include flowcharts, organizational charts, zoom, rotate, multiple fonts, symbol design, multiple overlay, and text slides. Three-dimensional features include scaling, overlay, rotation, duplication, and hidden line removal. *Energraphics* works with many printers and plotters, including the HP 7470, the HP 7475, the Houston Instrument DMP40 and DMP29, the IBM 749, the Amplot II, and the Sweet Pea. List price: \$350 (for use with plotters \$450). Requirements: 128K, two disk drives, IBM Color/Graphics Adapter, color monitor.

Enertronics Research, Inc.
150 N. Meramec #207
St. Louis, MO 63105
800/325-0174, 314/725-5566

PC-Draw

You can create, edit, store, and print high-resolution black-and-white or color drawings with *PC-Draw*. The program provides symbol templates that you can define. It also has predefined symbol templates for flowcharts, office layouts, and electrical design. *PC-Draw* supports two types of freehand line drawing and prints in compressed, expanded, or emphasized format. Support is included for HP 7470 and HP 7475 pen plotters and the Epson MX-80 and MX-100, IBM Graphics, NEC 8023, Okidata, and IDS Prism printers. List price: \$395. Requirements: 128K, two disk drives, color graphics board.

Micrografx, Inc.

1701 N. Greenville #305

Richardson, TX 75081

214/234-1769

"Vendor support is excellent. They are quick and responsive to phone calls." Jim Beatty, Toronto, Ontario, Canada

"I recommend PC-Draw enthusiastically, without reservation. For many PC users it will be the only graphics package they will ever need." Raymond A. Jacobson, Chicago, Illinois

Chartman I to IV, Super-Chartman II

The *Chartman* business graphics series is available in five versions. *Chartman I* generates two- or three-dimensional, high-resolution graphics on a monochrome monitor. You can design 20 chart formats and view screens consecutively in slide-show fashion. Data can be read from DIF format files. *Chartman II* displays charts on a color monitor in combinations of 32 colors or on a monochrome monitor. With *Chartman III* you can design 12 chart types, including line graphs and pie, bar, text, and three-dimensional charts that are displayed on a monochrome monitor. *Chartman IV* offers a specialized set of graphics formats including Gantt, organization, area fill, and on-screen text charts; scattergrams; and sta-

tistical curve fitting. Charts can be displayed on a color monitor in combinations of 32 colors.

Super-Chartman II displays data on a color or monochrome monitor in 25 chart formats. You can transfer data from one chart format to another. Charts can be previewed on screen before printing or plotting. Up to six charts can be presented on a single sheet of paper. The programs support Hewlett-Packard plotters and the Epson, P-Series, and IBM printers. List price: *Chartman I* \$325, *Chartman II* \$380, *Chartman III* \$199, *Chartman IV* \$500, *Super-Chartman II* \$425. Requirements: 128K, two disk drives, color graphics board.

Graphic Software, Inc.

P.O. Box 367, Kenmore Station

Boston, MA 02215

617/491-2434

Headliner

A program for printing banners, *Headliner* prints 7-inch-high letters on any 80-column printer. Any phrase, title, or message using letters, numbers, common symbols, and punctuation can be typed in and printed in large type. *Headliner* can be used for parties, schools, store signs, and office presentations. List price: \$19.95. Requirements: 64K, one disk drive.

Zephyr Services

306 S. Homewood Ave.

Pittsburgh, PA 15208

412/247-5915

V-Graph

Providing the functional equivalent of a Tektronics 4010 graphics display, *V-Graph* lets you communicate with another computer as if you were using a Tektronics terminal. *V-Graph* emulates each key or key sequence found on the Tektronics, including the cross-hair cursor used for high-resolution graphics input. Any control or function key can be programmed to produce a commonly used character string. List price: \$120. Requirements: 64K, one disk drive.

CompuView Products, Inc.

1955 Pauline Blvd. #200

Ann Arbor, MI 48103

313/996-1299

Easygraf, Graphit, Joydraw

You can incorporate line drawings into pictures and charts with *Easygraf*, then save your graphics to disk and print them with an Epson MX-80 with Grafrax.

The program offers a choice of high- or medium-resolution graphics. *Graphit* generates pie charts, bar charts, dot graphs, line graphs, histograms, and overlays. Up to 30 items per graph can be plotted. Data is entered from the keyboard or from *VisiCalc* DIF files. The program supports Epson printers with Grafrax.

Joydraw lets you draw diagrams and illustrations on the screen with a joystick. You can combine text with graphics. The program supports the Epson MX-80 printer. List price: *Easygraf* \$35, *Graphit* \$80, *Joydraw* \$30. Requirements: 64K, one disk drive, color graphics board, for *Joydraw* game port and joystick.

Miracle Computing

IBM PC Software Interchange

313 Clayton Ct.

Lawrence, KS 66044

913/843-5863

PC-Title, PC-Projector

Expanding the graphics capabilities of the personal computer, *PC-Title* and *PC-Projector* allow you to create large and small titles and run manual or automatic graphics presentations on the screen. *PC-Projector* can also control a camera for photographing the screen display. You can generate hard copy for bulletins, flyers, or other uses. You can offset titles left or right. *PC-Projector* creates and controls display sequences. Both programs support the NEC, C. Itoh, and Epson dot matrix printers. List price: \$49.95. Requirements: 128K, one disk drive, color graphics board, RGB monitor (for color capability).

PC Resources, Inc.

620 Hobart Terrace

Santa Clara, CA 95051

408/243-4169

Available
for IBM PC

What C did for Programming

Mark Williams has done for C Programming

The C Programming System from Mark Williams

MWC86 gets your C programs running faster and uses less memory space than any other compiler on the market. Then *csd*, Mark Williams' revolutionary C Source Debugger, helps you debug faster. That's The C Programming System from Mark Williams Company.

MWC86

MWC86 is the most highly optimized C compiler available anywhere for the DOS and 8086 environment. The benchmarks prove it! They show MWC86 is unmatched in speed and code density.

MWC86 supports large and small models of compilation, the 8087 math coprocessor and DOS 2.0 pathnames. The compiler features common code elimination, peephole optimization and register variables. It includes the most complete libraries. Unlike its competition, MWC86 supports the full C language including recent extensions such as the Berkeley structure rules, voids, enumerated data types, UNIX* I/O calls and structure assignments.

Quality is why Intel, DEC and Wang chose to distribute MWC86. These industry leaders looked and compared and found Mark Williams to be best.

User Friendly

MWC86 is the easiest to use of all compilers. One command runs all phases from pre-processor to assembler and linker. MWC86 eliminates the need to search for error messages in the back of a manual. All error messages appear on the screen in English.

A recent review of MWC86 in *PC World*, June, 1984, summed it up:

"Of all the compilers reviewed, MWC86 would be my first choice for product development. It compiles quickly, produces superior error messages, and generates quick, compact object code. The library is small and fast and closely follows the industry standard for C libraries."

csd C Source Debugger

Mark Williams was not content to write the best C compiler on the market. To advance the state of the art in software development, Mark Williams wrote *csd*.

csd C Source Debugger serves as a microscope on the program. Any C expression can be entered and evaluated. With *csd* a programmer can set tracepoints on variables and expressions with full history capability and can single step a program to find bugs. The debugger does not affect either code size or execution time. *csd* features online help instructions; the ability to walk through the stack; the debugging of graphics programs without disturb-

ing the program under test; and evaluation, source, program and history windows.

csd eases the most difficult part of development — debugging. Because *csd* debugs in C, not assembler, a programmer no longer has to rely on old-fashioned assembler tools, but can work as if using a C interpreter — in real time.

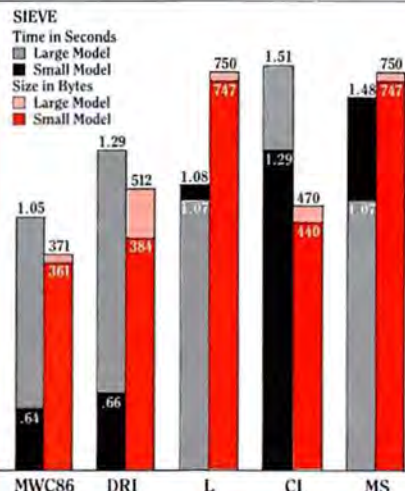
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from Mark Williams now supports
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Windows for C	Creative Solutions
Halo	Media Cybernetics
PHACT	PHACT Associates
The Greenleaf Functions	Greenleaf Software
Btrieve	SoftCraft

The C Programming System from Mark Williams

The C Programming System from Mark Williams delivers not only the best C compiler for the 8086 but also the only C source level debugger. That's why it does for C programming what C did for programming. The Mark Williams C Programming System gives the programmer the MWC86 C compiler and the *csd* C Source Debugger for only \$495. Order today by calling 1-800-MWC-1700. Major credit cards accepted.

Technical support for The Mark Williams C Programming System is provided free of charge by the team that developed it.



Mark Williams Company
1430 W. Wrightwood Ave.
Chicago, IL 60614

*Unix is a Trademark of Bell Laboratories.

KeyChart Presentation Graphics Software System

You can create presentation graphics with *KeyChart Presentation Graphics Software System*, a package designed for business, education, and scientific applications. You can plot line charts; simple, clustered, and stacked bar charts; pie charts; combined line and bar charts; text charts; horizontal bar charts; X-Y plots; logarithmic charts; high/low/close charts; and linear regression and scatter diagrams. You can preview the layout for size, orientation, and positioning, thereby eliminating numerous trial-and-error plots.

With *KeyChart Presentation Graphics Software System*, data can be entered from the keyboard or from most spreadsheet programs. The package supports over 20 different plotters. List price: \$375. Requirements: 128K, two disk drives (graphics board recommended). SoftKey Software Products, Inc.
411 Shaw St. #1
Toronto, Ontario
M6J 2X4 Canada
416/530-1931

2727 Walsh Ave.
Santa Clara, CA 95051
408/986-8149

Plotmatic

A pen-plotter support package, *Plotmatic* can be used with Microsoft FORTRAN or Pascal (3.1, 3.2) or IBM FORTRAN (2.0). Commands control pen selection, pen up and down, line type, and paints and fills, including crosshatching and continuous fills. The program produces bar and pie charts from menu-driven input. When *Plotmatic* is used with *Grafmatic*, the screen image can be sent directly to the plotter.

Two-dimensional features include choice of coordinate systems, automatic scaling, automatic axis generation, automatic labeling of tic marks on X-Y axes,

and function and tabular plots. Advanced features include contour log, three-dimensional rotations, scaling, and translation for three-dimensional wire-frame plots. The wire-frame model has hidden line removal (with *Grafmatic*), cubic and bi-cubic spline interpolation, and least squares fit. *Plotmatic* supports the HP 7470 and the HP 7475, the IBM 749 and 750, and all Houston Instrument plotters. List price: \$135. Requirements: 128K, one disk drive, plotter, MS-FORTRAN, MS-Pascal, or IBM FORTRAN 2.0 compiler. Microcompatibles
11443 Oak Leaf Dr.
Silver Spring, MD 20901
301/593-0683

Boardroom Graphics

A color graphics program for businesses, *Boardroom Graphics* creates pie charts, bar charts, line graphs, X-Y plots, text charts, scattergrams, and three-dimensional plots. Data can be entered directly from the keyboard or read from 1-2-3, *VisiCalc*, *Multiplan*, or BASIC files. Data can also be downloaded from mainframe data bases. *Boardroom Graphics* features automatic scaling and multiple graphs per page with values printed below graphs. You can print any size text anywhere on the page and plot up to five variables and 300 points of data in one graph. The program supports Hewlett-Packard plotters and a variety of printers. List price: \$115. Requirements: 128K, one disk drive (graphics board recommended). Analytical Software, Inc.
10939 McCree Rd.
Dallas, TX 75238
214/340-2564

Jr-Draw

You can create, maintain, save, modify, print, and plot drawings with *Jr-Draw*. The program uses freehand drawing, symbol libraries, object scaling, rotation, and placement to create complex drawings. Color or high-resolution black and white is available with up to 99 pages or

screen images per drawing. *Jr-Draw* supports a light pen and Hewlett-Packard pen plotters. List price: *Jr-Draw* \$195, plotter support \$100. Requirements: 128K, one disk drive, color graphics board, graphics monitor (not IBM monochrome).

Micrografix, Inc.
1701 N. Greenville #305
Richardson, TX 75081
214/234-1769

The Grafix Idea

You can create and combine drawings, pictures, and graphs with *The Grafix Idea*. You can elaborate on images from other programs, label them and add color. The program can run manual and automatic on-screen slide show presentations. All sketching and presentation is controlled from the keyboard. List price: \$79.95. Requirements: 128K, one disk drive, color graphics board. Idea Ware, Inc.
225 Lafayette St.
New York, NY 10012
212/334-8043

Graffhopper

Designed to reduce chart building to a series of keystrokes, *Graffhopper* has over 100 charts for data. You select a chart style from a catalog that includes pie charts, bar charts, smooth lines, symbols, multiple axes, and multiple curves. Charts can also be designed manually. The ChartConnect feature lets you use data from DIF or tabular ASCII files. List price: \$295. Requirements: 256K, two disk drives, DOS 2.00 or later version, graphics board. Data Business Vision, Inc.
3510 Dunhill St., Ste. B
San Diego, CA 92121
619/450-1557

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Mark Williams Company
1430 West Wrightwood, Chicago, Illinois 60614,
312/472-6659



*PDP-11 is a trademark of Digital Equipment Corporation.
*CP/M is a trademark of Digital Research Corporation.
*PC-DOS is a trademark of IBM.

Vishnu

Vishnu is a digitizer utility that reduces graphics and pictorial information to numerical form for analysis and data plotting. Graphs and charts can be placed on a digitizer pad, calibrated, and used to extract X-Y data. Charts can be semilog, log-log, and reciprocal curves and points in Cartesian coordinates. Circular flowcharts can be reduced in a similar manner. *Vishnu* reports distances, areas, and angles and can be used for graphics integration or to make precision measurements on maps, photographs, and diagrams.

The menu-driven program has utilities to convert data to 1-2-3 format and to produce hexadecimal vector lists in the *AutoCAD* format. The program supports all popular plotters. List price: \$500, with digitizer \$1200. Requirements: 128K, one disk drive, serial port, digitizer (Hitachi Tiger Tablet, GTCO digi pad 5, Summagraphics Bit Pad, or Summagraphics-compatible digitizer).

MOMS Computing, Inc.
1055 Fort Cronkhite
Sausalito, CA 94965
415/331-2043

Atlas

Generating maps and data for geographic regions, *Atlas* can pan and zoom in on any area of interest. You can construct your own maps or use the program's maps of states, Standard Metropolitan Statistical Areas (SMSAs), counties, Area of Dominant Influence (ADI) and Designated Marketing Area (DMA) advertising regions, congressional districts, zip codes, and census tracts. Potential uses include site location, target marketing, political analysis, market research, advertising studies, governmental resource planning, and engineering projects design.

Atlas can overlay two variables on the same map and plot multiple maps on the same page. You can select legend and title placement and choose from 300 modifica-

ble hatching patterns and 16 colors. The program can construct up to 20 data ranges for each variable being mapped. It displays both window and global summary statistics. The program uses 1-2-3 and *VisiCalc* files and supports HP 7470A or HP 7475A plotters. List price: \$349. Requirements: 192K, two disk drives, Plantronics- or IBM-compatible color graphics board (16-color support). Strategic Locations Planning
4030 Moorpark Ave.
San Jose, CA 95117
408/985-7400

DaVinci II Business Graphics

You can create presentation-quality charts and graphs using *DaVinci II Business Graphics*. The program produces high-resolution, two- and three-dimensional pie charts, bar charts, scattergrams, and line graphs. It can use proportional character fonts such as Helvetica and Times Roman. The program is also available for the lower-resolution (320 by 200 pixels) IBM Color/Graphics Adapter. List price: high-resolution version \$499, low-resolution version \$299. Requirements: high-resolution version 256K, two disk drives, SCION PC640 or Revolution graphics board; low-resolution version 256K, two disk drives, IBM Color/Graphics Adapter. Professional Research Consultants, Inc.
12832 Augusta Ave.
Omaha, NE 68144
402/330-5433

Condor Graf

You can condense stacks of numerical reports and figures into charts and graphs with *Condor Graf*. The program gives you a choice of vertical or horizontal bar charts (single-stacked or clustered), block charts, step charts, pie charts, single- and multiple-line charts, scatter charts, error bar charts, surface charts, and text charts. The program reads DIF or ASCII files and supports many printers, plotters, and screens. List price: \$295. Requirements: 128K, two disk drives, color graphics board.

Condor Computer Corp.
4984 El Camino Real #125
Los Altos, CA 94022
415/962-0242

Paint Program

Designed for the professional artist, the *Paint Program* works with the Summagraphics MM1201 graphics tablet. An icon menu offers a choice of effects, including definable brushes, air brushing with variable spatter widths, color mixing, and rubber banding. The program offers ten fonts and storage of up to 20 brushes at one time. It has a palette of 16.8 million colors, 512 of which may be used in a single drawing. One version works with the Midas color graphics board, and another works with the Vectrix VX384A graphics processor. List price: Midas version \$500, VX384A version \$900. Requirements: 192K, one disk drive, serial port, Vectrix VX384A graphics processor or Midas color graphics board, Summagraphics MM1201 graphics tablet.

Vectrix Corporation
2606 Branchwood Dr.
Greensboro, NC 27408
919/288-0520

GDSS

Designed to work with any data base, *GDSS (Graphics Decision Support System)* organizes and manipulates data. Data can be entered manually or retrieved from a remote computer through terminal emulation utilities. You can select data, display the selection as graphics, and use the information to identify trends, spot spikes, make comparisons, and perform mathematical functions on the results. *GDSS* offers both menu-driven and command file structures. Format styles include bubbles, scattergrams, three-dimensional bars, multiplex formats, layouts, overlays, rotations, split screens, and multiple graphics on the same screen. You can customize new formats using the graphics editor and an optional digitizer tablet. List price: \$795. Requirements: 320K, two disk drives, two serial ports, color graphics board. Data Business Vision, Inc.
3510 Dunhill St., Ste. B
San Diego, CA 92121
619/450-1557

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Statpro™ brings the power of mainframe statistics to your personal computer.

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Or call your local dealer.



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Professional Software**

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Circle 311 on reader service card

Business Graphics System

You can display numerical data in a variety of chart formats with *Business Graphics System (BGS)*. Graphs include line charts, vertical bar charts, and horizontal single- and double-sided bar charts. Data can also be displayed in histograms, critical ratio graphs, and scatter charts with linear regression and mean-value calculations. Formats can be varied with eight colors, nine area fills, and seven character fonts. Charts are defined by on-screen forms that you fill in, or by data read from a spreadsheet or another ASCII file. List price: \$295. Requirements: 128K, two disk drives, color graphics board. Peachtree Software, Inc.
3445 Peachtree Rd.
Atlanta, GA 30326
404/239-3000

Graphics Mantus

You can draw lines, boxes, and ellipses with *Graphics Mantus*, a graphics editor. Text can be incorporated into graphs, and images can be scaled and rotated on the screen, saved to disk, and used in BASIC programs. You can design your own commands for function keys. List price: \$69.95. Requirements: 128K, one disk drive, color graphics board. Suttle Enterprises
29844 W. Chicago
Livonia, MI 48150

PC-Plot III

A serial ASCII communications program, *PC-Plot III* enables the PC to emulate the Tektronics Model 4010 graphics terminal and the DEC VT-100 character terminal. The program provides access to main-frame graphics programs by ISSCO, SAS Graph, Precision Visuals, and Tektronics. Charts, graphs, pictures, and engineering blueprints can be generated, previewed, saved on a local disk file, and redrawn on the screen when the PC is no longer connected to the network. The program in-

cludes an HP 7470A plotter driver and screen-dump programs for popular printers. List price: \$95. Requirements: 96K, one disk drive, color graphics board, serial port. Microplot Systems Co.
2151 E. Dublin Granville Rd. #205
Columbus, OH 43229
614/882-4786

VCN Execuision

A presentation graphics package, *VCN Execuision* creates bar and line graphs with plot functions as well as text and images. The program has sketch and paint capabilities and manual or automatic presentation modes. *VCN Execuision* offers ten fonts and up to 64 color combinations for foreground and background. It has scaling capabilities to make text or basic shapes larger or smaller; electronic tools to sketch, erase, combine, move, copy, and save images or parts of images; and animation and motion techniques to move images across the screen each time a "slide" is shown. Add-on libraries provide predrawn images to illustrate and complement text or other information. The program supports IBM and Epson dot matrix printers. List price: \$395, add-on library disks \$80 and \$90. Requirements: for the PC 128K, two disk drives, DOS 1.10; for the XT 256K, DOS 2.00, color graphics board. Prentice-Hall, Inc.
Business and Professional Division
200 Old Tappan Rd.
Old Tappan, NJ 07675
800/624-0023, 800/624-0024 New Jersey

StarCADD

Created for design professionals, *StarCADD* is a two- and three-dimensional design and drafting tool. Single-keystroke commands copy, move, rotate, and undo. *StarCADD* lets you pan in eight directions for overviews and zoom for detail work. The program offers a conventional graphics cursor and a cross-hair cursor, which change their intensity when aligned with drawing lines. You can switch be-

tween steps and coordinates in decimal, fraction, English, and metric units. *StarCADD* draws lines, arcs, curves, ellipses, and polygons in solid, dot, dash, or dash-dot style. You can fill any irregular area with patterns and insert text with proportional spacing. Drawings can be at any scale on up to 99 overlays. List price: \$888. Requirements: 192K, one disk drive, color graphics board. Schierle Assoc.
P.O. Box 25727
Los Angeles, CA 90025
213/450-1565

SignArt

For composing signs and banners on a graphics monitor, *SignArt* is a graphics program with characters ranging in height from 1/4 inch to 6 inches. Four fonts and a symbol editor are provided. The symbol editor has 56 graphics building blocks that let you design your own characters, symbols, and logos. Each line of text can be up to 80 characters long with a maximum of 20 lines per sign. Once the text is entered, the sign is formatted, drawn on the screen, and printed on a graphics printer. List price: \$39.95. Requirements: 128K, one disk drive, color graphics board. TechArt Associates
1552 Sacramento St.
Berkeley, CA 94702
415/525-0870

AutoCAD

A two-dimensional drafting and design system, *AutoCAD* is suitable for applications such as architectural and landscape drawings and drafting for mechanical, electrical, chemical, structural, and civil engineering. *AutoCAD* lets you create and edit drawings of any size and to any desired scale, using both previously created drawings and basic elements such as lines of any width, circles, arcs, and filled areas. You create screen menus from ordinary text files and define parts libraries by drawing them. Drawings can be annotated with text of any size. An optional package, Advanced Drafting Extensions, includes dimensioning, crosshatch/pattern fill, partial delete, axis command for ruler lines, sketch mode, and a units command for both dimensions and coordinates in

feet and inches. List price: \$1000, with Advanced Drafting Extensions \$1500. Requirements: 256K (512K recommended), two disk drives (hard disk recommended), serial port, graphics board (8087 coprocessor recommended). Autodesk
150 Shoreline Hwy., Building B
Mill Valley, CA 94941
415/332-2344

WordGraph

You can generate text-oriented color graphics, such as overhead transparencies, flow charts, and report covers, with *WordGraph*. In the text mode the program provides three fonts, each in normal or boldface style and in color with medium resolution or black and white with high resolution. Character heights range from 1/4 inch to 2 inches. In the graphics mode you can create special symbols and logos. The program has commands for reformatting text, drawing, and merging screens. Screen images can be printed on the IBM Graphics, Epson MX and FX, and Okidata printers. List price: \$98.50. Requirements: 128K, one disk drive, color graphics board.
TechArt Assoc.
1552 Sacramento St.
Berkeley, CA 94702
415/525-0870

Grafox

You can create line charts, vertical or horizontal bar graphs, and pie charts with *Grafox*, a business graphics program. You can graph comparisons between data within files using the Data-Query feature to summarize information from thousands of records. *Grafox* can be used with files from programs such as IBM BASIC, *WordStar*, and *InfoStar* and with DIF files such as those created by *VisiCalc*, *SuperCalc*, and *1-2-3*. *Grafox* supports over a dozen printers and plotters. List price: \$295. Requirements: 96K, two disk drives, DOS 1.10 or 2.00 (color graphics board recommended).
Fox & Geller, Inc.
604 Market St.
Elmwood Park, NJ 07407
201/794-8883

Colography, Photography

The color graphics editor *Colography* lets you create geometric shapes such as arcs, circles, ellipses, lines, and rectangles or draw images by hand on the screen with the cursor. Once an image is on the screen, you can duplicate it, flip it, move it to another spot, paint it, rotate it, make it larger or smaller, and add text. You can display images for varying lengths of time. Control can be manual, automatic, or both. A paint brush function lets you choose from 100 bristles and five colors. *Colography jr* runs on the PCjr.

You can plot drawings on paper or transparency film in any size, anywhere on the page, and in either of two directions using *Photography*. Several versions are available to support a variety of plotters. List price: *Colography* \$99.95, *Colography jr* \$49.95, *Photography* \$49.95. Requirements: 128K, one disk drive, color graphics board.
Cactus Software, Inc.
P.O. Box 880
Peoria, AZ 85345
602/242-7953

"Colography lets me easily create drawings of considerable complexity. Its companion product, Photography, permits drawings to be attractively reproduced, and the system and documentation are very professionally done. I have used both systems extensively, and considering their quality and sophistication, I believe they are two of the best bargains in the micro-computer marketplace." Raymond A. Jacobson, Chicago, Illinois

DR Draw, DR Graph

You can produce organization charts, project flow diagrams, and slide-type screen displays using *DR Draw* and *DR Graph* separately or together. *DR Draw* is a picture editor with elements that include marker characters, arcs, pie segments, filled rectangles and polygons, and circles. You can choose line styles, text fonts, fill patterns, and colors. The program also has zoom and pan functions. *DR Graph* can produce trend charts and financial analysis reports by accessing information

from a data base. Both programs are available in 8087 coprocessor versions. List price: *DR Draw* \$295, *DR Graph* \$195. Requirements: 128K, two disk drives, graphics board.
Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

Statgraphics

Featuring integration of graphics directly into statistical procedures, *Statgraphics* is a collection of over 350 functions for data analysis, data management, and statistical graphics. The program's modular structure allows transformations, subset selections, and an unlimited variety of expressions. *Statgraphics* includes charting functions such as bar charts, pie charts, component line charts, time sequence plots, histograms, and skyscraper plots. A split screen simultaneously displays several plot and text windows. Object matrices can be defined and manipulated within any of several coordinate systems, permitting rotation, translation, scaling, three-dimensional projection, and other transformations. The program offers quality control for engineering applications; time series, regression, and sampling features; univariate and multivariate control charts; Fast Fourier Transform and autocorrelation functions; routines for the construction and analysis of full and fractional factorial experimental designs; and response surface methods. The basic system provides access to all procedures but does not allow you to program your own functions. *Statgraphics* together with *APL*Plus/PC* gives access to the APL language for customizing programs. List price: *Statgraphics* \$895, *Statgraphics* and *APL*Plus/PC* \$1195. Requirements: 320K, two disk drives, color graphics board.
Statistical Graphics Corp.
Research Park
2 Wall St.
Princeton, NJ 08540
609/924-9374

Light Pen Demo Software Package

Illustrating several light pen applications, *Light Pen Demo Software Package* includes unprotected source code. A subroutine corrects errors in IBM's light pen BIOS ROM. The package includes menu and educational demonstrations, games, and a simple graphics program that lets you create images using a light pen. Compositions can include boxes, lines, circles, text, and fill. List price: \$39. Requirements: 64K, one disk drive, color graphics board, FT-156 light pen.

FTG Data Systems
10801 Dale St. #M-2
P.O. Box 615
Stanton, CA 90680
714/995-3900

Monochrome Graphics

You can create graphics without a color graphics board, using *Monochrome Graphics*, a package of three programs that can be purchased together or separately. *Project Management* displays projects in graphics format showing up to seven tasks or subprojects at one time. Data is displayed on a day-by-day basis, and up to ten weeks of information can appear on the screen at once. The program shows the length of each task and whether it is firm, proposed, or completed. Projects can be as long as 99 weeks.

Bar Graph Generator lets you display statistical information in bar graph format. Data is entered from the keyboard, and up to three graphs can be displayed simultaneously in three possible formats. Fifteen time periods can be represented. *Employee Scheduler* displays work schedules, job status, and location for up to seven employees at one time. Any ten-week period can be selected for display. List price: package \$125, each program \$50. Requirements: 64K, one disk drive. Data* Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Comp-Art

You can draw pictures and create shapes and designs with *Comp-Art*. The program offers 16 background colors from two palettes as well as a choice of colors for painting and drawing. It automatically creates files, plots coordinates, and draws circles, boxes, and lines. List price: \$59.95. Requirements: 64K, two disk drives, color graphics board. Norfolk Systems
8 North Fork Rd.
Laurel Springs, NJ 08021
609/783-4483

Flowchart

You can create high-resolution illustrations of 120 columns by 50 lines with *Flowchart*. The program automatically generates circles, ellipses, rectangles, and diamonds. There are two character fonts for text. All points are addressable with cursor control keys. List price: \$175. Requirements: 192K, one disk drive, color graphics board.

Sunshine Computer Software Co.
1101 Post Oak Blvd. #9-493
Houston, TX 77056
713/552-0949

Fast Graphs

You can compare up to six sets of data on one graph with *Fast Graphs*. The program creates line charts, pie charts, and vertical and horizontal bar charts. Bar charts can be two- or three-dimensional with up to 72 bars per graph. You can add titles and footnotes. A graphics editor with a draw mode is available for drawing and customizing charts. *Fast Graphs* accepts information from spreadsheets such as *VisiCalc*, *Multiplan*, *SuperCalc*, and *1-2-3*. It also has a "slide show" feature for presenting up to 18 consecutive screen images automatically or manually. List price: \$350. Requirements: 128K, two disk drives, graphics board. Innovative Software
9300 W. 110th St. #380
Overland Park, KS 66210
913/383-1089

Emu-Tek

For access to mainframe graphics software, *Emu-Tek* emulates Tektronics graphics terminals 4010, 4012, and 4014. The program has a scrolling mode for text operations and support for a light pen, a mouse, and the Hercules graphics board. Four options are available with *Emu-Tek*: a screen dump, enhanced telecommunications with full VT-100 emulation, plotter support with local zoom and pen plot capabilities, and extended graphics for full 4014 emulation as well as selective erase and scrolling dialog region capabilities. List price: \$395, screen dump \$35, enhanced communications \$65, plotter support \$45, extended graphics with other listed options \$145. Requirements: 256K, one disk drive, color or Hercules graphics board, serial port. FTG Data Systems
10801 Dale St. #M-2
P.O. Box 615
Stanton, CA 90680
714/995-3900

3Design/3

Integrating three-dimensional design with two-dimensional drafting, *3Design/3* generates wire-frame, perspective, and hidden line views of three-dimensional objects. Data can be entered with digitizers, mice, and the keyboard. You can mark points in three-dimensional space to draw an object such as a pyramid; two-dimensional surfaces can be extended or spun into three-dimensional objects. The program lets you rotate, scale, or move objects independently or in groups. *3Design/3*'s two-dimensional drafting includes auto-dimensioning of any two points, windowing, and overlay. You can also write text in any size with several font choices, draw freehand curves, and crosshatch any area. The system is available with either its own drafting package or a conversion file to save *3Design/3*-generated views for modification with *Auto-*

CAD. List price: \$1200. Requirements: 256K, two disk drives, IBM Color/Graphics Adapter or HALO-supported high-resolution graphics board (DOS 2.00 recommended).

3Design

4710 University Way NE #1512

P.O. Box C-56789

Seattle, WA 98105

800/392-9210, 206/632-2125 Washington

ES Painter

A program for children, *ES Painter* generates four-color graphics. It offers a choice of 16 background colors and two three-color sets of pens. The program uses a joystick to create images and function keys for commands. Images can be stored on disk but cannot be produced as hard copy. A disk of nine pictures, which can be embellished and colored, is included. List price: \$45. Requirements: 64K, one disk drive, color graphics board, game adapter, joystick.

E & S Software

P.O. Box 238

Bedford, MA 01730

617/275-8534

Banner

You can use *Banner* to print signs for work, school, rallies, or celebrations. A text mode lets you enter text for up to five banners. You can print up to 75 characters per line in letters up to 6 inches high. The design mode lets you create your own character set by entering ASCII characters and using cursor keys to change the design. Banners are printed out sideways. A configuration mode allows you to choose the character that will make up the large block letters on the banner. List price: \$39.95. Requirements: 64K, one disk drive, parallel printer.

Sam Wilson and Assoc.

P.O. Box 37085

Houston, TX 77237

800/824-7888 orders only, 800/244-7919

Alaska and Hawaii, 713/785-7830

Authoring Graphics System, Presentation Graphics System

Designed to construct, organize, and deliver business and educational presentations, *Authoring Graphics System* offers both a text editor and a medium/high-resolution graphics editor. The graphics editor stores primitive commands such as animate, free-form draw, box, arc, and paint. Delivery features include animation and an optional unattended mode for "slide shows" in a loop. Utilities import images from other graphics packages, merge "slides" into new presentations, and produce hard copy. Graphics image libraries are available separately.

Presentation Graphics System includes all *Authoring Graphics System* features except the text editor, although a primitive graphics command performs text functions. A data-driven business graphing component generates bar, pie, line, area, and three-dimensional bar charts from either keyboard input or DIF file data. The graphics editor modifies, annotates, highlights, and integrates the charts into a presentation. List price: *Authoring Graphics System* \$395, *Presentation Graphics System* \$349. Requirements: *Authoring Graphics System* 128K, two disk drives, color graphics board; *Presentation Graphics System* 192K, two disk drives, color graphics board.

Hypergraphics Corp.

207 W. Hickory #202

Denton, TX 76201

817/565-0004

Sign-Master

Designed for office use, *Sign-Master* creates presentation texts such as outlines, tables, headlines, financial summaries, and other "word charts." The program is menu-driven and provides on-screen help and instructions. It accepts up to 80 lines of text and offers a choice of six fonts in 16 sizes with justification, underlining, italics, and color. You can place a sign anywhere on a page, in any size, either horizontally or vertically. A Table mode lets you enter text in table or column format and then preview your sign on the

screen exactly as it will appear when printed. *Sign-Master* supports over 30 plotters and 14 printers as well as the Polaroid Palette. List price: \$245. Requirements: 192K (with printer graphics or for the Polaroid Palette 256K), two disk drives, color graphics board.

Decision Resources

25 Sylvan Rd. S

Westport, CT 06880

203/222-1974

"This package is very easy to use, even from the beginning. Users do not have to spend much time trying to format the charts; the program does it for them. *Sign-Master* works very well with the Houston Instrument DMP-29." Bruce L. Noren, Beavercreek, Ohio

Micrograph by 2Y's

A presentation graphics package, *Micrograph by 2Y's* produces charts and graphs for businesses. It generates multiple line graphs, pie charts, and bar charts or histograms in simple, side-by-side, or stacked formats. The program performs trend analysis with scatter diagrams or X-Y plots, linear regression computations, and descriptive statistics. *Micrograph by 2Y's* operates on a color or monochrome monitor, and you can use it for "slide show" presentations on the screen. Hard copy can be produced in five sizes on a printer and in up to four colors on a plotter. Data can be keyed in or drawn from DIF files created by *VisiCalc*, *SuperCalc*, *1-2-3*, or *dBASE II*. Title lines, legends, axis labels, and other text can be added to charts. *Micrograph by 2Y's* supports an Epson printer with Grafrax or the Okidata Microline 84. Plotter support is available for the Hewlett-Packard HP-GL and Radio Shack CGP-115 multiple-pen plotters. List price: \$195. Requirements: 128K, two disk drives, color graphics board.

Willy Verbestel

12 D'Amour

Aylmer, Quebec

J9J 1C2 Canada

819/770-7191

Micro-Graf, Print-Graf

You can create and print graphics with *Micro-Graf* and *Print-Graf*. *Micro-Graf* distributes numeric data in high-resolution bar charts or line graphs. Data is entered from the keyboard; both axes and the graph itself can be titled. *Print-Graf* dumps medium- or high-resolution graphics to an Epson or IBM printer. Grafrax ROMs are available for the early IBM and MX-80 printers. Graphs can be printed upright or sideways, in dark or light print, and in either black-on-white or white-on-black. *Print-Graf* uses a one-line BASIC command for automatic printing, or you can use the <PrtSc> key. List price: *Print-Graf* \$44.50, *Print-Graf* with *Micro-Graf* \$79.50, both programs plus Grafrax ROMs \$149. Requirements: 48K, one disk drive, color graphics board.

Micro-Z Electronics
P.O. Box 2426
Rolling Hills, CA 90274
213/377-1640

ChartStar

A presentation graphics program, *ChartStar* produces a variety of chart types for businesses. The program produces text charts with nine font styles, pie charts with three-dimensional pies, and bar charts with choice of stacked, side-by-side, or three-dimensional bars. It also offers linear or logarithmic scale line charts, scatter charts, Gantt charts for project management with up to five time scales, organizational charts, and curve-fitting charts using linear, logarithmic, exponential, or power functions. *ChartStar* uses function keys and on-screen menus and has input forms for entering data. On-screen "slide shows" can display a series of charts on the screen. The program can read data from *CalcStar* and *PlanStar* and from any DIF file, such as 1-2-3 or *Multiplan*. List price: \$395. Requirements: 192K, two disk drives.

MicroPro International Corp.
33 San Pablo Ave.
San Rafael, CA 94903
415/499-1200

Executive Picture Show

You can create business graphics, free-form graphics, and word charts with *Executive Picture Show*. The program creates line, bar, three-dimensional bar, horizontal, surface, and pie charts from data stored in programs such as 1-2-3 and *dBASE II*. You can choose from 8 foreground colors and 16 background colors for 128 color permutations. Image libraries are available that include maps, icons, and drawings. Hours-long animated presentations display hundreds of different screens and graphs from one disk. List price: \$245. Requirements: 192K, two disk drives, graphics board.

PCsoftware
9120 Grammercy Dr. #416
San Diego, CA 92123
619/571-0981

CS-5 Graphics System

In addition to conventional wire-frame construction and two-dimensional graphics, the *CS-5 Graphics System* provides three-dimensional solid modeling functions. Features of the menu-driven program include hidden line and surface removal, smooth shading, and antialiasing. The program offers a choice of interactive or explicit line and polygon specification, rotation, translation, and viewpoint transformations. *CS-5 Graphics System* provides rotational, translational, and cross-section sweeps with three-dimensional construction and editing features. You have the choice of isometric views or automatic dimensioning on plan views. The shading options are flat, smooth, and constant. Scenes can be viewed in either perspective or orthogonal projection. You control the amount of perspective by changing the focal length. In orthogonal projection, the focal length is not used, and parallel lines remain parallel. The *CS-5 Graphics System* software works with the Solid Modeling System hardware, which includes a frame buffer and an adapter board. List price: \$11,900. Requirements: 512K, two disk drives (hard disk recommended), high-resolution RGB monitor, 8087 coprocessor.

Cubicomp Corp.
3165 Adeline St.
Berkeley, CA 94703
415/540-5733

Golden Software's Graphics System

Five programs make up *Golden Software's Graphics System*. Graphit lets you create high-resolution X-Y and line graphs and bar, pie, and scatter charts. Input can be keyed in or entered from a data file on disk. Plotcall lets you plot directly onto a dot matrix printer and generate plots from any language. ASCII character strings can be scaled to any size and rotated to any angle. Three-dimensional plots are also possible. Surf creates three-dimensional surface plots rotated to any angle, with or without hidden line removal. Topo generates contour maps with in-line contour labels. The program lets you view three-dimensional data in two dimensions and change the size of the contour intervals. QGrid creates a regularly spaced grid for irregularly spaced data so you can create a contour map or surface plot from a few randomly spaced data points. Data created by QGrid can be used as input for Surf and Topo. List price: \$199. Requirements: 128K, one disk drive, graphics board.

Golden Software
P.O. Box 281
Golden, CO 80402
303/279-1021

Lenipen Graphics Systems

The Lenipen graphics systems include several programs that can work together or separately. *Lenipen/PC* consists of artificial intelligence command sets that cover animation, flowcharts, computer art, graphics data bases, computer-aided design, and an executive presentation facility. Designed in the icon- and voice-based Symbolic Online User Language (SOUL), the program supports the Lenipen touch-ring light pen, the Microsoft Mouse, the Logimouse, the KoalaPad Touch Tablet, and a joystick. It can also be used with the keyboard only. You can use a digitizing camera to capture external drawings or text. *Lenipen/PC* supports video boards such as Colorplus,

Quadcolor, and Tecmar. It prints on any Epson or compatible dot matrix printer and Quadjet, IBM, or IDS color printers. You can attach plotter support for popular pen plotters or create photographic hard copy or slides using the Polaroid Palette. *Lenipen/XT* and *Lenipen/jr* programs are also available for the XT and the PCjr.

Lenibase, a graphics data base and animation system, lets you cut, paste, carve, slice, combine, update, label, and store windows of graphics information, entire screens, BASIC DRAW and PLAY strings, and animation scripting data. Graphics data can be compressed by up to 98 percent, depending on the complexity of the image. The Animation subsystem combines graphics windows, music, and movement "scripts" to produce action. Features include audio cassette synchronization, special effects, speed control, voice output, and perpetual action. For the PCjr a *Lenibase/jr* program and the *Lenimation/jr* video animation system are available.

Lenitext is a video typesetting system for photographic slides, posters, and book covers. The program uses Video Daisy-wheels character fonts. It has a slide presentation facility, and once loaded, the basic characters can be sliced, stripped, polka-dotted, mirrored, rotated, and enlarged. Optional features include slide creation using the Polaroid Palette, voice input for the visually impaired, and text image digitization. *Lenitext-jr* is available for the PCjr. List price: *Lenipen/PC* \$495, *Lenipen/XT* \$695, *Lenipen/jr* \$345; *Lenibase* \$275, *Lenibase/jr* \$150; *Lenimation/jr* \$125; *Lenitext* \$395, *Lenitext/jr* \$150. Requirements: 128K for the PC, 192K for the PCjr and the XT, one disk drive, color graphics board, DOS 2.00 or later version.

Duncan Atwell Computerized Technologies
1200 Salem Ave.
Hillside, NJ 07205
201/355-1690

Pixon

Pixon generates free-form graphics on a monochrome monitor. The program's graphics primitives include line, box, and diagonal. A modifiable character-set library comes with seven fonts and letter sizes. Graphics developed with other programs in BASIC can be changed with *Pixon*. List price: \$79. Requirements: 64K, one disk drive, graphics board. Olive Branch Software
1715 Olive St.
Santa Barbara, CA 93101
805/569-1682

MicroCAD

A modular computer-aided design system, *MicroCAD* is available with three optional modules that can be purchased separately. The basic program is a two- and three-dimensional graphics system with rotatable "graph paper," which emulates a drafting machine. The program has a spiral function and a function that automatically calculates area, center of gravity, and moment of inertia. Designs can be shown in true perspective, using data on the real-world dimensions of the defined objects. Perspective views are set up with the cursor as observer, without the need for information on viewer angle or distance to the object. Isometric views are also available. Optional modules include a three-dimensional rotatable character set, which lets you type text in any size or at any angle and then rotate it or view it in perspective; hidden line removal; and layering, which lets you plot, rotate, or move up to 999 layers separately. *MicroCAD* also displays data from *VisiCalc* files as high-resolution graphs. List price: *MicroCAD* \$500, *MicroCAD Plus Layering* \$750, 3-D Rotatable Character Set \$150, Hidden Line Removal \$250. Requirements: 256K, two disk drives, color or Hercules graphics board. Computer Aided Design
7650 Geary Blvd.
San Francisco, CA 94121
415/387-0263

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Geograf

A graphics utility program with 14 BASIC subroutines, *Geograf* allows people with minimal programming experience to produce business, science, and engineering plots and graphs on a pen plotter. With *Geograf* you can scale the plot, draw and label axes, plot data with a choice of symbols and line types, and draw circles. The program is compatible with Hewlett-Packard, IBM, Western Graftech, and Houston Instrument plotters. List price: \$250. Requirements: 64K, one disk drive.

Geocomp Corp.
Graphic Sales Division
342 Sudbury Rd.
Concord, MA 01742
617/369-8304

CADKEY

A two- and three-dimensional design and drafting system, *CADKEY* offers automatic dimensioning, hidden line removal, three-dimensional transforms, fillets, and chamfers. The program's command structure can be modified to resemble many large CAD/CAM system command formats. Input and output devices supported include three-dimensional digitizers, two-dimensional tablets, mice, multiplotters, and hard disks. List price: \$1495. Requirements: 512K, one disk drive.

Micro Control Systems, Inc.
27 Hartford Turnpike
Vernon, CT 06066
203/647-0220

Space Tablet/Advanced Space Graphics System 325

You can design, digitize, transform, and dimension irregularly shaped objects in three dimensions with *Space Tablet/Advanced Space Graphics System 325*. The program connects X, Y, and Z points of a wire-frame drawing and allows you to scale, rotate, and move the resulting drawing about any axis. You can examine drawings from three simultaneous views, add text, and see drawings automatically

dimensioned. List price: \$1995. Requirements: 256K, two disk drives, color graphics board, game port.
Micro Control Systems, Inc.
27 Hartford Turnpike
Vernon, CT 06066
203/647-0220

PCcrayon

You can create animated presentations, add drawings and symbols to programs, and create unique type fonts with *PCcrayon*. The program takes advantage of BASIC's graphics functions. It assigns single letters for chains of graphics statements. *PCcrayon* stores vector (outline only) drawings by number in vector files for recall in any size and at any angle into another drawing on the screen. List price: \$59.95. Requirements: 64K, one disk drive, color graphics board.

PCsoftware
9120 Grammercy Dr. #416
San Diego, CA 92123
619/571-0981

"PCcrayon is so simple and makes the color board behave so effortlessly for cartoons, large lettering, simple illustrations, and even animated sequences that I disappeared happily into my color board for a whole weekend." Berkeley F. Fuller, Honolulu, Hawaii

Videogram

An icon-oriented graphics program, *Videogram* is operated with the keyboard and contains a palette of 16 colors that can all be used in an image. Colors can be assigned to program functions. The program offers a choice of 24 brushes in four sizes and lets you design your own brushes. It has 8 character fonts in four sizes and can store 50 more character fonts. An optional font package is available that contains 30 additional typefaces. *Videogram* can chain up to 50 images for "slide shows," and it has a shape table with seven shapes. You can cut and paste, fill, paint, and magnify. List price: \$150, optional font package \$100. Requirements: 128K, one disk drive, Plantronics ColorPlus graphics board.

Softel, Inc.
P.O. Box 365
Stoddard, NH 03464
212/677-6599

Graffhopper, GDSS

A graphics program with a catalog of over 100 graph formats, *Graffhopper* lets you create graphs by responding to screen prompts, selecting options from a menu, or using command words. The program offers access to data in 1-2-3, *Multiplan*, or *dBASE II* files. *Graffhopper* is included in *GDSS*, a menu-driven business graphics package that accepts data from other micros, mainframes, networks, or information services. *GDSS*'s query language lets you sort items and perform mathematical, statistical, and logical operations on the results. The *GDSS* command-file structure can store frequently used formats, including lines, bars, pies, shaded lines, bubbles, stacked bars, scattergrams, stepped lines, shaded bars, three-dimensional bars, and multiplex formats. Layouts, overlays, rotations, reductions, and split screens are possible. There are no limits to image size, number of data bases, or data points. *GDSS* includes a graphics editor for custom formatting. List price: *Graffhopper* \$295, *GDSS* \$795. Requirements: 256K for *Graffhopper*, 320K for *GDSS*, two disk drives, DOS 2.00 or later version, graphics board.

Data Business Vision, Inc.
3510 Dunhill St., Ste. B
San Diego, CA 92121
800/321-6828, 619/450-1557

Statmap

A statistical and demographic mapping program, *Statmap* displays information on a color-coded map that can be enlarged for greater detail and constructed to custom specifications. The menu offers maps of states, counties, congressional districts, zip code areas, and census tracts. Statistical information can be entered manually or transferred from *dBASE II* or other ASCII files. Maps can be sequenced for slide show presentations. List price: \$995. Requirements: 128K, two disk drives, graphics board.

GANESA Group
1495 Chain Bridge Rd. #300
McLean, VA 22101
800/638-2225, 703/442-0442

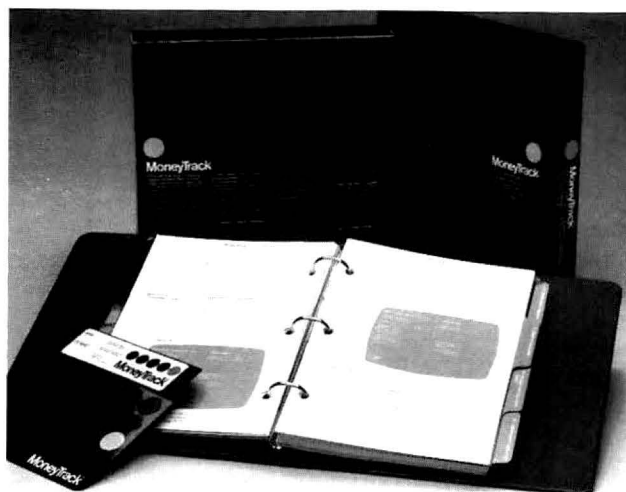
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(212) 964-7427

Graphics

Word-Plot

Business-quality plots can be merged with text using *Word-Plot*. The program provides automatic data entry, scaling, and over 10,000 plot formats. Plot size ranges from 1 inch to 8½ inches. *Word-Plot* can be used with any word processor capable of reading ASCII files. List price: \$49.50. Requirements: 64K, one disk drive, printer.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

Microsoft Chart

A business graphics program, *Microsoft Chart* generates charts from a gallery of examples. The program offers 45 chart forms that can be modified as needed and saved for use with different sets of data. Text can be included and moved anywhere on the screen. Sixteen charts can be displayed simultaneously or overlaid. Data entered from the keyboard can be analyzed with statistical functions including linear regression and exponential curve fitting. *Microsoft Chart* reads data from 1-2-3, *VisiCalc*, *dBASE II*, and DIF or ASCII files. The program works with *Multiplan*, automatically incorporating changes made in the spreadsheet. List price: \$250. Requirements: 128K, one disk drive, IBM Color/Graphics Adapter. Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8080

Pyxel Visuals

For text-oriented graphics, *Pyxel Visuals* produces overhead transparencies, report covers, signs, and on-screen presentations. You can create screens with underlined text and characters from ¼ inch to 1 inch high. Simple illustration screens may be printed horizontally or vertically, saved for editing, and displayed in automatic or prompted presentations.

Batchprint converts screens from *Pyxel Visuals* to proportionally spaced, high-resolution hard copy. The program prints 42 screens at a time and designates spacing between screens for long printouts. Files are interchangeable with *Showtime*

and *Pyxel Visuals*. List price: *Pyxel Visuals* \$98, *Batchprint* \$75. Requirements: 128K, two disk drives, color graphics board.

Pyxel Applications
2917 Mohawk Dr.
Richmond, VA 23225
804/320-5573

G

A color graphics editor, *G* uses the cursor as a pen and includes single-key commands for shapes such as circles, ellipses, arcs, and boxes. With *G* you can erase, reposition, copy, mirror, or flip any image. The program includes functions that fill areas with color, control the cursor's speed and line size, and change palettes and background colors. For experimenting with effects, an Undo command reverses the last change made on the screen. *G* pictures can be incorporated into advanced BASIC programs and into programs in any other language if you have the *Halo* library for that language. List price: \$95. Requirements: 128K, one disk drive, color graphics board. Micro Marketing Assoc.
3497 E. Livingston Ave., Ste. A
Columbus, OH 43227
614/231-4956

CAD Master

A two-dimensional design and drafting program, *CAD Master* operates with a high-level command language, a mouse, or a digitizing tablet. The program features auto-dimensioning, volume generation, selective erase, and definable parts libraries and symbol tables. It provides 12 text fonts, seven line styles, and 11 pattern fills. *CAD Master* supports several plotters and dot matrix printers and the 8087 coprocessor. With a graphics board *CAD Master* provides resolution of up to 1024 by 1024 pixels, depending on the board and the monitor. You can display up to 256 colors out of a possible 4096. List price: \$1795. Requirements: 512K; serial port; Scion, Conographic, Tecmar, Amdek, or Quadscreen graphics board. Datagraphic Systems
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Plymouth, MI 48170
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Accounting, Business Management, and Financial Applications





Ken Greenberg

More than ever, personal computing means business, and in three major software categories—accounting, business management, and financial applications—the shelves are sagging with packages that promise to make your work easier.

“Doing the books” is the common denominator of businesses large and small. Accounting encompasses the housekeeping that keeps all businesses going: monitoring inventory, receivables, and payables; writing checks; processing orders; calculating payrolls; supplying management reports; and periodically checking the financial pulse of a company via a general ledger.

Accounting software is perhaps best described as bookkeeping software because, although it is structured around sound accounting principles, it does not suggest financial strategies. Typically, programs are sold in work-together modules, such as general ledger, accounts payable, accounts receivable, inventory, and payroll, or in single integrated packages. Integration enables modules to share data without rekeying and permits components to report to one another for easy file updates.

Properly automating your books dramatically reduces the time and drudgery involved in the numerous repetitive tasks of basic bookkeeping; recurring billings and payments, for example, can often be handled with a few keystrokes. Automation also provides readily accessible, consolidated views of various facets of a business for cash flow management and forecasting decisions.

Most accounting packages serve as data warehouses on clients and suppliers. The best programs generate a host of forms, such as purchase and sales orders, invoices, statements, and checks. A variety of reports can also be produced. The reports help you analyze variables, such as management strategy, sales, and vendor performance, that may affect your business. Since accounting packages enable you to manage a complex and detailed organization with minimal extra effort, an automated accounting system supports—and can even enhance—a company's growth.

Although accounting packages promise great gains in productivity, the programs require time and energy to master. Before converting from manual to automated procedures, you'll need effective support from your dealer and your accountant. You may need to retain a consultant to ensure that conversion is painless.

Dataquest analyst Kathy Lane reports that accounting has become the application of choice for new and veteran PC users alike. Figures from Dun & Bradstreet, Dataquest's parent company, reveal that 66 percent of 1984 computer buyers cited accounting as the impetus behind their hardware purchases. The market research firm Future Computing pegs the accounting software market at \$440 million in 1984 and projects that sales will rise to \$1.1 billion by 1988.

Lane sees "smarter" accounting software as part of this trend. "Tables will help you fill out forms, for example," she says, "and I expect to see more integration linking accounting functions to word processing and spreadsheets." In addition, Lane suggests that rent-an-accounting-program schemes may not be far off.

Business Management

While accounting software is concerned with the structure of business activity, business management packages deal with its content. Under the banner of business management is an array of products crafted to speed major tasks in areas such as project tracking, decision analysis, statistical analysis, and office management.

Foremost among these productivity tools are programs classified as time managers and project managers. Time managers act as PC-based appointment calendars, with certain embellishments. Such scheduling products keep track of regular commitments, even on a year-to-year basis, and flag priority events. The better programs provide quick access to information needed to refine or revise plans.

Project management programs rely on such techniques as the Critical Path Method (CPM) or the Program Evaluation and Review Technique (PERT) to schedule, plan, or evaluate large-scale endeavors. These packages monitor project flow, staff performance, project costing, resource allocation, and other information pertinent to project completion.

Marketing is a specialized business management application. Some programs use the PC as a reservoir of sales prospect information, customer lists, and sales completion data. Others sort and distill data based on such elements as account type or client type. A number of packages print reports, invoices, and letters; generate lists and labels; and merge data files with word processing documents.

Information analysis programs, which offer a variety of techniques to support decisions and forecasts, make up another type of business management software. Statistical and mathematical models, such as regression analysis and time series analysis, form the bedrock of quantitative analysis programs. Statisticians and researchers rely on statistical analysis packages to make sense of survey results and compile data on respondents. Decision analysis programs, a subset of information analysis software, guide you through a variety of options and alternatives for a plethora of situations, from hiring to procurement.

Financial Applications

Like business management programs, financial application software is experiencing explosive growth, and for good reason. The well-equipped PC is an ideal investment record-keeping and financial analysis tool. The financial application market is replete with portfolio evaluation, information retrieval, and investment analysis programs.

Portfolio evaluation software performs record keeping that is essential to investors. Many packages record all gains and losses, note all purchases and sales, and calculate commissions, short-term gains, long-term gains, and tax consequences. Most generate statements summarizing the performance of holdings during a specified period.

The information-retrieval field is burgeoning. Using telephone lines, a modem, and a communications package, you can dial into a variety of on-line data bases and business news sources. With information retrieval programs economic indexes, key indicators, historical information, and stock quotations are only a few keystrokes away. Even more significant is the recent introduction of packages that put you on line to your brokerage house.

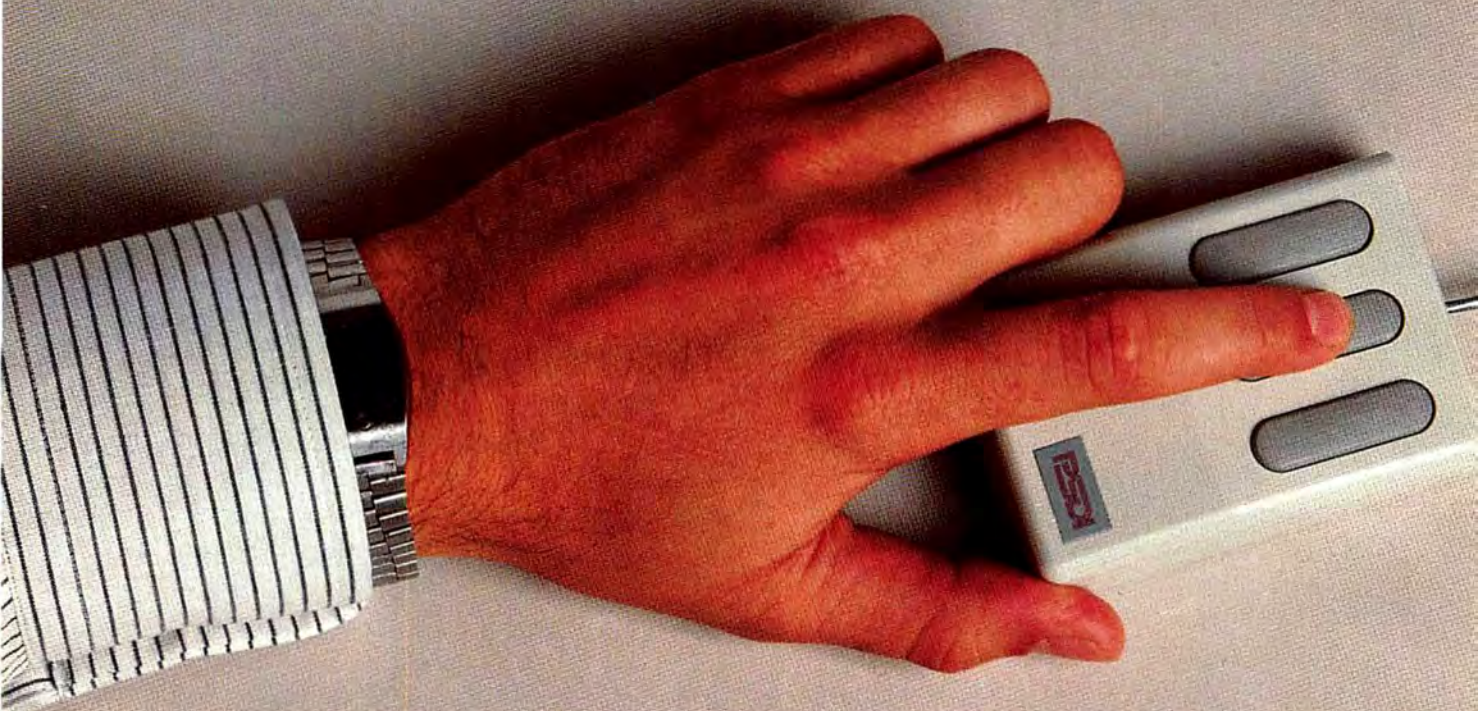
To trade wisely you may need to consult one or more investment analysis packages. Both major approaches to investment analysis—fundamental and technical—are well represented on software shelves. Fundamental analysis entails a review of all pertinent elements—from corporate performance to general economic indicators—that affect the price of a stock and uses a technique called “screening” to separate solid bets from likely losers. Technical analysis shapes prognostications by assessing past stock prices and trading volume. Such programs allow you to chart past averages as means of extrapolating future performance.

Financial application software also helps with calculation and planning chores including tax preparation, depreciation, amortization schedules, loan payments, and leases. Programs may supply

printouts of statements and schedules or generate formal reports. Some even permit customized general financial reports, including audit trails, cash flow analysis, budgets, and purchase decisions.

Dataquest's Kathy Lane is convinced that the business application software market is getting stronger and more diverse each year. In business management and financial applications, Lane anticipates an increased role for macro-based intelligent software: “Expert systems are coming in financial modeling and planning, and in accounting, too.” She also foresees that programs will become increasingly friendly, a prediction that Doug Levin of the Microcomputer Information Bureau heartily endorses. Levin suggests that 1985 will be the year that business software for the PC takes a leaf or two from Apple's Macintosh.

Ken Greenberg is an Assistant Editor at PC World.



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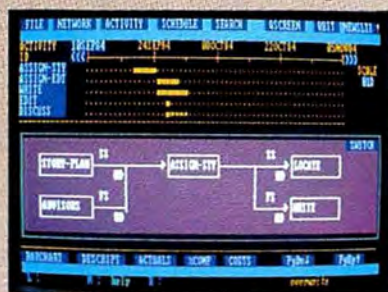
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\$99.95

VERSAINVENTORY™ is a complete inventory control system that gives you instant access to data on any item. VERSAINVENTORY™ keeps track of all information related to what items are in stock, out of stock, on backorder, etc., stores sales and pricing data, alerts you when an item falls below a preset reorder point, and allows you to enter and print invoices directly or to link with the VERSARECEIVABLES™ system. VERSAINVENTORY™ prints all needed inventory listings, reports of items below reorder point, inventory value reports, period and year-to-date sales reports, price lists, inventory checklists, etc.

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Accounting

The Advocate

Originally written for attorneys, *The Advocate* can also be used by other professionals who bill for their time. The integrated system is made up of seven modules: time billing and receivables, trust accounting, calendar scheduling, accounts payable, payroll, checking account, and general ledger. The menu-driven software uses simple English phrases and immediately updates pertinent data files with each entry. List price: full package \$2495 (modules also available separately). Requirements: 128K, two disk drives.

Alta Sierra Software
3600 Carson Rd.
Camino, CA 95709
916/644-5424

Checkbase

Designed for personal and small-business financial control, *Checkbase* maintains multiple check registers, keeps up-to-date balances, and prints checks. List functions provide tracking of budget expenses and up to 60 tax category codes. You can key in information once to generate checks, automatically reconcile, and complete the check register. List price: \$95. Requirements: 64K, one disk drive.

IMSI
633 Fifth Ave.
San Rafael, CA 94901
415/454-7101

Cash Flow Reporter

A *dBASE II* template for analyzing a company's cash condition, *Cash Flow Reporter* accepts and reports on 1000 categories of expenses and 1000 categories of income. Reports can be generated to show monthly or yearly expenditures or income. The program is designed for companies with gross sales of less than \$10 million per year and fewer than 5000 transactions per month. Monthly and yearly totals are provided for each category. A definable dictionary of categories verifies that only valid category codes are used. List price: \$175. Requirements: 64K, one disk drive, *dBASE II*.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

Checkbook

Intended for small businesses using fewer than 500 checks per month, *Checkbook* provides 12 reports on checks and deposits, including checks paid, checks outstanding, deposit status, and balance. Multiple checkbooks can be maintained. List price: \$175. Requirements: 64K, one disk drive, *dBASE II*.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

Cash Controller

Intended for the small business that is often short on cash, *Cash Controller* helps apply available funds in the most judicious manner by using both the age of the invoice and the dollar amount to make decisions. The program accommodates up to 300 invoices at a time and has routines for totaling, finding, deleting, correcting, updating, and listing the entire data base. An alphabetizing routine automatically groups each vendor's invoices. Printouts sorted by age and amount can be selected from the main menu. List price: \$30. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

PC Payroll

Designed to handle the processing and reporting needs of most small businesses and professional offices with up to 100 employees, *PC Payroll* automatically computes federal, state, and local income taxes and social security tax. It produces payroll checks; check stubs; period-to-date, quarterly, and yearly totals; W-2 forms; and quarterly and yearly earnings reports. List price: \$200. Requirements: 128K, two disk drives.

Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

After-the-Fact Payroll

Designed for accountants, *After-the-Fact Payroll* is a menu-driven, passive payroll system that handles records for multiple employers and up to 1000 employees on a single disk. The program prepares all necessary reports and maintains complete client payroll information. It also prints W-2 and other required forms. List price: \$250. Requirements: 128K, two disk drives.

Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

Accounts Receivable-Plus

A stand-alone system, *Accounts Receivable-Plus* is designed to accommodate over 900 customers and up to 1000 transactions on a double-density disk. Reports produced by the system include current transactions, transaction listings, transaction summaries, updated accounts receivable, aging reports, service charge reports, and billing statements. The program also provides information on each account, such as credit limit, charges to date, payments to date, and date of last payment. All statements are printed to client specifications. List price: \$300. Requirements: 128K, two disk drives.

Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

Complete Business System

A menu-driven accounting package, *Complete Business System* handles up to 400 accounts in any sequence. Users can design their own reports. The programs are on two disks: General Ledger and Payroll on one, and Accounts Receivable and Accounts Payable on the other. List price: \$500. Requirements: 128K, two disk drives.

Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

Accountability Retailer, Level I

An accounting system intended for equipment dealers and retail store owners and managers, *Accountability Retailer, Level I* works with information about sales, payments, returns, discounts, payroll deductions, bad debt write-offs, down payments, adjustments, and warranties. The package includes inventory control, accounts receivable, general ledger, salesperson statistics, job costing, passive payroll, and accounts payable programs. The package handles up to 4000 inventory parts with 1000 customers and 2000 invoices per month. List price: \$2500. Requirements: 128K, two disk drives, RM/COBOL *Runtime* package.

Key Systems, Inc.
512 Executive Park
Louisville, KY 40207
502/897-3332

Ledger 1

A package that includes *General Ledger*, *Accounts Receivable*, and *Accounts Payable* programs, *Ledger 1* with a hard disk can support multicompany accounting. *General Ledger* can copy a chart of accounts to a new company. It allows consolidations but does not provide for previous-year comparisons. *Accounts Receivable* looks up customers alphabetically and numerically and enters new customers from the invoice entry screen.

The program requires the NEB statement format and does not print invoices. *Accounts Payable* lets you add vendors from the invoice screen and provides alternate selections for payment. List price: each module \$500. Requirements: 64K, two disk drives, RM/COBOL *Runtime* package.

Soft Lab
P.O. Box 879
St. George, UT 84770
801/268-4969

MICA Accounting Series

A group of double-entry, menu-driven accounting programs, the *MICA Accounting Series* uses the function keys to perform similar operations in different modules. The modules work separately or together and can automatically post to *General Ledger*, which handles up to 999 accounts and can be updated throughout each fiscal period. While processing partial payments, *Accounts Payable* retains records for prepaid invoices, credit memos, and returns and adjustments. *Payroll* handles up to 20 types of compensation, including commissions and non-taxable wages, and carries records of salaried and hourly employees for multiple payroll cycles. *Inventory Control* maintains location codes, maximum and minimum reordering levels, quantities in stock, unit costs, and four price levels for each unit.

Accounts Receivable accommodates open-item and balance-forward customers simultaneously and provides detailed agings with autobilling, open-credit reconciliation, finance charges, and sales commissions. *Sales Invoicing* works with *General Ledger*, *Accounts Receivable*, and *Inventory Control*, generating invoices for cash and credit sales. *Application Manager* establishes a master menu for MICA applications on the hard disk, as well as in-depth security for all programs. *Job Cost* controls labor and materials on a project basis and issues invoices to customers. List price: *Application Manager* \$195, *Job Cost* \$995, other modules \$495. Requirements: 128K, two disk drives.

Micro Associates, Inc.
2349 Memorial Blvd.
Port Arthur, TX 77640
409/983-2051

General Ledger

Menu-driven *General Ledger* produces profit-and-loss, detail-ledger, trial balance, and chart of accounts reports. The program uses ASCII sequential data files, enabling you to enter and manipulate information using DOS commands and to transfer data over telephone lines. The program accommodates up to 1500 ledger accounts, 2000 journal entries, 99 departments, and 10 digits left of the decimal point for all numbers. List price: \$300. Requirements: 128K, one disk drive.

PC innovations, Inc.
P.O. Box 454
Morrison, CO 80465
303/697-5676

Books! The Electric Ledger

Designed to work the way bookkeepers do, *Books! The Electric Ledger* features data entry onto ledger sheets that appear on the monitor. You can scan or add to the chart of accounts while in the middle of a journal entry. Entire journals and ledgers can be viewed. The program allows for 512-character journal entry descriptions and 30-character account names. An indexing technique allows a description to be used in place of the account number. You can instruct *Books! The Electric Ledger* to prompt for offsetting entries, and multiple prompts can be made into a "chain." Since the entire chart of accounts is on line, you can review it without leaving an entry. The program comes with a tutorial, sample charts of accounts, and sample data. Optional modules include *Payroll*, *Inventory*, *Check Writing*, *Invoicing*, *Recurring Entries*, and *Budgeting With Job Cost*. List price: \$350. Requirements: 128K, two disk drives.

Systems Plus, Inc.
1120 San Antonio Rd.
Palo Alto, CA 94303
415/969-7047



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Evergreen Software, Amherst, NH 03031

Circle 888 on reader service card

EZ Entry

An order-entry and invoicing program, *EZ Entry* displays product codes and prices on screen. You can maintain a file of 200 product codes and prices and 500 orders per single-sided disk. Invoices and reports can be printed on a customized letterhead with an IBM or Epson dot matrix printer. List price: \$99.95. Requirements: 64K, two disk drives.

Systemics Inc.
3050 Spring St.
West Bloomfield, MI 48033
313/851-2504

My Accountant

Designed for personal, home, church, or small-business finances, *My Accountant* provides extensive ledger capability without requiring accounting experience. Features include a chart of accounts, 150 definable accounts, budgeting, checkbook reconciliation, tax-deductible flag, and macro codes for quick entry. The program prints itemized lists, trend charts, the monthly ledger, a financial statement, a receivables list, and a payables list. Information displayed can be edited and updated, and the financial statement can be customized. A hard disk can hold 16,000 items; a floppy disk, 2400 items. Source code is provided with the compiled program. List price: \$69.95. Requirements: 128K, one disk drive.

Ensign Software
7337 Northview
Boise, ID 83704
208/378-8086

Eazyacct

A check writer and general ledger, *Eazyacct* produces reports in a variety of sequences. The program is written in BASIC and handles both interactive and batch processing. *Eazyacct* does double-entry accounting and lets you perform unlimited transactions; it handles 600 accounts and can record 5000 transactions per disk. List price: \$150. Requirements: 128K, two disk drives.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Hardisk Accounting Series

A menu-driven system, *Hardisk Accounting Series* includes six modules that can be used independently or integrated with each other. *General Ledger* retains transaction detail for a full year, and its financial statements have a flexible format for comparing performance with budget, previous year, and year-to-date figures.

Accounts Receivable records revenues by customer, customer type, salesperson, and state. The program handles up to 3000 customers, sorts customer lists 16 ways, and helps identify slow payers. *Accounts Payable* accommodates partial payments and handwritten and computer checks, and it calculates discounts automatically. *Inventory Management* supports FIFO, LIFO, and weighted average inventory valuation methods. The program maintains sales histories for up to 6000 items with part numbers up to 15 characters long. Inventory can be linked to a cash drawer, and sales slips or invoices are printed at the time of sale.

Payroll handles up to 250 employees with 20 deductions and pay types possible per employee. Tax tables for all states are built in and can be updated manually or through the manufacturer's updating service. *Rapid Transfer*, a utility, lets you transfer data directly to 1-2-3, *VisiCalc*, or *Multiplan*. *Job Cost* allows firm bid or cost plus billing, flexible overhead charging, wage-sensitive costing, unbilled costs, and overriding of computer billing amounts. List price: *Rapid Transfer* \$295, *Job Cost* \$695, other modules \$595 each (single user) and \$895 each (multi-user). Requirements: 128K, hard disk. Great Plains Software
1701 S.W. 38th St.
Fargo, ND 58103
701/281-0550

Entrepreneur's Accountant

A general ledger system for small businesses, *Entrepreneur's Accountant* features security, disk space monitoring, graphics displays, and several report formats. Users can set up subsystems such as accounts receivable or inventory. A financial statement summary is updated with

each journal entry, enabling year-to-date statements to be printed at any time.

The Audit Listing module produces journal file listings, account activity listings, and a trial balance report. The Journal Entry module allows up to nine debits and nine credits per entry, accompanied by descriptive information. The Chart of Accounts module displays a graph of account activity. An index file facilitates account validation and lookup. Use of account mnemonics allows users to specify simple abbreviations instead of full account numbers. List price: \$149.95, optional source code \$40. PC requirements: 128K, one disk drive. PCjr requirements: 128K, one disk drive, Cartridge BASIC. Personal Software Co.

P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

Solomon III

An integrated set of menu-driven programs, *Solomon III* includes *General Ledger*, *Accounts Receivable*, *Accounts Payable*, *Payroll*, *Sales Order Entry/Invoicing*, *Sales Analysis*, *Fixed Assets*, *Inventory*, *Purchasing and Receiving*, *Job Costing*, *Fixed Assets*, *Address and Mailing List Management*, and *Database Reporter*. Batch balancing techniques at data entry sessions catch common entry errors. The programs have password protection and can produce reports at any time during operation.

General Ledger uses data entry forms and is automatically updated by other modules. The number of accounts is limited only by disk space. *Accounts Receivable* features automatic updating from the *Invoicing* module and four definable aging categories plus a current category. *Payroll* prints checks, 941 reports, and W-2 statements and places virtually no limit on earning types or deduction types. *Sales Order Entry/Invoicing* has data entry screens that look like familiar forms, accepts multiple-line items for each order, includes automatic back order, and handles sales of nonstock items. *Sales Analysis* provides reports for management planning, sales forecasting, promotional item tracking, and commission tracking. It organizes reports by customer, by inventory item and product class, or by salesperson.

Fixed Assets supports both the Asset Depreciation Range system and the Accel-

erated Cost Recovery System. The module supports independent depreciation books for financial, federal, and state tax calculations and lets you define the frequency of depreciation calculations. *Inventory* supports definable cost methods such as LIFO, FIFO, average cost, or specific identification and maintains items by serial or lot number in addition to ID. *Purchasing and Receiving* handles standard, blanket, and drop-ship purchase orders; features automatic updating of *Inventory*; and handles promised, anticipated, and required-by dates. *Job Costing* features automatic updating from *Payroll* transactions and *Accounts Payable* invoices; user-defined job, phase, and cost-type coding structure; and original and revised budgets and contract amounts.

Database Reporter generates ad-hoc queries and reports; you can query in an English-like, nonprocedural manner. Features include selective retrieval, wild-card string matching, arithmetic expressions, character class matching, virtual fields, sorted output, query nesting, value labels, and macros. List price: *Sales Analysis* \$250, *Fixed Assets* \$295, *Job Costing* \$995, other modules \$595 each. Requirements: 256K, 10MB hard disk.

Computech Group Inc.
Lee Blvd.
Frazer, PA 19355
215/765-6666

Datawrite

A menu-driven accounting system in three parts, *Datawrite* includes Journalizing Data Entry, Client Set-Up, and Datawriter. Datawriter is a report writer that generates eight standard reports and also allows users to create their own reports with a definable chart of accounts. The program supports up to 99 cost divisions with separate year-ends and any number of journals. Two modules can be purchased separately and used with *Datawrite*: *Post Facto Payroll*, which integrates payroll into the general ledger, and *Fixed Asset Management and Depreciation and Amortization*. List price: *Datawrite* \$3495, *Post Facto Payroll* \$400, *Fixed Asset Management and Depreciation and Amortization* \$795. Re-

quirements: 256K, 10MB hard disk.
Accountants Microsystems Inc.
3633 136th Pl. SE
Bellevue, WA 98006
206/643-2050

PC-Fund

A menu-driven fund accounting system, *PC-Fund* is designed for local and state governments, school districts, universities, and nonprofit organizations. The program is written in COBOL and includes help text. Modules include General Ledger, Purchase Order/Encumbrance, Accounts Payable, Utility Billing/Accounts Receivable, Payroll/Personnel, Budget Forecasting, and Fixed Assets. The system supports up to 99 funds, 9999 departments, and 36 fiscal periods. All modules update directly to General Ledger. List price: \$7960. Requirements: 128K, 10MB hard disk.

American Fundware Inc.
P.O. Box 773028
Steamboat Springs, CO 80477
303/879-5770

HAI* Line

A comprehensive double-entry accounting package, *HAI* Line* has program options to change operations of its modules, which work separately or together. Programs allow variable tax rates, choice of costing methods in inventory, optional second reference on invoices, and optional posting descriptions. *HAI* Line* ages invoices by due date or invoice date, sorts items by product group, and prints accounts receivable reports with both name and address or name only. Transactions are not accepted into an application module until the program certifies their validity, and each transaction generates and keeps its own reference for audit control. Written in BASIC, the modules consist of *General Ledger*, *Accounts Receivable*, *Accounts Payable*, *Invoicing*, *Sales Analysis*, *Inventory*, *Manufacturing*, and *Filekeeper*. The *Filekeeper* module is a menu-driven manager available in several languages, including English, German, Dutch, Spanish, and French. Disk size determines the number of records a file can hold. During data entry users can control field types and sizes, minimum and maximum values in numeric fields, and date validation. Re-

ports can have control breaks, subtotals, totals, multiple lines per record, page numbers, and up to 132 characters per line. List price: complete *HAI* Line* package except *Manufacturing* \$2500, *Invoicing* \$395, *Filekeeper* \$195, other modules \$495 each. Requirements: 64K, *Filekeeper* 128K, two disk drives.
Holland Automation USA, Inc.
3400 W. MacArthur Blvd., Ste. D
Santa Ana, CA 92704
714/641-2844

Open Systems Accounting Software

Available in BASIC or RM/COBOL, *Open Systems Accounting Software* is a set of nine single- and multiuser accounting applications. The modules are *Accounts Payable*, *Accounts Receivable*, *Fixed Assets*, *General Ledger*, *Inventory*, *Job Cost*, *Purchase Order Processing*, *Sales Order Processing*, and *Payroll*. (*Sales Order Processing* requires the use of *Accounts Receivable*.) Designed for hard disk systems, the menu-driven programs can handle the books of over 60 companies. Users can select modules to be posted automatically to *General Ledger*. Each program provides on-screen error verification. A *Report Writer* module can reformat accounting data to DIF, SDI, SYLK, and ASCII formats for use by word processors, spreadsheets, and data management programs. List price: each module \$695. Requirements: 128K, 5MB hard disk.

Open Systems, Inc.
430 Oak Grove
Minneapolis, MN 55403
800/328-2276, 612/870-3515

"One-digit company I.D. numbers is my only complaint." Ed Vance, Lexington, North Carolina

"The accounting package helps to define the heartbeat of our corporation better. In the electrical construction industry it is very important to know that job cost is accurate." C. M. Doane, Lorain, Ohio

"Highly flexible and easy to use. The software is also well documented, and it comes with the source code, making this package one of the best." Dale E. Parris, Evansville, Indiana

Accounting Partner

An entry-level accounting package designed for businesses with sales of up to \$5 million, *The Accounting Partner* includes General Ledger, Accounts Payable/Purchasing, Accounts Receivable/Invoicing, and Payroll modules. General Ledger leaves complete audit trails and has automatic backup routines for up to ten checking accounts. Accounts Payable/Purchasing prints purchase orders, supports volume discounting, and ages vendor payables. Accounts Receivable/Invoicing prints invoices and customer statements, allows separate shipping locations, and supports volume discounting. Payroll calculates all required tax deductions and prints payroll checks for both hourly and salaried employees. List price: \$395. Requirements: 128K, two disk drives.

Star Software Systems
20600 Gramercy Pl.
Torrance, CA 90501
213/538-2511

Star Accounting System

A menu-driven general accounting system, *Star Accounting System* includes four basic modules. *General Ledger* features an unlimited number of charts of accounts and six journals for transaction entry. *Accounts Receivable With Invoicing* has open item accounts, credit memos, and payment registers by customer name or invoice and credit memo number. *Accounts Payable With Purchase Orders* provides departmental posting of invoice items received. It also supplies a purchase analysis by product for total monthly purchase amount and average monthly cost. *Payroll* allows 11 deduction categories per employee and IRA employee deduction plans. *Star Accounting System* works in conjunction with Star Software's *Legal Timekeeping and Billing* and *Property Management*. List price: each module \$495. Requirements: 64K, two disk drives.

Star Software Systems
20600 Gramercy Pl.
Torrance, CA 90501
213/538-2511

Desktop Accountant

An integrated package written in Microsoft BASIC, *Desktop Accountant* includes *General Ledger*, *Accounts Receivable*, *Accounts Payable*, and *Payroll*. The package produces 42 reports and features five aging periods for payables, payment by due or discount date, open item or balance forward billing, detailed audit trails, and user-maintainable federal and state tax tables. Source code is included. List price: \$495, each module \$250. Requirements: 64K, two disk drives.

Rocky Mountain Software Systems
1280C Newell Ave. #1292
Walnut Creek, CA 94596
415/680-8378

Dow Jones General Ledger

Offering a flexible chart of accounts, *Dow Jones General Ledger* lets you define and modify the structure of the chart, select appropriate accounts, and establish account ranges for assets, liabilities, capital, income, and expenses. The program automatically balances accounts. An automatic audit trail ensures that you can track summary account balances back to the originating transactions. *Dow Jones General Ledger* provides six journals: Sales, Cash Receipts, Purchases, Cash Disbursements, Payroll, and General. A "pencil and ink" mode permits easy error checking before printing and posting. List price: \$995. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Dow Jones and Co.
P.O. Box 300
Princeton, NJ 08540
609/452-2000 ext. 3611

Peachtree Business Accounting Software

A set of eight menu-driven programs that work together or separately, *Peachtree Business Accounting Software* consists of *General Ledger*, *Accounts Receivable*, *Accounts Payable*, *Inventory*, *Sales Invoicing*, *Job Cost System*, *Fixed Assets*, and *PeachPay Payroll*. Programs automatically post to *General Ledger* at the end of each accounting period. There are two levels of password protection, and forced entry balancing helps prevent out-of-balance er-

rors from being posted to master files. List price: each module \$595. Requirements: 128K, two disk drives.
Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
800/554-8900

Back to Basics Accounting System

Designed as an entry-level system for people with little or no accounting or computer experience, *Back to Basics Accounting System* consists of three interactive programs. Accounts Payable and Accounts Receivable post automatically to General Ledger. The system generates 30 reports, including mailing labels for vendors or customers. List price: \$295. PC requirements: 64K, two disk drives. PCjr requirements: 128K, two disk drives.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
800/554-8900

The MBA Accountant

In addition to general ledger, accounts payable, and accounts receivable modules, *The MBA Accountant* also includes a DWP (dBASE II, word processor, and programmer) interface or a *SuperCalc* interface. Features include automatic posting to the general ledger from subsidiary ledgers, automatic audit trail printing, automatic year-end closing, and flexible aging of payables. Additional modules include *Payroll With Check Writing*, *Inventory With Invoicing*, *Purchase Order/Requisition for Inventory*, *Fixed Asset Accounting*, and *Professional Time Accounting*. Also available are a *Multi-Company* program that allows multiple application data files to reside on one disk and a *Multi-User* program that provides file and record level lockout. List price: *The MBA Accountant* \$1495, *Payroll With Check Writing* \$595, *Inventory With Invoicing* \$595, *Purchase Order/Requisition for In-*

ventory \$395, *Fixed Asset Accounting* \$395, *Professional Time Accounting* \$495, *Multi-Company* option \$250, *Multi-User* option \$595, DWP options for other modules \$100. Requirements: with DOS 128K, two disk drives; with Concurrent CP/M-86 256K, two disk drives. Micro Business Applications, Inc.
12281 Nicollet Ave. S
Burnsville, MN 55337
800/622-5463

INCOME

An integrated accounting package, *INCOME (Integrated Company Management)* is suitable for retailers, wholesalers, and providers of services. It comprises *General Ledger*, *Accounts Receivable*, *Accounts Payable*, *Inventory*, *Purchasing*, and *Sales Order Entry* modules, each of which operates separately or with the others. Audit trails are maintained throughout. The program performs record and file locking under MP/M-86 and Concurrent DOS. List price: each module \$600. Requirements: 256K; hard disk; DOS 2.00 or later version, Concurrent DOS, or MP/M-86.
Microcomputer Consultants
P.O. Box 1377
Davis, CA 95617
800/824-5952, 916/756-8104 California

Micro-One-Write

A single-entry checkbook accounting system, *Micro-One-Write* is designed for error-checking data entry. An automatic audit trail and a bank reconciliation routine are included. The program allows 999 account codes with budgets, 99 departments, and 99 secondary files for charge cards or money market accounts. It prints checks and any combination of reports sorted by file, account code, department, or date. Reports can be exported to other programs, such as *dBASE II*, *1-2-3*, or *Symphony*. List price: \$95. Requirements: 256K, two disk drives.
William A. Permar
1125 Sunnyside Rd.
Oakland, CA 94610
800/443-0100

FCC General Ledger

A menu-driven accounting package, *FCC General Ledger* prepares month-by-month budgets, monthly audit trails, flexible balance sheets, and income statements. It handles repeating transactions and allows a 20-character comment on each transaction. List price: \$380. Requirements: 128K, one disk drive.
Fogle Computing Corp.
357 E. Blackstock Rd.
P.O. Box 5166
Spartanburg, SC 29304
803/574-4950

Business Management System

A set of applications that can be used separately or as an integrated package, *Business Management System* consists of *Accounts Receivable*, *Accounts Payable*, *General Ledger*, and *Payroll*. You can use the system in conjunction with Fisher Business Systems' *Industry Application Systems*. List price: \$1800, each module \$600. Requirements: 128K, two disk drives.
Fisher Business Systems
1010 Huntcliff
Atlanta, GA 30328
404/587-1717

Interactive Business System

An integrated accounting package, *Interactive Business System* is written in Microsoft BASIC. Accounts Receivable allows for sales commissions and includes order entry options with sales orders and point-of-sale invoicing. Accounts Payable includes check writing, automatic payments, cash requirements, and bank statement reconciliation. Inventory Control supports bill of materials and automatic purchase ordering. Payroll provides multiple pay status and pay period options and automatically calculates overtime and deductions. General Ledger features automatic posting from other modules. Fixed Assets calculates depreciation. The package comes with BASIC source code. List price: \$795. Requirements: 128K, one disk drive, DOS 2.00 or later version.
P.E.P. Engineering
3970 Syme Dr.
Carlsbad, CA 92008
619/434-6023

PC/Fixed Asset System

Although its main function is to automate accounting for the depreciation of fixed assets, *PC/Fixed Asset System* also keeps track of name of custodian, location, class, price, purchase date, investment tax credit, estimated life, disposal method, gain and loss, and other information. The program maintains three depreciation schedules for the IRS, internal bookkeeping, and state tax purposes. It includes seven depreciation methods and lets you customize nine additional methods. The system prints IRS Form 4562, provides inventory labels, and produces a variety of reports. You can sort assets by two categories and use seven criteria to select which assets to include in a report. List price: \$495. Requirements: 128K, one disk drive.
Best Programs
5134 Leesburg Pike
Alexandria, VA 22302
703/931-1300

Manufacturing Inventory Control Program

Designed for a variety of manufacturing applications, *Manufacturing Inventory Control Program* stores 2000 inventory items on a floppy disk or 20,000 items on a hard disk. The inventory file includes information such as part name, part number, reorder point, preferred inventory level, lead time, and cost. Reports include part use by part or equipment number. A purchase order file stores information such as date, vendor code, P.O. number, quantity ordered, quantity received, and due date. Reports include out-of-stock items and projections, excess inventory, and overdue items. List price: \$1995. Requirements: 256K, two disk drives, DOS 2.00 or later version.
UNIK Assoc.
12545 W. Burleigh
Brookfield, WI 53005
414/782-5030

Inventory Control

A stand-alone inventory system, *Inventory Control* controls stock status, reorder point, orders, receipts, and reconciliation of items. The item code can be up to 10 alphanumeric characters. The system does not perform FIFO or LIFO accounting, but it tracks inventory value based on the latest costs and list and sale prices. Included are programs to record purchases and sales. List price: \$125. Requirements: 64K, two disk drives.

Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Firm I, Little General, Bottom Line

The menu-driven general accounting programs that make up *Firm I* can be used separately or together. *Payroll* accommodates piecework and computes state, county, and city taxes, allowing for pre- and posttax deductions. *Little General* is a menu-driven economy version of *Firm I*. The programs can be used with *Bottom Line*, a billing and time management program for accountants that includes a report generator. List price: \$1980, *Payroll* \$495, other modules \$495 each, *Little General* \$195, *Bottom Line* \$995. Requirements: 64K, two disk drives.
American CompuSoft
23113 Plaza Pointe Dr.
Laguna Hills, CA 92653
714/472-8186

The Shoebox Accountant

In addition to accounting functions, *The Shoebox Accountant* provides budgeting, job costing, graphing, management reporting, and check writing. The system integrates general ledger, accounts receivable, accounts payable, and payroll functions. Reports include balance sheets and income statements in three styles, journals, funds flow and trial balance work-

sheets, charts of accounts, aging reports, invoices, and shipping labels. An autopilot job-queuing feature saves report formats. List price: \$395. Requirements: 320K, one disk drive.

CYMA Corp.
2160 E. Brown Rd.
Mesa, AZ 85203
602/835-8880

Bill of Materials

Designed for small companies, *Bill of Materials* handles parts, procurement, and costing. Starting with a list of parts for any given assembly, it adds assemblies together to create a purchase order. It also shows inventory use and shortage lists. The printout routine can mask prices and distributors or make a printout for each distributor. List price: \$285. Requirements: 128K, one disk drive.
Frontier Technologies Corp.
P.O. Box 11238
Milwaukee, WI 53211
414/964-8689

CYMA General Business

An integrated accounting system, *CYMA General Business* lets you define multiple formats for financial statements, graphing, management reporting, and check writing. *General Ledger* provides trial balance and funds flow worksheets, automatic generation of recurring entries, an out-of-balance warning, and ongoing display of batch, journal, and ledger totals. *Accounts Receivable* includes aging detail on receivables, maintains complete audit trails, calculates charges and discounts according to individual terms, and produces sales and finance charges reports as well as sales analysis by date, product line, and department. *Accounts Payable* shows variable aging of payables, reports when discounts or financial penalties may be incurred, and maintains broken check sequences and voided checks. *Payroll* lets you create tax tables for automatic calculations, supports up to 26 standard deductions or pay allowances, and prints labor analysis reports. Designed for small manufacturing or wholesale operations, the optional *Inventory System* module includes multilevel bills of materials, sales and purchase order entry, backorder

tracking, subassemblies, and finished goods in multiple locations. List price: \$2495, each module \$795. Requirements: 320K, one disk drive.

CYMA Corp.
2160 E. Brown Rd.
Mesa, AZ 85203
602/835-8880

Champion Business Accounting Software

An integrated accounting package written in dBASE II, *Champion Business Accounting Software* includes modules that operate alone or in combination with each other. The interactive modules feature simultaneous updating of all files when data is entered. The package has modules for general ledger and financial statements, accounts payable including purchase order, payroll, inventory, and accounts receivable including order entry and point of sale. Help screens let you ask questions without leaving the section in which you are working. The system features open months accounting, letting you keep a set of books open while activity for succeeding months is entered. A recover program restores the system in the event of power failures. List price: \$2975, each module \$595. Requirements: 128K, one disk drive.

Champion Software Corp.
17301 W. Colfax Ave. #250
Golden, CO 80401
303/278-8666

SBT Accounting Software Programs

The nine *SBT Accounting Software Programs* can be used individually or as an integrated system with dBASE II or dBASE III. *dLedger II* is a general ledger accounting system. *dAssets* maintains records of assets and calculates depreciation. *dPurchase II* and *dPayables II* provide a purchasing, inventory control, and accounts payable system. *dOrders II* generates, schedules, and maintains sales orders and order backlog reports. *dPayroll II* performs calculations for payroll and labor distribution by employee hours and

amounts, job number, and work type code. *dInvoice II* and *dStatements II* operate together to provide a billing, inventory, and accounts receivable system. *dProject* provides a budgeting and cost accounting tool for project and job cost management. List price: *dLedger II* \$395, *dAssets* \$195, *dPurchase II* \$195, *dPayables II* \$295, *dOrders II* \$195, *dPayroll II* \$395, *dInvoice II* \$195, *dStatements II* \$95, *dProject* \$345. Requirements: 64K, two disk drives, *dBASE II* or *dBASE III*. SBT Corp.
1140 Mountain View-Alviso Rd.
Sunnyvale, CA 94089
408/980-8880

Inventory Manager II

Designed for retailers and distributors, *Inventory Manager II* provides reports and analysis on stock sold, gross margins, current levels of inventory, listings by vendor, suggested orders, and purchase orders. The floppy disk version of the program can handle 8250 items, and the hard disk version, 9999 items. *Inventory Manager II* features extensive sorting capabilities. List price: floppy disk version \$199, hard disk version \$299. Requirements: 64K, one disk drive.
Satori Software
5507 Woodlawn Ave. N
Seattle, WA 98103
206/633-1469

Integrated Accounting

The *Integrated Accounting* package ties together accounts receivable, accounts payable, sales ordering, purchasing, receiving, inventory control, and sales analysis and reporting. In addition, the package works with additional Trac Line modules designed for retailers, wholesalers, and manufacturers. List price: \$1495. Requirements: 64K, 10MB hard disk.
Trac Line Software, Inc.
51 Alpha Plaza
Hicksville, NY 11801
516/935-7500

Inventory Service, Inventory Stockroom

A pair of menu-driven inventory control programs, *Inventory Service* and *Inventory Stockroom* use 10 alphanumeric digits to define stock numbers. *Inventory Service* is a general inventory program with a report writer. The program automatically invoices work in progress and prints invoices that include labor charges. *Inventory Stockroom* is a more specific inventory application that allocates inventory usage to departments for a corporate stockroom and allows billing to various departments. List price: each program \$1200. Requirements: 128K, hard disk.

Fogle Computing Corp.
P.O. Box 5166
Spartanburg, SC 29304
800/845-7594, 803/574-4950

dFeller Inventory

A business inventory program written in *dBASE II*, *dFeller Inventory* includes source code so that you can modify the program to fit your particular needs. The menu-driven program lets you locate items by inventory name or number. It keeps track of reorder points, vendors, average cost, and other information. List price: \$150. Requirements: 128K, two disk drives, *dBASE II*.
Feller Assoc.
550 CR PPA, Rt. 3
Ishpeming, MI 49849
906/486-6024

Point of Sales/Inventory Control

A menu-driven program, *Point of Sales/Inventory Control* provides point of sales, sales invoicing, inventory control, and management reports. The program can handle a maximum of 32,000 items and requires custom forms. List price: \$995. Requirements: 128K, two disk drives.
Intelligent Software Systems
P.O. Box 318
Montgomery, WV 25136
304/744-6403

CertiFLEX Accounting Programs

The nine CertiFLEX accounting programs were designed to be adaptable to most businesses. *General Ledger* handles up to 3000 transactions per month, prints balance sheets, and provides income statements. The program allows prior period adjustments and simplifies year-end closing by allowing blocks to remain open until accountant review is complete. *Payroll* handles up to 500 employees, supports any state's taxes, and includes up to ten nonstandard deductions per employee. *Fixed Assets* supports four depreciation methods, provides defaults by category for life and depreciation method, and calculates depreciation by asset and category. *Accounts Receivable* lets you print open-item or balance-forward statements at any time. The program prepares a monthly sales summary by salesperson and maintains a sales history for each customer. *Bill of Materials Inventory* suggests orders for quantities needed based on minimum on-hand amount.

Accounts Payable prints checks, provides a cash requirements report, and keeps a purchase history by vendor. *Order Entry* prints shipping orders for the warehouse, bills automatically on shipping, and keeps back orders by customer, order, or inventory item. *Inventory* handles up to 1500 stock items on a floppy disk or 30,000 on a hard disk. The module tracks sales and gross profit by item and category, prints count sheets and labels to assist in taking inventory, and costs inventory items by average or current cost methods. *Network Manager* lets you use CertiFLEX modules in a multi-user environment. List price: *Bill of Materials Inventory* \$849, *Network Manager* \$849, other modules \$549 each. Requirements: 256K, two disk drives, for *Order Entry* and *Network Manager* hard disk.
CertiFLEX Systems
2526 Manana Dr.
Dallas, TX 75220
214/350-6641

Infotory

A stand-alone inventory management system, *Infotory* incorporates a data management feature, Anyreport, that lets you monitor both inventory status and inventory flow by creating ad hoc reports to meet specific requirements. The system performs inventory management functions such as receiving, shipment, sales, reorder points, and various description and item identification functions. Depending on your hardware configuration, *Infotory* can track 5000 to 65,000 items. Point-of-sale and bar code reader systems that work with *Infotory* are available. List price: floppy disk version \$425, hard disk version \$575. Requirements: 64K, one disk drive.

SSR Corp.

1600 Lyell Ave.

Rochester, NY 14606

716/254-3200

The Business Library

A set of business management and accounting programs, *The Business Library* must be used with The Business Library Corporation's *Librarian* program, which sets up a password system. Accounting programs include a general ledger with profit-and-loss statements, financial statements, a check writer, and an income and expense summary; accounts receivable and payable; and a payroll system. Other programs include inventory control, sales order entry, purchase order tracking, and a word processor. List price: *Librarian* \$95, *General Ledger* \$695, *Accounts Receivable* \$695, *Accounts Payable* \$695, *Payroll* \$695, *Inventory Control* \$795, *Sales Order Entry* \$795, *Purchase Order Tracking* \$795, *Information Retrieval* \$395, *LetterWriter* \$395, *Business Letter Series* \$195, *Personal Tax Planner* \$350, *Business Analyzer* \$395, *Time Accounting/Project Tracking* \$895, *Retail Inventory* \$795, *Fixed Assets* \$695. Requirements: 192K, two disk drives, *Librarian*.

The Business Library Corp.

P.O. Box 9363

Walnut Creek, CA 94596

800/221-1985, 800/451-1973 California

Sensible Solution Management Series

The three accounting application programs in the *Sensible Solution Management Series* are written in O'Hanlon Computer Systems' *Sensible Solution*, a language designed specifically for business applications. The package features data base management and query facilities, a data dictionary, screen painting, automatic file maintenance, program generation, a source code editor that creates plain English commands, field masking and overlay fields, record and file locking, and a program trace debugger. A run-time version of the language is available for people who want to run *Sensible Solution* programs but do not wish to write or modify them.

General Accounting is an integrated general ledger, accounts receivable, and accounts payable system. It tracks up to five profit centers, provides a complete audit trail, and lets you design financial statements. *Payroll* and *Wholesale Distribution*, which includes inventory, sales order, and purchase order modules, can be integrated into *General Accounting*. Specialized modules are also available for lawyers, architects, and engineers. All application programs must be used with the *Sensible Solution* language or its run-time version. List price: *Sensible Solution* language for single user \$695, multiuser \$995; run-time module for single user \$200, multiuser \$350; *General Accounting* \$750; *Payroll* \$400; *Wholesale Distribution* \$750.

O'Hanlon Computer Systems, Inc.

11058 Main St. #225

Bellevue, WA 98004

206/454-2261

"Excellent, comprehensive accounting and management system. Source code is available to provide the exact solution. Data base inquiry provides simple means of generating additional reports. All reports can be seen on the screen, complete." Peter Sattin, New York, New York

Product Invoicing

A program that creates invoices for materials billing, *Product Invoicing* also tracks inventory. The program keeps an item file of quantity sold, cost, list price, and discount price as sales are recorded and invoices generated. A stock status report compiles inventory on hand and alerts the user when reordering of stock is necessary. A sales-by-customer report shows the total dollar amount of business for each customer at a given time. List price: \$195. Requirements: 64K, two disk drives.

Data*Easy Software

Data Consulting Group

12 Skylark Dr. #18

Larkspur, CA 94939

415/927-0990

Time & Materials Billing, Work & Time Billing, PC Time Accounting

A client billing program, *Time & Materials Billing* lets you store up to 120 characters of text on each client. Billing rates are part of the text record, but they can be overridden by an authorized operator. The program reports billing records in client-code order or by the employee who performed the work. Invoices can be generated by individual client, by class of client, or for all clients. Other features include credit limits, employee commissions, and four tax rates.

Work & Time Billing has the same features but lets you enter data into a work-in-progress file before the data is applied for invoicing. *PC Time Accounting* has all the features of *Work & Time Billing* with an integrated receivables function for receipt of cash and aged receivables. Also included are statements, delinquency notices, and a report by reference number to provide general ledger totals. List price: *Time & Materials Billing* \$195, *Work & Time Billing* \$245, *PC Time Accounting* \$295. Requirements: *Time & Materials Billing* and *Work & Time Billing* 64K, two disk drives; *PC Time Accounting* 128K, two disk drives.

Data*Easy Software

Data Consulting Group

12 Skylark Dr. #18

Larkspur, CA 94939

415/927-0990

File Clerk * General Ledger, File Clerk * Inventory Control

A customizable accounting program, *File Clerk * General Ledger* lets you define the number of periods in the fiscal year, account number ranges, and financial report formats. You can specify which accounts will have previous year and budget information maintained for comparisons on income statements. You can run financial reports and trial balances at any time for any period of the year.

*File Clerk * Inventory Control* is an accounts receivable, customer mailing, point-of-sale, order entry, and bill of materials system. You can select average or standard costing, and the program maintains prices for wholesale and retail customers. Items can be placed on sale for both customer types. Reports include inventory cost, status, and items for reorder. The system prints invoices and a day-end sales register. List price: each program \$395. Requirements: 128K, two disk drives.

Landrum Software, Inc.
P.O. Box 842
Palm City, FL 33490
305/286-1324

Mr. QuarterMaster, Mr. QuarterMaster Jr.

An inventory system for consumable stock items, *Mr. QuarterMaster* updates receipts and issues, maintains files, prints labels, and lists inventory, usage, and items to reorder. Each file can have up to 32,766 stock items. Maximum, minimum, and reorder levels can be updated automatically at intervals of six months or longer, based on usage and delivery time. *Mr. QuarterMaster Jr.* is a similar inventory system for nonconsumable stock items. List price: *Mr. QuarterMaster* \$120 (with enhanced sort \$140), *Mr. QuarterMaster Jr.* \$55. Requirements: 64K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

Junior Ledger

An entry-level accounting system for small businesses, *Junior Ledger* creates files that are upwardly compatible with Lake Avenue Software's more expensive package, *The Assistant Controller*. The package provides general ledger and financial reporting functions in a stand-alone program. *Junior Ledger* is written in dBASE II. List price: \$195. Requirements: 96K, two disk drives.

Lake Avenue Software
77 N. Oak Knoll #105
Pasadena, CA 91101
818/792-1844

Medallion

Each program in the *Medallion* series can operate alone or with the other programs. *General Ledger* features real-time or batch processing and a complete audit trail. Reports include income statements, changes in financial position, account and department balance sheets, and financial statements. *Accounts Payable* has six invoice selection categories, eight built-in reports, and optional reports such as vendor credit terms and purchase information. *Accounts Receivable* lets you create reports with customer credit information such as current balance, previous period balance, last payment date and amount, finance charges, discounts, and credit limit. It also features six built-in reports. *Payroll* includes tip credit calculations and accumulations, allows for multiple checks per employee, and generates eight standard reports. The tax file covers 50 states and some cities. *Inventory* features five costing methods and up to four prices for each stock item and has on-line stock inquiry. Among the 12 built-in and optional reports are a physical count worksheet, vendor list, product price list, and stock valuation. List price: each module \$690. Requirements: 192K, two disk drives.

Timberline Software
7180 S.W. Fir Loop
Portland, OR 97223
503/644-8155

PeachPak 4

Peachtree Software's mid-level accounting system, *PeachPak 4*, is designed for small businesses with limited computer capacity. It consists of General Ledger, Accounts Receivable, and Accounts Payable. General Ledger, the center of the system, allows up to 99 departments and features nine reports. Accounts Receivable prints invoices, statements, and aging reports and maintains customer account information and sales taxes. Accounts Payable maintains a complete file for each vendor and helps determine which invoices should be paid, subject to your criteria. List price: \$395. Requirements: 64K, two disk drives.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
800/554-8900

SOLVation Manager Programs

The hub of SOLVation's set of accounting programs is *The General Ledger Manager*. It automatically picks up input from the three other modules and lets you create customized reports. *The Payroll Manager* allows eight earning types and eight miscellaneous deductions and calculates all federal, state, and local taxes. Reports include a labor distribution listing of employees by job and department and a gross earnings report showing rates, units, gross, and pay date for each employee. *The Receivables Manager* maintains an extensive customer file, allows open-item format, automatically ages receivables, and produces registers listing such information as credit memos, transactions, and miscellaneous adjustments. *The Accounts Payable Manager* lets you define 20 credit terms, maintains an extensive vendor file including information such as trade discount and sales tax rate, and provides vendor analysis reports comparing current and previous years. List price: *The General Ledger Manager* \$695, other modules \$595 each. Requirements: 128K, two disk drives.

SOLVation Inc.
150 Flanders Rd.
Westborough, MA 01581
617/366-6621

Master Ledger

A menu-driven general ledger, *Master Ledger* features three-level password security and a definable chart of accounts. Reports include general ledger, subledger, and sub-subledger listings. A report writer option lets you produce custom financial statements. List price: \$570. Requirements: 96K, one disk drive. Micro Masters Software Ltd. P.O. Box 513 Edmonton, Alberta T5J 2K1 Canada 403/423-3509

EasyBusiness Systems

The six integrated modules in *EasyBusiness Systems* work as stand-alone programs or as a file-sharing system with other modules. *General Ledger* prepares monthly, quarterly, semiannual, yearly, and year-to-date statements; stores historical data and budget projections; and prints reports with calculations, text, and headings. Performance by department, account, or period can be compared, and year-end closings are prepared automatically. *Accounts Receivable* provides open-item, balance-forward, and mixed posting; offers flexible trial balance aging options; posts interest and recurring charges; and flags credit limit violations. The program prints customized statements, collection letters, promotional letters, and labels. *Accounts Payable* preserves unpaid balance detail with open-item posting, reports on business by individual supplier, and prints checks, payment letters, and aged cash requirements reports.

Payroll prints payroll check registers, hours and earnings registers, distribution ledgers, checks, and required government forms. The program handles multiple earnings sources, deductions, and taxes. All data is protected by a password security system. *Inventory Control* handles up to 20,000 items in up to 999 groups, reports on sales and costs of sales for any period, and prints price lists, bin and shelf labels, and margin, mark-up, and sales analyses. *Order Entry* prepares reports on

sales and sales margins and prints invoices and price lists. List price: *Payroll* \$795, other modules \$595 each. Requirements: 64K, two disk drives, C compiler. Sorcim/IUS Micro Software 2195 Fortune Dr. San Jose, CA 95131 408/942-1727

Attaché Accounting Software

An integrated business accounting series, *Attaché Accounting Software* consists of *Accounts Receivable*, *Accounts Payable*, *General Ledger*, *Invoicing/Sales Analysis*, *Inventory*, and *Payroll*, available separately or bundled. Also included is *Attaché Passport*, which allows data transfer to and from other programs. List price: *Invoicing/Sales Analysis* \$395, other modules \$595 each, *Business Pack I (Accounts Receivable, Inventory, Invoicing/Sales Analysis)* \$1425, *Business Pack II (Accounts Payable, General Ledger)* \$1095. Requirements: 128K, two disk drives, DOS 2.00 or later version. Attaché Software Inc. 4251 Plymouth Rd. Ann Arbor, MI 48105 313/663-1166

MISys Manufacturing Inventory System

Geared to the needs of small- to medium-size manufacturing firms, *MISys Manufacturing Inventory System* provides inventory control capabilities, multilevel bills of materials, and an integrated purchase order processing system. The program produces over 40 management information reports. Designed to be operationally compatible with the *EasyBusiness* family of software from Sorcim/IUS Micro Software, *MISys* integrates directly with the *EasyFiler* data base management system. *MISys* features item, assembly, and vendor maintenance; material transfer; physical inventory; purchase orders; stock, bill of material, purchase order, and vendor reports; and journal listings. List price: \$995. Requirements: 128K, hard disk, DOS 2.00 or later version.

Microcomputer Specialists, Inc. 18 Lyman St. Westboro, MA 01581 800/833-1500, 617/366-1200

The Assistant Controller, Multi Entity

A set of seven accounting programs, *The Assistant Controller* includes *General Ledger*, *Financial Reporting*, *Payroll*, *Professional Time & Invoicing*, *Accounts Payable*, *Accounts Receivable*, and *Job Costing*. Source code is available for each of the programs. *Multi Entity* contains the same features but is designed for larger businesses and those with client write-up needs. It extends the capabilities of *The Assistant Controller*, handling up to 1000 businesses with 1000 departments each. List price: each *Assistant Controller* module \$475, each *Multi Entity* module \$675. Requirements: 96K, one disk drive.

Lake Avenue Software 77 N. Oak Knoll #105 Pasadena, CA 91101 818/792-1844

ADS Accounting Packages

The accounting packages produced by ADS are designed to replace manual "one-write" systems or bookkeeping machines. The five basic modules are *General Ledger*, *Accounts Payable*, *Accounts Receivable*, *Inventory*, and *Payroll*. *Accounts Payable* must be used with *General Ledger*. *Accounts Receivable* and *Payroll* can be used in conjunction with *General Ledger* or as stand-alone programs. *Inventory* is a stand-alone package.

ADS also offers two combination packages, *Accounts Receivable With Invoicing* and *Invoicing and Accounts Receivable and Inventory*. Both feature optional integration with *General Ledger*. Another package in the ADS line of accounting software is *Res/Com Services*, a general ledger and accounts receivable system designed for businesses whose principal source of revenue is contract services performed at regular intervals with fixed and repetitive fees. List price: each basic module \$485, *Accounts Receivable With Invoicing* \$585, *Invoicing and Accounts Receivable and Inventory* \$995, *Res/Com Services* \$995. Requirements: 128K, two disk drives.

ADS Software, Inc. P.O. Box 13686 Roanoke, VA 24036 703/344-6818

Periodic Inventory/Sales

A comprehensive system for retailers, wholesalers, and others using the periodic accounting method, *Periodic Inventory/Sales* is also suitable for control of parts and supplies. The program lets you set fiscal periods and years, performs period and year-end close-off, maintains generations of data files, and has two passwords. It includes backup and restore utilities. Files are key indexed with no record limit. List price: \$495. Requirements: 128K, two disk drives. Pidata Computer Systems
4312 Ontario St.
Vancouver, British Columbia
V5V 3G9 Canada
604/876-3145

2001

A special hardware enhancement accompanies the 2001 integrated accounting package. This Accounting Computer contains a central processing unit with 64K RAM and fits in one of the expansion slots of the PC. The enhancement creates a multitasking environment similar to a minicomputer, significantly increasing the speed of the 2001 software. The software includes integrated modules for invoicing, accounts receivable, inventory, accounts payable, payroll, general ledger, and job costing. It also features an on-line instruction manual. List price: Accounting Computer and one module \$795, each additional module \$595, entire package \$3995. Requirements: 256K, two disk drives, DOS 2.00 or later version. Financial Information Systems, Inc.
411 Industrial Dr. #107
Richardson, TX 75081
800/527-4681, 214/680-8696

ICS Accounting Packages

Six accounting programs are available from ICS (International Computer Shop). *Bookkeeping System* keeps a general ledger, does accounts payable, and produces a variety of reports. *Accounts Receivable* tracks customer balances and provides reports to aid open balance collection. *Inventory Control System* manipulates and provides statistics on inventory

records. *Invoicing System* creates invoices from sales receipts and work orders and prints back orders. *Sales Analysis System* provides current information on sales by customer and by item and on work orders. *Order Entry System* processes orders and provides information such as back orders, order cancellations, and shipping information. List price: each program \$99.95. Requirements: 192K, two disk drives.

International Computer Shop
218-81 Hempstead Ave.
Queens Village, NY 11429
212/776-5264

General Accounting

A general ledger with basic balance forward systems of accounts receivable, accounts payable, and payroll on one disk, *General Accounting* formats customized checks and prints statements with customer aging. It also calculates employee FICA and FIT automatically. The program performs double-entry bookkeeping from a single-sided entry and provides comprehensive audit trails. List price: \$595. Requirements: 128K, two disk drives.

Prentice-Hall
Englewood Cliffs, NJ 07632
201/592-2000

Micro Payroll

A payroll system for up to 5000 employees, *Micro Payroll* offers up to 199 deduction types per employee. It calculates hourly and fixed wages, commissions, nontaxable reimbursements, piece work, and eight overtime rates. You can customize tax and deduction tables. The program generates W-2s and 941-A quarterly summaries as well as detailed listings and summaries of all pay and withholding taxes from any start date to any stop date. List price: \$199.95. Requirements: 128K, one disk drive, DOS 2.00 or later version. Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

MicroA/P, MicroA/R, Micronetics G/L-Master

The three modules in Alternative Software's accounting series work separately or together. *MicroA/P*, an accounts payable system, handles 3000 active bills pending. The menu-driven program uses standard NEBS checks and produces reports and cash flow projections. It handles scheduled payments such as mortgages, rent, loans, one-time payments, late charges, deferred payments, and discounts. For billing and accounts receivable, *MicroA/R* accommodates 1500 active client or customer accounts, using several billing formats including NEBS standard window bills. The program features direct transaction posting and deleting, full aging sheets with selectable time intervals, automatic recurring services, bill posting and automatic late-payment posting. Both *MicroA/P* and *MicroA/R* can be used with Alternative Software's *Mass Mailer* to produce mailing lists and labels.

Micronetics G/L-Master is a general ledger system that allows up to 98 subsidiary divisions for departments. It can produce both separate and consolidated general ledger trial balances, balance sheets, and income statements. It allows for up to 90 supporting schedules, such as 1040 or 1120 forms. List price: *MicroA/P* \$199.95, *MicroA/R* \$349.95, *Micronetics G/L-Master* \$695. Requirements: 128K, one disk drive (hard disk recommended for *MicroA/R*), DOS 2.00 or later version. Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

Account Payables

Detailed cash requirements, forecasting, immediate calculation of vendor discounts, and fast disbursement of repetitive payments are provided by *Account Payables*. The program maintains a file for each vendor, including information on the account's status for the year, terms, and a vendor profile. List price: \$695. Requirements: 128K, two disk drives. Prentice-Hall
Englewood Cliffs, NJ 07632
201/592-2000

Client Master

A multiclient, multicompany general ledger, *Client Master* lets accountants set up charts of accounts, balance sheets, and income statements. The program supports eight journals and posts prior-period transactions, automatically correcting reports and related entries month by month. *Client Master* can receive data directly from Alternative Software's *Micronetics G/L-Master*. List price: \$995. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

Versa Business Series

Designed for the small-business owner, the *Versa Business* series is an integrated accounting system composed of *Versa Ledger II*, *Versa Receivables*, *Versa Payables*, *Versa Payroll*, and *Versa Inventory*. *Versa Ledger II* is both a check register and a general ledger. It allows you to design charts of accounts, accounting systems, income statements, and balance sheets. The program sorts accounts to particular departments. *Versa Receivables* prints invoices and keeps invoice totals in a separate file. It reports transactions, including debits and credits with balances, and accommodates handwritten invoices. *Versa Payables* is a basic payables system that prints checks. *Versa Payroll* also prints checks and calculates tax and employee deductions. *Versa Inventory* writes invoices and automatically deducts items from the inventory data base. It prints period-to-date and year-to-date reports as well as an inventory price list with up to 32,000 items on a 10MB hard disk or 2000 items on a floppy disk. List price: *Versa Ledger II* \$149.95, other programs \$99.95 each. Requirements: 64K, two disk drives.

H & E Computronics, Inc.
50 N. Pascack Rd.
Spring Valley, NY 10977
914/425-1535

Thoroughbred Business Software

The seven accounting programs in the *Thoroughbred Business Software* package are *Accounts Payable*, *Accounts Receivable*, *Fixed Assets*, *Purchase Order*, *Payroll*, *Order Processing*, and *General Ledger*. All the modules work with *General Ledger*, except *Purchase Order*, which works with *Accounts Payable*. The programs come with source code and can be modified using SMC's BASIC interpreter. Multiuser versions of the programs are available and require SMC's multiuser operating system. List price: *General Ledger* \$395, *Purchase Order* \$395, other modules \$595 each, SMC BASIC \$395, *Thoroughbred/OS* multiuser BASIC operating system \$795. Requirements: 128K (256K for multiuser version), DOS 2.00 or later version, 10MB hard disk.

SMC Software Systems
1011 Rt. 22
Bridgewater, NJ 08807
800/526-3968, 201/685-9000

Dow Jones Software Accounting Series

For small businesses the *Dow Jones Software Accounting Series* is an integrated family of accounting programs. All programs in the series feature menus, text editors, prompts, error checking, numeric entry options, and an automatic audit trail. "What if" calculations let you create preliminary entries and statements without permanently altering the data. The series is integrated, so that information from accounts receivable or accounts payable is recorded in the general ledger. The general ledger module has a flexible chart of accounts that allows different chart types. Both the accounts payable and the accounts receivable programs can sort by up to 37 criteria and select an account that is the closest match to the information provided. Inventory, management analysis, sales order entry, and purchase order entry modules are also available. List price: each module \$1000. Requirements: 128K, hard disk.

Dow Jones Software
P.O. Box 300
Princeton, NJ 08540
800/257-5114

Time Accountant

A time-keeping and invoicing system, *Time Accountant* is for professional firms that bill clients by the hour. With menus and help messages, users construct a coded data base that can be sorted by client, billing period, or worker. The system handles billing cycles and accounting periods of any length and accepts codes of up to 10 characters for clients or projects. It has a billing preview feature for testing adjustments to rates and hours. *Time Accountant* stores reports and invoices as ASCII files that can be transferred to other applications. List price: \$495. Requirements: 128K, two disk drives.

Time Accountant
636 Waverly St.
Palo Alto, CA 94301
415/328-7877

Accounting Pearl

An integrated accounting package of five modules, *Accounting Pearl* lets data in one module reference data in any other module. The general ledger module automatically enters recurring expenses and compiles updated reports. The accounts payable module prepares checks and forecasts cash requirements for set dates. Accounts receivable processes invoices, receipts, and delinquency reports and determines interest on past due invoices. With a choice of two pay methods, the payroll module calculates overtime, sick leave, and vacation. Inventory produces reports on reordering needs, stock status, sales by item or by product class, and history by item or type. *Accounting Pearl* can be used with the *Personal Pearl* data base and other applications such as *WordStar* and *SuperCalc*. List price: \$895. Requirements: 128K, two disk drives.

Relational Systems International Corp.
Pearlsoft Division
P.O. Box 638
Wilsonville, OR 97070
503/682-3636

One-Write Plus

Based on the popular "one write" book-keeping concept, *One-Write Plus* is a complete accounting system, designed by CPAs. The program produces over a dozen management and accounting reports. List price: \$395. Requirements: 128K, two disk drives. Evergreen Software
Rt. 202N, WGE Bldg.
Peterborough, NH 03458
603/924-9261

focus:ABC

Accountants, bookkeepers, and controllers can use *focus:ABC* when auditing accounts. Used with 1-2-3, the program creates its own menus and work papers within the 1-2-3 spreadsheet. You can record reclassifications and tax adjustments, summarize and consolidate trial balances, and perform analytical reviews. With *focus:ABC* you can graph a five-year comparative ratio analysis. Data can be translated to and from other programs such as *Multimate* and *dBASE II*. List price: \$950. Requirements: 256K; two disk drives; 1-2-3, version 1A. Hemming Morse, Inc.
1700 S. El Camino Real #320
San Mateo, CA 94402
415/574-1900

General Ledger

Designed for owners of small businesses and professionals with limited accounting skills, *General Ledger* automatically determines debits and credits for transactions and prevents out-of-balance conditions. The Fixed-Asset Management subsystem is included for calculating equipment depreciation and project depreciation by month. *General Ledger* also produces a 12-month graphics analysis of income and expense accounts and prints loan amortization schedules. List price: \$385. Requirements: 128K, two disk drives. Eagle Enterprises
2375 Bush St.
San Francisco, CA 94115
415/346-1249

The Professional

Designed for professionals who bill their time to client accounts, *The Professional* tracks the amount of time spent on projects and keeps records of expenses. It works with the *Firm* accounting package. Other programs are available that perform similar functions for membership organizations, churches, and clubs (*Members Only*), service companies (*Service Billing*), and firms that bill by units such as the ton or the mile (*Convoy*). List price: \$995. Requirements: 64K, two disk drives, *Firm*. American CompuSoft
23113 Plaza Pointe Dr.
Laguna Hills, CA 92653
714/472-8186

Timelog

Designed for professionals such as attorneys, accountants, and others who bill for time and services, *Timelog* is a timekeeping and billing system. Users enter a client identifier (name or number), the initials of the professional providing the service, the number of hours it took, the rate, the date, and a 128-character description of the charge. This and other billing information is then used to produce bills, aged accounts receivables, client and category totals, and other management reports. *Timelog* is menu-driven and requires no codes for inputting data. It is designed to handle up to 15 professionals per office. List price: \$550. Requirements: 256K, two disk drives. Gavel Computing Systems, Inc.
Rt. 2, Box 466
Alachua, FL 32615
904/462-4564

Financier II

An accounting package designed for home, small-business, or departmental financial management and record keeping, *Financier II* produces a variety of reports, including definable reports and detailed financial statements. *Financier II* tracks financial transactions, prints graphics, writes and addresses checks, tracks inventory, reconciles all types of money accounts, and organizes tax records. The

program works with the *Financier Tax Series* to provide tax planning analysis. All reports from *Financier II* can be accessed by 1-2-3. List price: \$195. Requirements: 192K, two disk drives. Financier, Inc.
2000 W. Park Ave.
Westboro, MA 01581
617/366-0950

Auto-Ledger

A menu-driven general ledger package for small businesses, *Auto-Ledger* includes on-screen help and two modes of data entry. You can enter transaction accounts one at a time for quick transaction splitting or in double-account form for foolproof account balances. The program also features customizable reports, on-disk audit trails, displays of cash account balances, and automatic posting and closing. The program processes up to 400 accounts. List price: \$295. Requirements: 96K, one disk drive. Emerald Software Inc.
2416 Warren Ave. N
Seattle, WA 98109
206/282-2100

Client Manager

A complete general ledger system, *Client Manager* lets you record transactions into journals, post the journals to the general ledger, produce financial statements, and close the books for a period or a fiscal year. The program helps automate the paperwork functions of accountants, bookkeepers, or small businesses. It maintains historical and budget data, including after-the-fact payroll posting, fixed asset accounting, and bank account reconciliation. *Client Manager* generates amortization schedules and includes a report writer that acts like a word processor to allow you to write detailed reports and notes. List price: approximately \$1800. Requirements: 64K, two disk drives. Systems Plus Inc.
1120 San Antonio Rd.
Palo Alto, CA 94303
800/222-7701, 800/222-7707 California,
415/969-7047

RealWorld Integrated Accounting Software

The programs that make up *RealWorld Integrated Accounting Software* can function independently or as an integrated system. *General Ledger* is designed for small businesses and offers flexibility in financial statement formatting. *Accounts Receivable* handles both open item and balance forward customers. *Accounts Payable* uses the accrual method for handling payables. *Payroll* is an hourly and salary payroll system that can be modified to reflect changes in tax laws. *Inventory Control* can handle multiple warehouses. It prints a number of reports, including a physical count worksheet. *Order Entry/Billing* runs with the *Accounts Receivable* and *Inventory Control* programs, providing one-step and two-step billing procedures. *Sales Analysis* locates specific areas of increasing or decreasing sales and includes reports by customer name, customer type, customer sales volume, salesperson, state, item, item category, or item sales volume. *LedgerLink* loads information from *General Ledger* directly into *VisiCalc*, *Multiplan*, or 1-2-3 spreadsheets. List price: each module \$695. Requirements: 128K, two disk drives. RealWorld Corp.
Dover Rd., Willow Hill Bldg.
Chichester, NH 03263
800/255-1115

Excalibur Plus

An integrated series of 12 multiuser, multitasking accounting modules, *Excalibur Plus* operates on UNIX, XENIX, and most networks. The programs can use information from 1-2-3, *Symphony*, *dBASE II*, and *Framework*. Each program offers password protection and record locking. List price: *General Ledger*, *Accounts Receivable*, *Inventory*, *Order Entry*, *Accounts Payable*, *Payroll*, *Counter Sales*, *Work in Progress*, *Billing*, *Purchase Orders* \$695 each; *Customer Information*, *Depreciation* \$395 each. Requirements: 128K, 5MB hard disk.
Armor Systems Inc.
324 N. Orlando Ave.
Maitland, FL 32751
305/629-0753

Myte Myke

Derived from mainframe business software, the *Myte Myke* accounting programs are designed for both small businesses and major corporations with multiple departments and sites. The accounting modules integrated in the system are *Accounts Payable*, *Accounts Receivable*, *General Ledger*, *Purchase Order Processing*, *Order Entry/Billing*, and *Inventory Control*. Other *Myte Myke* programs are available for specific manufacturers.

The series also includes a professional time and analysis system, *Protime*, as well as a sales history data base and report generator, *Comparative Sales Report Writer*. List price: *Accounts Payable* \$600, *Accounts Receivable* \$600, *General Ledger* \$1000, *Purchase Order Processing* \$800, *Order Entry/Billing* \$1400, *Inventory Control* \$600, *Protime* \$1500, *Comparative Sales Report Writer* \$600. Requirements: 128K, one disk drive, hard disk.

MDS Assoc., Inc.
3885 N. Buffalo Rd.
P.O. Box 108
Orchard Park, NY 14127
716/662-6611

SolidCosts Job Cost Accounting

For contractors, manufacturers, or other businesses, *SolidCosts Job Cost Accounting* figures costs by job. The program consists of two modules: *Job Cost Payroll*, which figures labor costs, and *Job Cost Accounting*, which adds up material, subcontractor, and overhead costs. The program also analyzes the profitability of each job. The accounting files act as a set of subsidiary ledger files that can be integrated into the Solid Software general ledger program or accounts payable program. List price: \$1495. Requirements: 64K, hard disk.

Solid Software, Inc.
2625 Cumberland Pkwy. #250
Atlanta, GA 30339
404/433-0823

Job Cost Labor and Materials Application Template

Data entry screen forms, output forms, and reports from the *Job Cost Labor and Materials Application Template* record, track, and report job costs by labor and materials. The program handles estimating, job costs, time cards, labor accounting, and work-order tracking. The template, used in conjunction with *Versaform* (the company's forms-oriented data base), checks data entries for accuracy. It calculates labor costs based on hours, rates, and overtime multipliers. You can modify the template. List price: \$79.95. Requirements: 128K, two disk drives, *Versaform 1.10* or later version.

Applied Software Technology
170 Knowles Dr.
Los Gatos, CA 95030
408/370-2662

Job Cost System

The accounting program *Job Cost System* is for small companies that provide products or services. Construction companies, landscape architects, or print shops can track actual versus estimated costs of every job on two levels of detail. Costs for labor, equipment, materials, subcontractors, and overhead expenses can be entered as they occur. Reports let you compare estimates with actual costs for specific tasks, identify the most profitable tasks and jobs, pinpoint unprofitable areas, and track the progress of particular jobs. *Job Cost System* verifies that estimates and cost transactions have been entered correctly. List price: \$595. Requirements: 128K, two disk drives.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

Ledgermaster

Designed for CPAs and bookkeeping services, *Ledgermaster* is a client write-up system that helps keep books and prepare financial statements. At data entry, *Ledgermaster* displays account descriptions, employee names, and tested and adjusted FICA amounts. Other features include true division reporting, automatic project and job cost accounting, and prior period adjustments with automatic file updates. List price: \$1250. Requirements: 128K, two disk drives.

Executive Data Systems, Inc.
1845 The Exchange #140
Atlanta, GA 30339
404/955-3374

TCS Total Accounting System, TCS Client Ledger System

A series of programs with built-in data base managers, the *TCS Total Accounting System* works on individual PCs or on a 3Com local area network (LAN). Accounting modules cover the ledger, receivables, payables, payroll, inventory, materials, assets, and sales. *Q*WORD* and *Q*LABEL* add word processing and mailing abilities to the system. *Q*NET* governs the system's operations on a LAN.

The *TCS Client Ledger System* is a client write-up system with passive payroll, definable profit and loss statements, and ledger consolidation of up to 10 companies. The program handles up to 99 departments per ledger, with three levels of departmental summaries. Features include a subledger for work in progress, batch processing of reports, and over 50 report and tax forms. The *TCS Client Ledger System* works with the core modules of the *TCS Total Accounting System*. List price: *TCS Total Accounting System* each module \$600 to \$900, *Q*WORD* and *Q*LABEL* \$300 to \$450, *Q*NET* \$800 to \$1000; *TCS Client Ledger System* \$1600 to \$2000. Requirements: 128K, two disk drives.

TCS Software, Inc.
6100 Hillcroft #600
Houston, TX 77081
713/771-6000

Most project managers want just 3 little things from their software:

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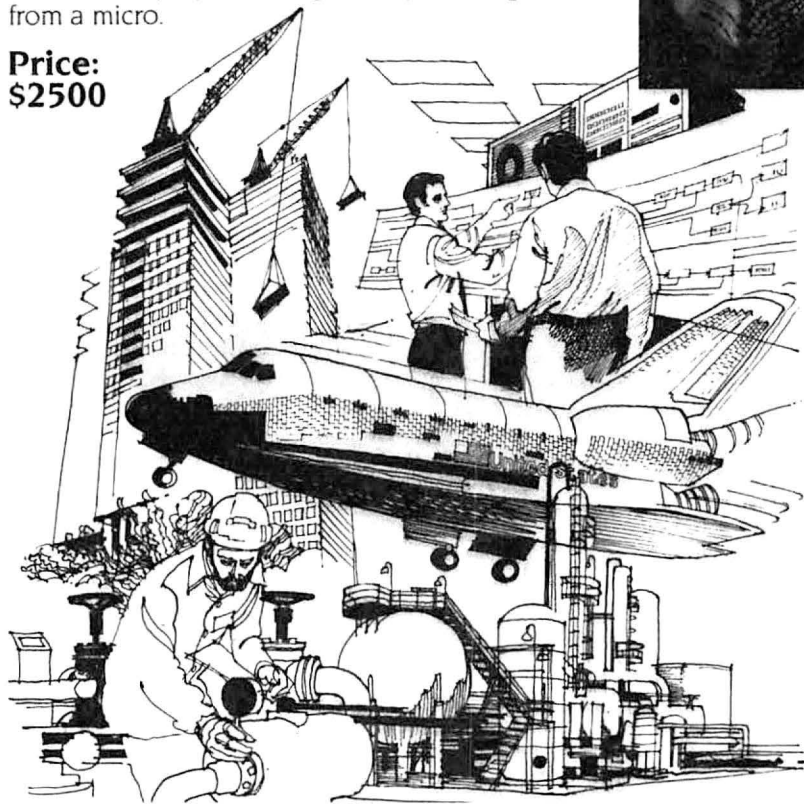
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Company _____

Address _____

City _____ State _____ Zip _____ Phone _____

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Business Management

Project Management

A business graphics program, *Project Management* displays the progress of a multitask project on a day-by-day basis. Up to seven tasks can be displayed on screen simultaneously. The monitor shows the length of each task, whether it is in progress or proposed, and who is responsible for it. The program keeps track of projects scheduled to last as long as two years. Up to ten weeks of project information can be shown at once. List price: \$50. Requirements: 64K, one disk drive. Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Confidence Factor

An integrated decision-making package, *Confidence Factor* offers decision tree, risk simulation, decision matrix, and qualitative analyses. The program uses standard ASCII files so that data can be shared with other programs. Sample applications are included. List price: \$389. Requirements: 128K, one disk drive (two recommended). Simple Software, Inc.
2 Pinewood
Irvine, CA 92714
714/857-9179

Quality Control Manager

Designed to help with quality control when purchasing raw materials, monitoring finished products, and controlling production processes, *Quality Control Manager* provides storage and retrieval of information on each lot of raw material and finished product. Data can be analyzed in tables, by statistical summaries, or by pairwise plots or regressions. Control chart items and lots can be characterized by a sample size of up to 20 values. The size of the data base is limited only by disk capacity, and data files are compatible with 1-2-3. List price: base system \$4000, expanded system with added modules priced separately up to \$6000 total. Requirements: 256K, two disk drives. Least Cost Formulations, Ltd.
1685 Chevron Way
Atlanta, GA 30338
404/394-8125

Time and Travel Reporter

Designed for companies with fewer than 100 employees, *Time and Travel Reporter* tracks time and travel expenses and produces reports. Individuals or groups turn in disks rather than time cards. The program verifies employees' reports. Management has access to the master file for summaries of all reports or for analyses by group or by individual. The program checks fields against specified limits and accommodates nine different travel policies. List price: \$175. Requirements: 64K, one disk drive, dBASE II. ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

PMS-II

A project management system and critical path network analyzer, *PMS-II* is designed for construction management, engineering and planning, research and development, manufacturing, government subcontracting, and education. *PMS-II* uses the activity-on-arc method to calculate critical paths. The program's budgeting features include a funding chart for comparing actual and budgeted expenses, and an earned value analysis, which cal-

culates the total cost of certain tasks based on their cost to date. *PMS-II* provides reports on each subcontractor for the time between any two dates. List price: \$1295. Requirements: 128K, two disk drives (hard disk recommended), DOS 2.00 or later version. AHA, Inc.
P.O. Box 8405
Santa Cruz, CA 95061-8405
408/458-9119

Business Pac I

Fifteen menu-driven programs for handling daily business problems and record keeping are combined in *Business Pac I*. The package includes programs for terms of loans, assets and depreciation, growth rates and projections, cash-flow analyses, returns on investments, stock portfolio analyses, apportionment by ratio, and loan status. List price: \$49.95. Requirements: 64K, one disk drive. Alphanetics
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

Oz: Management and Control

Managers can consolidate financial information from up to 50 divisions and store organization charts with *Oz: Management and Control*, a financial analysis and reporting system. Reports generated include budget variance, percent variance, and month-to-month comparison. You can retrieve explanations for all changes that have an impact on a particular number. *Oz* displays eight types of graphs. The program shows data quarterly, defines a library of up to 256 graphs and 256 reports, shows favorable and unfavorable variances, and automatically performs currency conversions for 15 countries. List price: \$495. Requirements: 256K, two disk drives (graphics monitor and color graphics board recommended). Fox & Geller, Inc.
604 Market St.
Elmwood Park, NJ 07666
201/794-8883

The PriceBook

Designed for manufacturing representatives, subcontractors in the construction trade, sales agents, and retail stores, *The PriceBook* creates and maintains a price book disk file and produces itemized price, product, and service listings. The system generates invoices, quotations, purchase orders, acknowledgments, and other business applications that require an itemized listing with price extensions and calculated totals. Features include file maintenance, itemized listings in six formats, backup and recovery facilities, and mail merge capabilities. A sample price book disk file is included. List price: \$99.95. Requirements: 128K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

Employee Scheduler

Designed for managers, *Employee Scheduler* displays schedules in graphics format without the need for a color graphics board. The status and location of up to seven employees can be shown at once. Personnel can be assigned to jobs or departments over a period as short as one day. List price: \$50. Requirements: 64K, one disk drive.

Data*Easy
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Prospects

A tool for tracking prospective customers, *Prospects* maintains mailing lists, a calendar of events, promotional letters, and prospect data. Information can be located by searches and sorts. The program is designed for independent consultants and sales managers who have fewer than 5000 prospects per year. List price: \$175. Requirements: 64K, one disk drive, *dBASE II*.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

Target Task

Designed to help managers plan and control projects, *Target Task* calculates the time saved in expediting a task and determines which schedule is the most cost-effective for reaching goals. The program integrates the procedures of the Critical Path Method (CPM) and the Performance Evaluation and Review Technique (PERT). List price: \$329. Requirements: 128K, one disk drive, CP/M-86.

Comshare, Inc.
5901-B Peachtree Dunwoody Rd. #275
Atlanta, GA 30328
404/391-9012

Lead Manager

A sales management tool for salespeople, sales managers, account managers, or anyone who must keep track of contacts, *Lead Manager* is useful for those whose primary means of communication is the telephone. Customer information can be grouped by criteria meaningful to the user. The program maintains a contact history with notes, schedules meetings, and prompts for follow-up written or verbal communication. You can create an unlimited number of individual contact lists, customize tables, and pull leads from lists by name, company, city, state, zip code, salesperson, type, user code, last contact date, or next contact date. Lists can be merged or used with word processors to create personalized correspondence. List price: \$350. Requirements: 128K, two disk drives.

Systems Plus, Inc.
1120 San Antonio Rd.
Palo Alto, CA 94303
415/969-7047

Weighted Point Rating

Based on the weighted point rating technique used by consultants and business analysts, *Weighted Point Rating* assists in decision making in which several mutually exclusive alternatives are available. You identify and give relative weights to the criteria to be considered and then rate each alternative. All names of alternatives,

weights, and ratings are saved on file. The program calculates an overall rating for each alternative. Relative weights can be adjusted automatically. List price: \$34.95, optional source code \$10. Requirements: 64K, one disk drive.

Personal Software Company
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

The Work Management System

Designed for government, plant management, and service personnel, *The Work Management System* assists in scheduling work, evaluating group performance, and accumulating cost and productivity information. The program details information on pending work, including recurring and one-time jobs or projects, and on completed work, including report costs and performance against standards. It can handle up to 5000 jobs per month and is tailored to each user, with nine master tables. List price: \$3950. Requirements: 128K, hard disk.

LWFW, Inc. Group
12700 Park Central #1805
Dallas, TX 75251
214/233-5561

BisyBase

A predefined data base for time, client, and financial management, *BisyBase* is designed for salespeople and corporate executives. It searches a master file to extract pertinent information about contacts, reviews information by categories such as business type or area code, and maintains a running record of finances, including accounting balance and cash flow totals. Other features include currency conversion and instant access to an indexed master file. The program generates mailing lists, works with most popular word processors, and is compatible with *dBASE II*. List price: \$275. Requirements: 128K, one disk drive.

IMSI
633 Fifth Ave.
San Rafael, CA 94901
415/454-7101

Protracs

A project and item tracking system, *Protracs* breaks projects into component tasks that can be prioritized and assigned to individuals. Tasks can be sorted for custom reporting, and overdue tasks can be highlighted on the screen or listed in report format. Six reports and four Gantt charts can be created. *Protracs* can track up to 100 projects containing up to 100 tasks each. List price: \$59.95. Requirements: 128K, one disk drive.

Applied MicroSystems, Inc.
P.O. Box 832
Roswell, GA 30077
404/475-0832

Project Master

A project management program designed for planners and managers, *Project Master* takes a project through its life cycle using critical path analysis. The program offers multiple-resource classes, cost reporting, resource allocation analysis and resource smoothing or leveling. You can calculate the least-cost alternative, analyze the project's risk, and estimate the probability of completion by the desired date. List price: \$289. Requirements: 128K, one disk drive (two recommended).

Simple Software
2 Pinewood
Irvine, CA 92714
714/857-9179

Prospecting

Designed to increase the effectiveness of sales, marketing, and after-sales support efforts, *Prospecting* stores and analyzes information about customers or prospects and their product interests. It prints envelopes, cards, labels, status reports, and marketing analysis reports. Other features include multiuser capabilities, password protection, and extensive file searching and sorting capabilities. List price: \$640. Requirements: 128K, two disk drives (hard disk recommended).

Key Systems, Inc.
512 Executive Park
Louisville, KY 40207
502/897-3322

Business Analyst

Designed for government contractors, consultants, corporate officers, and investors, *Business Analyst* compares historical with projected data to analyze expenses. The program calculates the effects on company operations of changes in income, labor costs, material costs, overhead, and G&A expense. Up to 50 individual expense accounts are allocated to separate overhead and G&A expense pools. You can adjust the proportions to test the effect on burden rate percentages, or change allocations. The program displays a summary of the company's financial condition, comparing the previous fiscal period under the same conditions. The program also computes burden rate percentages for cost accounting and bidding purposes. List price: \$55. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Decision-Analyst

A program that analyzes alternatives, *Decision-Analyst* asks a series of questions to define a problem, develops values criteria, and scores each alternative against the criteria. The program prints reports for each of the eight steps in the process and shows which alternative best fits the values criteria. *Decision-Analyst* can help in selecting personnel, new machinery or equipment, plant or office sites, marketing strategies, and computer hardware or software. It can also be used for personal decision making such as choosing a job, determining the best investment, or buying the right home or car. List price: \$139. Requirements: 128K, one disk drive, CP/M-86.

Executive Software, Inc.
2 N. State St.
Dover, DE 19901
302/734-3236, 705/722-3373 Canada

Automail

A program designed for salespeople, *Automail* helps keep track of customers. You specify the dates to send each prospect any of four "reminder" letters, and *Automail* automatically generates the appropriate letters on the specified days. The program also keeps a log of the date each letter was generated. *Automail* can use letters created with most word processors. List price: \$49.95. Requirements: 64K, one disk drive.

The Software Group
P.O. Box 278
Friendswood, TX 77546
713/482-4757

LP Master

Designed for manufacturers, production departments, and service companies, *LP Master* helps make business decisions. The program automatically creates an optimal model of an enterprise. A data table input format helps nonexperts set up linear programming (LP) models. *LP Master* allocates resources such as labor and machine time and computes least-cost blends. It works with other software, such as 1-2-3 and *SuperCalc*. The program solves models of up to 32,767 rows. List price: \$795. Requirements: 128K, one disk drive.

Applied Operations Research, Inc.
22056 Saticoy St.
Canoga Park, CA 91303
818/340-1419

Routemaster

A program that minimizes traveling time by computing the best route, *Routemaster* is designed for pickup, delivery, and distribution people; traveling salespeople; and carpoolers. The program can handle up to 32,767 locations at once. Data base features let you store information about locations. List price: \$195. Requirements: 128K, one disk drive.

Applied Operations Research, Inc.
22056 Saticoy St.
Canoga Park, CA 91303
818/340-1419

Expense Account Manager

A program that organizes and tracks travel and entertainment expenses, *Expense Account Manager* is designed for executives, accountants, sales professionals, consultants, physicians, freelancers, and others whose business takes them out of the office for extended periods of time. Features include reminders of expenses that are often overlooked and prompts for specific information for the IRS and budget projections. A table of frequently traveled trips is maintained for reporting automobile mileage. The system automatically reconciles travel advances and tracks reimbursements. An interface to 1-2-3 is included to provide additional reporting. You can change the definitions of expense items, budget lines, and subtotals without reprogramming. List price: \$150. Requirements: 128K, one disk drive.

Adaptive Software
1868 Cavell Ave.
Highland Park, IL 60035
312/831-4420

MMS-II, RMS-II

A materials management system for use with *PMS-II*, *MMS-II* lets project managers control major bid items and project funds. Up to 1000 purchase orders can be entered into *MMS-II*'s data base for as many as 500 vendors. The program enables project managers to track materials, order and delivery dates, and purchasing methods.

RMS-II is a resource management system that allocates resources among competing projects. Project managers can define up to 96 resource centers, such as people, departments, tools, and test centers. *RMS-II*, a template for *PMS-II*, is designed for contractors, engineers, and manufacturers who encounter conflicts over scarce resources. List price: each program \$995. Requirements: 128K, two disk drives (hard disk recommended), *PMS-II*, DOS 2.00 or later version.

AHA, Inc.
P.O. Box 8405
Santa Cruz, CA 95061-8405
408/458-9119

ABtab

Designed for the nontechnical manager, *ABtab* summarizes the results of data collection and presents data in tabular format. The program produces frequency distributions, cross-tabulations between variables, and printed reports. It creates files in the *dBASE II* format and reads and writes ASCII files. List price: \$395. Requirements: 256K, two disk drives. Anderson Bell
P.O. Box 191
Canon City, CO 81212
303/275-1661

Harvard Project Manager

Designed to plan and track small or large projects, the *Harvard Project Manager* provides visuals for project management. The program uses the Critical Path Method (CPM) and the Program Evaluation and Review Technique (PERT) and offers "what if" analysis. You can view parts of a project in up to three windows, monitor subprojects, specify task duration in periods ranging from minutes to years, and total the costs of each task. The program recalculates automatically when new information is added. List price: \$329. Requirements: 128K (192K recommended), two disk drives.

Harvard Software, Inc.
521 Great Rd.
Littleton, MA 01460
617/486-8431

"This product performs its PERT/CPM functions much better than other products in its price range, but the documentation is inadequate and incomplete. It takes too long for beginners to master the complexities of the program." Bob Kemp, San Diego, California

"By entering our projected schedule and manpower requirements, we can generate detailed PERT chart graphs on a printer for distribution. Output is also available to 1-2-3." Stephen John Hysick, Grosse Pointe Woods, Michigan

"I found the program limited. Individual resources assigned to a task cannot be individually priced (for budgeted to actual comparisons). You cannot print out or display all tasks assigned to specific individuals, and you cannot selectively reprint

portions of detailed reports. All workdays must be the same length, and days of the week must be designated as workdays, holidays, or weekends." Richard A. Westerman, Houston, Texas

EasySales Pro

A prospect management system for salespeople, *EasySales Pro* maintains information on leads and allocates time among them. The program tracks performance against quotas, produces reports and correspondence, and prioritizes prospective customers. *EasySales Pro* generates a phone list of leads and a prospect book with two-page reports on each potential customer. Prospects can be sorted by sales value, percentage chance of closing the sale, zip code, name, and other pertinent categories. Prospect information can be merged with sales correspondence produced with *EasyWriter II*. List price: \$495. Requirements: 128K, two disk drives.

Sorcim/IUS Micro Software
2195 Fortune Dr.
San Jose, CA 95131
408/942-1727

OnTime Calendar Manager

A calendar management and appointment scheduling program, *OnTime Calendar Manager* handles up to 100 calendars simultaneously and displays several calendars side by side. The program maintains logbooks for items such as company vehicles, conference rooms, and audiovisual equipment. Designed to be compatible with the *EasyBusiness* family of software from Sorcim/IUS Micro Software, the program integrates directly with that company's *EasyFiler* data base management system. List price: \$199. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Microcomputer Specialists, Inc.
18 Lyman St.
Westboro, MA 01581
617/366-1200

Milestone

A project management and time-scheduling program, *Milestone* can plan the life-time of any project. The program produces PERT (Project Evaluation and Review Technique) charts but cannot do resource leveling or probability scheduling. *Milestone* is designed for project managers who detail labor requirements, profit margins, and contractual obligations. List price: \$295. Requirements: 128K, one disk drive (two recommended). Digital Marketing Corporation
2362 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

TaskManager

Designed for middle managers, *TaskManager* helps manage people and jobs. The program coordinates due dates and juggles workloads for up to 999 tasks. For each task, *TaskManager* tracks the person responsible, the department, the task's priority, beginning and completion dates, project number, subproject number, worker-hours, and percentage completed. The program produces Gantt charts and worker-hour summary reports, identifies conflicts and overloads, and balances schedules. List price: \$395. Requirements: 128K, one disk drive.
Quala
23026 Frisca Dr.
Valencia, CA 91355

SalesPrompt

Designed for salespeople, *SalesPrompt* designs, creates, and updates sales presentations and training programs. The menu-driven program stores facts and selling statements, and displays up to three levels of increasingly detailed product information. A keyword directory is automatically created. List price: \$495. Requirements: 128K, two disk drives, UCSD p-System.
Infacs Corporation
240 Grand Ave.
Leonina, NJ 07605
201/947-0035

MeetingTrak, PeopleTrak

A registration and management system, *MeetingTrak* is designed to help with seminars, meetings, and conventions. The program handles speakers, exhibitors, special events within a convention, billing, confirmation letters, name badges, hotel accommodations, cancellations, and refunds. It produces rosters and directories, custom reports, and personalized mail for selected groups. A companion product, *PeopleTrak*, is a management system designed for trade and membership organizations. The program keeps track of information such as addresses, organizations, interests, committee memberships, and subscriptions. It produces personalized mail, mailing labels, custom reports, and membership directories. List price: *MeetingTrak* \$1795, *PeopleTrak* \$1595. Requirements: 256K, hard disk, DOS 2.00 or later version.
Noesis Computing Company
615 Third St.
San Francisco, CA 94107
415/495-7440

Schedule-It, Gantt-It

Managers can plan projects, schedule tasks, and identify critical path activities with *Schedule-It*. Information entered on the bottom half of the screen is integrated automatically into the schedule on the top half. A calendar identifies workdays and non-workdays for each schedule, and a "what if" function produces alternative schedules without changing the original. A Gantt chart reflects changes in activity dates or estimates. The program identifies milestones such as specific dates or a range of dates generated by slack-time calculation. *Schedule-It* includes Under-Control for file management and report writing and *Gantt-It* for graphics. *Gantt-It* is also sold separately and includes Under-Control. List price: *Schedule-It* \$285, *Gantt-It* \$195. Requirements: 192K, two disk drives.
A + Software, Inc.
16 Academy
Skaneateles, NY 13152
315/685-6918

Calendar Management

Using reminders and priority and flexible-time analyses, *Calendar Management* tracks and manages time for up to 98 individuals, groups, or facilities. The program schedules meetings in the first available time slots and automatically designates recurring appointments or activities. List price: \$195. Requirements: 128K, two disk drives.
Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

Netcon I, II

Designed to help plan and manage projects, *Netcon I* and *Netcon II* provide Critical Path Method (CPM) scheduling. *Netcon I* uses the arrow diagram method, and *Netcon II* uses the precedence diagram method. Both programs define, schedule, update, and report on projects having up to 1000 activities. Fourteen management reports cover time status, resources, and funding. Features include definable alphanumeric activity codes, a ten-year calendar, 100 resources and work areas per project, random-entry inquiry and updating of all project tasks, and "what if" analysis. List price: each program \$595. Requirements: 128K, two disk drives, DOS 2.00 or later version.
Project Planning Management and Control Systems
1309 E. 132nd St.
Burnsville, MN 55337
612/894-2415

MODCAMjr

Aimed at small maintenance departments, *MODCAMjr* handles scheduling, manages special projects, and develops equipment records. The program has modules for work order tracking, inventory control, preventive maintenance, and equipment history. It generates management reports and provides activity schedules for any selected time frame. List price: \$2995. Requirements: 256K, hard disk.
Modern Management, Inc.
7301 Carmel Executive Park
Charlotte, NC 28226
704/542-6546

Empact

A scheduling system designed to monitor projects and track labor resources, *Empact* can handle up to 100 projects. You can assess each project's status, identify bottlenecks, and produce reports for both employees and management. The program can track up to 150 tasks per project by either priority or responsibility. Tasks can be sorted into any sequence, and overdue tasks highlighted. The program offers six reports with personalized headings; specifiable breaks can produce employee status reports suitable for distribution. Four Gantt charts are available, including a "long" Gantt chart representing the entire project. List price: \$149.95. Requirements: 256K, one disk drive.

Applied MicroSystems, Inc.
P.O. Box 832
Roswell, GA 30077
404/475-0832

Management Diagnostic Series, Management Training Series

Designed to help businesspeople evaluate the need for particular management skills, *Management Diagnostic Series* includes three programs: *Assessing Personal Management Skills*, *Evaluating Organizational Effectiveness*, and *Understanding Personal Interaction Styles*. The *Management Training Series* contains seven self-paced courses: *Leading Effectively*, *Motivating to Achieve Results*, *Defining Goals and Objectives*, *Improving Employee Performance*, *Performance Appraisal*, *Managing Time Effectively*, and *Conducting Successful Meetings*. Each course takes from 3 to 5 hours to complete. A branching feature lets you make a more detailed study of any topic. List price: each program in the *Management Diagnostic Series* \$350, each course in the *Management Training Series* \$450. Requirements: 64K, one disk drive.

Thoughtware
2699 S. Bayshore Dr.
Coconut Grove, FL 33133
800/848-9273, 305/854-2318

Saleseye

Designed for large or small sales forces, including clerks and administrative assistants, *Saleseye* integrates data base management with text editing. Users can store, retrieve, and update information on prospects; write and print personalized letters, envelopes, and labels; and manage appointments. *Saleseye* is a menu-driven program that can share data with *dBASE II* and *WordStar*. List price: \$495. Requirements: 128K, two disk drives, DOS 2.00 or later version.

High Caliber Systems, Inc.
165 Madison Ave.
New York, NY 10016
212/684-5553

Software Resources

An interactive system that provides software development managers with estimates of optimal staff levels, key milestones, and schedule lengths and costs, *Software Resources* optimizes software projects requiring 10 to 5000 worker-months of effort. Depending on the range of constraints, managers can investigate the effects of up to ten key project factors, including schedule length, human resources, lines of code, peak labor demand, code type, documentation type, and development environment. List price: \$175. Requirements: 64K, one disk drive.

ATC Software
Rt. 2, Box 448
Estill Springs, TN 37330
615/967-9159

Optimizer

Designed to help businesses solve quantitative problems, *Optimizer* uses linear programming techniques to analyze production schedules, personnel assignments, product buying, and pricing. *Optimizer* performs "what if" calculations and features 100 decision variables. List price: \$200. Requirements: 48K, one disk drive.

SuperSoft, Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

Pertmaster 1500

A menu-driven, critical path analysis package for project planners, *Pertmaster 1500* can use both activity-on-arrow and precedence networking techniques to schedule as many as 1500 activities. It logically plans a project, monitors its progress, and adjusts schedules as factors change. The program can produce bar charts that show more than one day or time unit per column, has a calendar system up to the year 2049, and produces reports handling large numbers and noninteger numbers. *Pertmaster 1500* tabulates the earliest and latest possible start and finish dates for each activity and highlights critical activities and those with "float." Reports can be organized with earliest activities first, critical activities first, in alphabetical order, or in activity sequence. A Resource Histogram chart shows the demand for any selected resource over the same time frame indicated by the bar chart. The program can share data with *dBASE II*, *R:base 4000*, *1-2-3*, *SuperCalc 3*, and *Multiplan*. List price: \$695. Requirements: 128K (256K recommended), two disk drives.

Westminster Software, Inc.
660 Hansen Way #2
Palo Alto, CA 94304
415/424-8300

The Sales Manager

A professional management information tool for executives in sales, marketing, and general business, *The Sales Manager*, version 2, handles tracking and reporting for customers, prospects, sales representatives, commissions, planning, forecasting expenses, sales analysis, and personnel. It is designed to increase sales revenue by giving executives control of vital sales information. *The Sales Manager* offers macro command files, import and export of data files, and three levels of security. List price: \$575. Requirements: 256K, two disk drives.

Market Power, Inc.
11780 Rough and Ready Rd.
Rough and Ready, CA 95975
916/432-1200

LP1, LP2

To help decision makers allocate resources, *LP1* uses linear programming to create mathematical models of a business. The program can solve problems involving up to 100-by-100 matrices. *LP1* can be used in financial planning, agriculture, health care services, personnel planning, marketing, and engineering. *LP2* determines the most economical transportation routes for shipments from several factories to different warehouses or distribution centers. You can change data and evaluate the effects. List price: *LP1* \$135, *LP2* \$75. Requirements: 128K, one disk drive.

Micro Vision
145 Wicks Rd.
Commack, NY 11725
516/499-4010

Project Planner

Using the Critical Path Method, *Project Planner* helps managers organize and control projects, analyze alternatives, and flag critical activities. You define project activities and their sequences; the program automatically generates flowcharts and work schedules. List price: \$200. Requirements: 256K, two disk drives, graphics board.

Applitech Software, Inc.
381 Harvard St.
Cambridge, MA 02138
617/497-8268

Pathfinder

A Critical Path Method program, *Pathfinder* helps you organize projects with up to 3000 activities. The program's editing capabilities allow you to rename activities, change time requirements, and add or delete entries. *Pathfinder* prepares a Gantt chart and graphically displays a project's critical path. List price: \$80. Requirements: 128K, one disk drive. Morgan Computing Co.
10400 N. Central Expwy. #210
Dallas, TX 75231
214/739-5895

Pac Micro

A project planning and management tool, *Pac Micro* assists in budgeting, resource allocation, and "what if" simulations. Color graphics are included. The program handles up to 400 activities and an unlimited number of large and small projects. List price: \$990. Requirements: 256K, one disk drive. AGS Management Systems
880 First Ave.
King of Prussia, PA 19406
215/265-1550

Prompt

Practices can keep track of filing dates and deadlines with *Prompt*, which shows scheduled, in-progress, or completed work by date, partner/associate, or client. Printed schedules can double as time sheets. *Prompt* automatically reschedules recurring tasks. List price: \$749. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Day-1 Data Systems, Inc.
200 Craig Rd.
Freehold, NJ 07728
201/462-3910

Quick-Plan

Using the critical path method, *Quick-Plan* offers control over the planning process. With network modeling capabilities, *Quick-Plan* facilitates the development of business strategies, resource allocations, budgets, and schedules. *Quick-Plan* builds project plans based on time, costs, and resources. The system has editing and modeling capabilities and 13 report formats. Graphics help with logic review. *Quick-Plan* handles 250 activities, 99 resources, and 500 connectors for each project. It has advanced features to control float, avoid resource scheduling conflicts, and monitor activities that don't affect the project schedule. List price: \$995. Requirements: 384K, one disk drive, graphics board. Mitchell Management Systems
Westborough Office Park
2000 W. Park Dr.
Westborough, MA 01581
617/366-0800

Project Control Program

Designed to help managers keep projects on time and within budget, *Project Control Program* (PCP) uses the Critical Path Method and the activity-on-arrow method of scheduling. *PCP* stores budget data and helps track actual expenditures. The program reports on schedules (with actual versus planned bar charts), project performance (actual costs versus budgeted costs), project progress, and resources. You can select and sort an unlimited number of activities in any order for reports. *PCP* stores original and current schedules. An optional *BarPlot* program produces full-size two- and three-color bar charts on a Calcomp plotter. List price: *PCP* \$900, *BarPlot* \$75. Requirements: 64K, two disk drives. Project Planning Services, Inc.
P.O. Box 303
Collegeville, PA 19426
215/489-7488

MicroPERT 0, Version 3

A project management system that uses the activity-on-arrow method of project networking, *MicroPERT 0* produces time-scaled network diagrams (PERT charts) and Gantt charts. The program can handle 220 events and 220 activities and sorts by date and slack time. You can define a schedule in terms of any time unit (from nanoseconds to centuries) and chart an entire schedule or portions of it. The program is menu-driven, scrolls horizontally, and prints charts sideways on IBM or Epson printers. It calculates early and late start and finish dates, critical path, project completion date, calendar conversions, status of all activities (percentage complete), and slack time. List price: \$350. Requirements: 192K, one disk drive (two recommended). Sheppard Software Company
4750 Clough Creek Rd.
Redding, CA 96002
916/222-1553

TMM Corrective Maintenance Work Order System

Designed for maintenance departments in industry, the *TMM Corrective Maintenance Work Order System* keeps a data base of open and closed work orders. The program assists daily scheduling, compiles labor and materials costs for each work order, and maintains equipment history. Reports summarize backlogs and weekly and monthly costs. List price: \$1500. Requirements: 256K, hard disk.

TMM Systems
127 Michael Dr.
Red Bank, NJ 07701
201/530-9260

Neat: The Time and Information Manager

You can organize your notes, expenses, addresses, and time with *Neat: The Time and Information Manager*. The program schedules appointments, keeps a travel and expense register, records time spent on projects, and displays the date and time. It also includes a file for names, addresses, and other information. The program helps you write short reports and works with Prentice-Hall's *Business Word Processor* to produce multiple-addressee form letters. List price: \$150. Requirements: 128K, two disk drives.

Prentice-Hall
Englewood Cliffs, NJ 07632
201/592-2000

Dow Jones Prospect Organizer

Designed to help sales professionals and organizations increase productivity, the *Dow Jones Prospect Organizer* tracks prospects from initial leads through allocation to sales territories. You can use the menu-driven system to maintain, update, organize, and display prospect files. You can screen prospects and qualify leads with the program's telemarketing and survey features and generate sum-

mary, geographic, and status reports to help analyze leads. The program includes a calculator, a word processor, and mail merge capabilities. List price: \$395. Requirements: 256K, two disk drives, DOS 2.00 or later version.

Dow Jones Software
P.O. Box 300
Princeton, NJ 08540
609/452-2000

Product Scheduler 5000 + Graphics

Designed to handle project forecasting, scheduling, control, and tracking, *Product Scheduler 5000 + Graphics* calculates the critical path and displays a Gantt chart showing personnel and cost requirements after each addition, change, or deletion. The system provides "what if" analysis and can handle over 5000 tasks. A project's schedule is presented using graphics to depict the critical path, slack time, milestones, early starts, and completed jobs. List price: \$465. Requirements: 256K, two disk drives.

Scitor Corp.
256 Gibraltar Dr.
Sunnyvale, CA 94089
408/730-0400

GPSS/PC

A version of GPSS (*General Purpose Simulation System*), *GPSS/PC* predicts the effects of managerial or engineering decisions on complex, real-world systems. *GPSS/PC* has on-line help, programmable function keys, keystroke error prevention, and partial command recognition. The program offers unlimited parameters per transaction, random number generators, and precision statistics accumulators. Interactive features let you interrupt any action, simulate systems manually, access state variables and simulation primitives, and plot values as the program runs. An optional security device lets you run *GPSS/PC* without the master disk. List price: \$900, security device \$100. Requirements: 256K, one disk drive.

Minuteman Software
P.O. Box 171
Stow, MA 01775-0171
800/343-0664 ext. 4800, 800/322-1238
ext. 4800 Massachusetts

Personal Computer Automated Telemarketing

A telemarketing and sales management tool, *Personal Computer Automated Telemarketing (PCAT)* automates business functions such as telephone sales, lead qualifications, customer service, surveys, receivables collection, inquiry processing, and fundraising. The program combines a customer data file, a call scheduler, a telephone auto-dialer, a script prompter, a word processor, and a mailing list processor. The program comes in floppy disk, hard disk, and network versions. List price: floppy disk version \$680, hard disk version \$830, network version \$3000. Requirements: floppy disk version 128K, two disk drives; hard disk version 160K; network version 256K.

Arlington Software + Systems
400 Massachusetts Ave.
Arlington, MA 02174
617/641-0290

Organization Map jr

Two management programs are included in *Organization Map jr*. The Human Resources Decision Support System provides a description of an organization's structure, including layers of management, spans of control, and staffing levels. The program can also serve as a manager's human resource system, keeping track of a variety of facts on each employee and the characteristics of the work force overall. The Organization Analysis and Productivity Improvement Support System presents a detailed view of work activities in an organization and calculates costs. A manager can focus on activities that contribute toward objectives, reduce redundant or low-payoff work, and increase efforts on activities that need attention or resources. List price: \$895. Requirements: 128K, two disk drives.

Pacesetter Software
P.O. Box 5270
Princeton, NJ 08540
609/737-8351

Microsoft Project

General business managers can plan schedules, assign resources, and develop budgets for large or small projects with *Microsoft Project*. The program works like a spreadsheet, using English commands similar to those in other Microsoft products. The critical path for a project is calculated automatically, and "what if" capabilities assess the impact of scheduling changes. A graphics display feature gives a visual schedule of activities. A resource cost table, which you can view at any time, shows the cost of completing a project. A resource chart shows when each resource will be or has been used and by whom. *Microsoft Project* also has a report generator for analysis and presentations. Files can be transferred to *Microsoft Chart*, *Multiplan*, 1-2-3, or *dBASE II*. List price: \$250. Requirements: 128K (192K when used with the Microsoft Mouse), one disk drive.

Microsoft

10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8080

Tutsim

A computer simulation program, *Tutsim* permits a graphics representation and a numerical listing of the behavior of a linear or piecewise linear system. You can solve problems by constructing, operating, and evaluating a block diagram simulation of the system. You can vary the model design; add or delete blocks, change interconnections, and vary parameters and values at any time during the simulation. Models are entered as either a block diagram or a bond graph, and both forms can be intermixed. The program accommodates up to 999 blocks per model. The operating characteristics of the model are displayed graphically and can be printed with an IBM or Epson dot matrix printer. The program supports an 8087 coprocessor. List price: \$525. Requirements: 64K, one disk drive, IBM or Hercules graphics board.

Applied i

200 California Ave. #214
Palo Alto, CA 94306
415/325-4800

Project Cost Management Information

Originally developed for government and private sector consulting projects, *Project Cost Management Information System* helps plan, monitor, budget, and schedule construction and manufacturing projects. The program evaluates the cost implications of alternative labor mixes and tracks cost-plus-fixed-fee, unit-rate, and lump-sum contracts. It includes audit routines that compare time sheet and direct expense data entries with project budgets. List price: \$495. Requirements: 64K, two disk drives.

Davis & Assoc., Inc.

1655 Peachtree Rd. NE #1104
Atlanta, GA 30309
404/875-0793

Participative Management Skills

Case studies and simulations provide managers with leadership ideas and self-assessment tools in *Participative Management Skills (PMS)*. The program comes on five disks that include the following modules: Choosing Participation, Enhancing Power, Facilitating Team Communication, Understanding Motivational Dynamics, and Achieving Consensus. List price: \$250. Requirements: 128K, two disk drives, color graphics board.

Concourse Corp.

2626 E. 82nd St. #215
Minneapolis, MN 55420
612/854-8848

SalesTaxFile

To manage sales tax rate information, *SalesTaxFile* includes data for all states and many major counties and cities. Sales tax information for any location can be added. The program features global updating; printouts and displays in various formats; maintenance of nonstandard rates; and backup, recovery, and re-organizational facilities. List price: \$125. Requirements: 128K, two disk drives.

RJL Systems

106 New Haven Ave.
Milford, CT 06460
203/878-0376

Thoughtware

A series of interactive management training courses, *Thoughtware* is designed to improve management performance and competence. The programs are self-paced and include pretests for assessment against national norms, study units with graphics, question-and-answer sessions, and simulations of business situations. *Thoughtware* reduces traditional training times and includes printed worksheets, a glossary of terms, and a bibliography. Courses available include Assessing Personal Management Skills, Evaluating Organizational Effectiveness, Understanding Personal Interaction Style, Leading Effectively, Motivating to Achieve Results, Defining Goals and Objectives, Improving Employee Performance, Managing Time Effectively, Conducting Successful Meetings, Performance Appraisal, and Managing by Exception. List price: each course \$350 to \$450. Requirements: 128K, one disk drive, color graphics board.

Thoughtware, Inc.

2699 S. Bayshore Dr. #1000A
Coconut Grove, FL 33133
800/848-9273, 305/854-2318

Project Reporter

A 1-2-3 template for engineers, managers, and administrators, *Project Reporter* provides a format for monthly project financial status reports. The program shows monthly, year-to-date, and year-end project spending plans; forecast status; actual status; and variance-to-forecast comparisons for up to 11 departments and for the total project. *Project Reporter* also provides quarterly reports on estimated labor, burden, and material costs of product development projects. The program lets you enter comments such as schedule status, work plans, and milestones. Multi-year projects can be accommodated. Graphs and report printouts are built in. List price: \$79.95. Requirements: 256K; two disk drives; 1-2-3, version 1A.

Cinnamon Microsystems
P.O. Box 29494
Minneapolis, MN 55429
612/574-1697

Primavera Project Planner

A menu-driven project management program for experienced managers, *Primavera Project Manager* handles complex task interrelationships, detailed projections, and resource and cost tracking. The program accommodates up to 10,000 activities and prepares tabular and graphic reports. *Primavera Project Manager* supports earned value analysis and includes report formats consistent with government cost reporting requirements. List price: \$2500. Requirements: 512K, 10MB hard disk, DOS 2.00 or 2.10. Primavera Systems, Inc.
29 Bala Ave.
Bala Cynwyd, PA 19004
215/667-8600

MicroGantt

A menu-driven project management program, *MicroGantt* calculates a project's work schedules, critical paths, slack time, fixed cost, and time billing. Variables include time scale, work week, billing rate, worker allocation, previous task overlap, fixed cost, and task and project descriptions. List price: \$395. Requirements: 128K, two disk drives.
Earth Data Corp.
P.O. Box 13168
Richmond, VA 23225
804/231-0300

Datebook

A professional appointment scheduling program, *Datebook* is designed for doctors, dentists, lawyers, and salespeople. The program schedules appointments for more than 25 professionals and displays up to three calendars on screen at one time. List price \$295. Requirements: 128K, two disk drives.
Digital Marketing Corp.
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/938-2880

TMM Preventive Maintenance System

Maintenance departments can keep track of the preventive maintenance provided each piece of equipment with the *TMM Preventive Maintenance System*. The program assists in weekly planning and daily scheduling, provides cost information, and maintains equipment history. List price: \$1500. Requirements: 256K, hard disk.
TMM Systems
127 Michael Dr.
Red Bank, NJ 07701
201/530-9260

SalesCtrl

Designed for sales professionals, *SalesCtrl* integrates a word processor, a report generator, a data base, and an automatic phone dialing system. You can keep unlimited descriptive and historical records on each prospect, search the records using 6 of 30 criteria at a time, and generate customized reports on a group of prospects. A "tickler" function stores daily reminders of future commitments. The data base features 15 definable fields with 24 characters each. *SalesCtrl* automatically phones predefined prospects and stores up to 800 prospects on a double-sided disk. List price: \$299. Requirements: 128K, two disk drives.
Computer Task Group Inc.
800 Delaware Ave.
Buffalo, NY 14209
716/882-8000

Task Monitor

Designed to help managers with planning and scheduling, *Task Monitor* performs critical-path management and generates charts similar to PERT networks. The program keeps track of schedules, costs, and resources. *Task Monitor* is menu-driven, takes advantage of the PC's function keys, and includes an integrated help facility. List price: \$395. Requirements: 192K, one disk drive, DOS 2.00 or later version.
Monitor Software
960 N. San Antonio Rd. #210
Los Altos, CA 94022
415/949-1688

Energy Accountant

Designed to track conservation efforts, *Energy Accountant* traces energy consumption and develops targets based on past performance. The program accommodates any fuel source; accounts for weather, facility size, and changes in energy systems; prorates fuel and utility bills to monthly consumption; and handles up to 200 buildings. The system warns of building system problems, identifies conservation opportunities and costly billing errors, prepares energy budgets and consumption forecasts, and establishes energy objectives. *Energy Accountant* includes a comprehensive file listing and management reports for monthly consumption, variance, unit cost of energy, summary consumption and cost, and longitudinal consumption and cost. List price: \$1000. Requirements: 128K, hard disk.
Superex Business Software
151 Ludlow St.
P.O. Box 248
Yonkers, NY 10705
800/862-8800, 914/964-5200 New York

MicroMinder

An itinerary, calendar, and resource scheduler program, *MicroMinder* sorts appointment or use times and displays the current calendar and appointments for any day. Appointments can be added to multiple dates without repeating descriptions. Using the displayed appointment list, the program automatically calculates offsets in days, weeks, or months. Reports can be screened to print only those appointments fitting the description, time, and date specified. List price: \$49.95. Requirements: 192K, one disk drive.
Alphanetics Software
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

Financial Applications

N-Squared Market Analyzer

Using a data base included with the program, *N-Squared Market Analyzer* monitors and compares market indicators. Keystroke functions include exponential smoothing, arithmetic averaging, ratios, sums, differences, transforms, and time-lag analyses. The program generates and displays indicators such as the Trading Index (TRIN) and the Advance Decline Line (ADL). List price: \$295. Requirements: 128K, one disk drive, color graphics board.

N-Squared Computing
5318 Forest Ridge Rd.
Silverton, OR 97381
503/873-5906

N-Squared Stock Analyzer

Designed for studying individual stocks, *N-Squared Stock Analyzer* incorporates technical analysis functions. The program provides high/low/close volume displays with linear or semilogarithmic auto-scaling, price-volume indicators, relative strengths, momentums, smoothing, averaging, and point and figure charting. List price: \$295. Requirements: 128K, one disk drive, color graphics board.

N-Squared Computing
5318 Forest Ridge Rd.
Silverton, OR 97381
503/873-5906

Pear Portfolio Management System

Designed to organize transaction information into two sets of files, *Pear Portfolio Management System* creates one file for securities and one for portfolio position. Since the program uses internal identification numbers to relate files to each other, you can include securities information in every relevant portfolio after entering the information only once. *Pear Portfolio Management System* creates portfolio appraisals that include security descriptions, percent breakdowns within and by security type, and yield to maturity for fixed income securities. The program also generates cross-reference reports that list all positions on the system by security, unrealized and realized capital gains and loss reports, and investment income statements for any time period.

List price: \$695. Requirements: with two floppy disk drives 128K, with a hard disk 192K, modem.

Hale Systems, Inc.
Remote Computing Division
1044 Northern Blvd.
Roslyn, NY 11576
800/645-3120

TK!SolverPack for Financial Management

An application package designed to solve the most common financial management problems, *TK!SolverPack for Financial Management* provides equations, values, and tables to use with the *TK!Solver* program. The package has 13 models, including option analysis, net present value, compound interest, convertible debt analysis, bond refunding, and cost-of-equity capital. Definable functions let you develop your own additional models. List price: \$100. Requirements: 128K, one disk drive, *TK!Solver*.

Software Arts, Inc.
27 Mica Ln.
Wellesley, MA 02181
617/237-4000

Stock Manager

A stock portfolio management system, *Stock Manager* handles up to 500 stocks on one disk and prints several types of reports, including those required for federal income tax returns. The program calculates short- and long-term capital gains, dividends, and average price per share to reflect changes in dividends or repurchase. *Stock Manager* values stock portfolios at current prices, tracks reinvestment and repurchases, and notifies users of stocks reaching long-term maturity. The Value Line index is included with the program. List price: \$150. Requirements: 64K, two disk drives.

Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

Stock Portfolio Reporter

Investors can get current information on stock accounts with *Stock Portfolio Reporter*. The program's sorting function allows breakdown and reporting by nine categories, including yield, price/earnings, and gain/loss. *Stock Portfolio Reporter* sorts stocks into groups defined by the investor and calculates totals and weighted averages for each group and for the entire portfolio. List price: \$279. Requirements: 128K, two disk drives, modem, subscription to Dow Jones News/Retrieval service.

Micro Investment Systems, Inc.
P.O. Box 8599
Atlanta, GA 30306
404/892-3194

Bond Ware

Bond Ware computes yields for all types of bonds and evaluates bond portfolios, swaps, and short-term money market trading strategies. *Bond Ware* protects data with a block-mode screen or protected data entry field and includes a filing system. List price: \$350. Requirements: 64K, two disk drives.

Davidge Data Systems Corp.
55 Perry St.
New York, NY 10014
212/691-4410

OptionCalc

You can calculate the theoretical value of call and put options with *OptionCalc*. The program performs "what if" calculations and includes a Repeat command that allows data to be changed without rekeying. List price: \$89. Requirements: 64K, one disk drive. Savant Corporation
P.O. Box 440278
Houston, TX 77244-0278
800/231-9900, 713/556-8363 Texas

Doughflo

A financial planning and cash flow analysis package, *Doughflo* has several menu-driven programs designed for tax preparation, budget planning, and income and expense analysis. List price: \$79.95. Requirements: 64K, one disk drive. Alphabetic
P.O. Box 339
Forestville, CA 95436
707/887-7237

Financial Analyst

You can create five-year plans or financial analyses with *Financial Analyst*, a menu-driven program that provides "what if" calculations, goal-seeking consolidation, real estate and acquisition analyses, and discounted cash flows. Reports include income statements, balance sheets, and cash-flow analyses. Tax functions incorporate recent tax laws, including depreciation and tax benefit schedules. *Financial Analyst* plots graphs from financial forecasts, complete with growth rates and automatic scaling. Financial statements can be tailored to specific needs by renaming and inserting lines and defining calculations. List price: \$180. Requirements: 64K, one disk drive. Analytical Software, Inc.
10939 McCree Rd.
Dallas, TX 75238
214/340-2564

Micro PMS

Designed for investment managers, *Micro PMS* prepares and maintains account portfolios, portfolios containing stock and asset valuations, and gain and loss reports. The program provides real-time displays that let you update files continuously and call up stocks and portfolios using a cross-reference screen. *Micro PMS* prepares asset reports that include stock cost and current portfolio market value. The program's securities data base can be updated manually or automatically with a pricing update program available from the manufacturer. List price: \$495. Requirements: 256K, two disk drives. Information Resource Management
109 Fairfield Way #106
Bloomington, IL 60108
312/894-5598

Invest

A securities tracking system, *Invest*, version 3.0, records transaction details and provides periodic reports of interest accrued, transaction histories, and liquid asset and maturity schedules. Calculations include future values, annuities, discount, loan discount amortization, municipal bond yield, discount commercial paper, variable interest rates, discount on principal yield, and simple and compound interest. *Invest* analyzes portfolio mix and hypothetical situations for up to 600 portfolios. List price: \$200. Requirements: 128K, two disk drives. Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Microsoft Financial Statement Analysis

A template for *Multiplan*, *Microsoft Financial Statement Analysis* eliminates the need to format and enter formulas into the worksheet yet takes advantage of the worksheet's "what if" capabilities. The program computes 18 common financial ratios for liquidity, leverage, efficiency,

and profitability. Ratios can be defined for personalized analyses and then calculated automatically. List price: \$100. Requirements: 128K, one disk drive, *Multiplan*. Microsoft Corporation
10700 Northup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088
Alaska and Washington

Money Decisions

Designed to simplify financial decision making, *Money Decisions* is a package of 70 problem-solving programs. The programs cover business management, loans, investments, budget forecasting, and statistics. Calculations can be passed between programs. Available functions include bar graphs, moving averages, exponential smoothing, and regression analysis. *Money Decisions* also includes a communications feature and a subscription to CompuServe's Executive Information Service. List price: \$259. Requirements: 128K, one disk drive. Eagle Software Publishing, Inc.
993 Old Eagle School Rd. #405
Wayne, PA 19087
215/964-8660

Financial Analysis System

Containing 28 financial programs, *Financial Analysis System* comes in two volumes that are available together or separately. Each modular program analyzes various financial problems and performs "what if" testing. Volume 1 programs include mortgage, equity, and present value routines. Volume 2 programs include valuation analysis, after-tax routines, statistical routines, and special models for cash flow and building development. List price: Volume 1 \$125, Volume 2 \$250. Requirements: 64K, one disk drive, CP/M-86, CBASIC-86. Valuation Systems Company
7120 S. Lewis #235
Tulsa, OK 74136
918/496-7655

OptionVue-A

A spreadsheet customized for financial use, *OptionVue-A* answers "what if" questions regarding stock options strategies. The program handles put or call options purchased, and covered and ratio writing. Fair value pricing models are used to identify undervalued and overvalued options. *OptionVue-A* has functions for an option expiration calendar through 1999, full service and discount commission schedules, and automatic dividend and interest calculations. List price: \$129. Requirements: 64K, one disk drive. Star Value Software
12218 Scribe Dr.
Austin, TX 78759
512/837-5498

Loancomp

You can compute loan payments, annual percentage rates, interest, and balances for monthly, annual, and total loan periods with *Loancomp*. The program analyzes annuities with monthly, quarterly, semiannual, and annual payments. It prints summary statements and three types of amortization schedules. List price: \$67.95. Requirements: 64K, one disk drive. Contract Service Associates
706 S. Euclid
Anaheim, CA 92802
714/635-4055

LIFE Goals

Designed for investment advisors, *LIFE (Life Insurance and Future Equity) Goals* produces custom financial plans. It analyzes savings, life insurance, and investment strategies for each client. The program computes federal income tax and Social Security benefits and prepares a five-year tax plan showing the advantages of eight types of investments. List price: \$495. Requirements: 64K, two disk drives, *SuperCalc* or *1-2-3*. Kinnaird SoftPlans
2953 N.E. Brogden St.
Hillsboro, OR 97124
503/640-2875

Investment TaxPac

Designed to maintain a complete catalog of information on personal or professional investments and tax records, *Investment TaxPac* analyzes market values and performance and prepares year-end reports. It includes a report generator, a tax information file, and a message calendar. List price: \$200. Requirements: 48K, one disk drive. SuperSoft
P.O. Box 1628
Champaign, IL 61820
217/359-2112

The Technical Investor

A technical data base and charting program, *The Technical Investor* automatically logs on to the Dow Jones News/Retrieval service and the Warner Computer Systems data base for stock price updating. The program plots multiple stock activity in up to four independently controlled windows. *The Technical Investor* offers point-figure charts, relative strength plots, and five price-volume trend indicators. Stocks can be plotted with the program's linear regression, oscillating, exponential, and moving average functions. You can save any amount of data to disk and manually edit the data base. List price: \$395. Requirements: 256K, two disk drives, color graphics board, DOS 2.00 or later version. Savant Corporation
P.O. Box 440278
Houston, TX 77244-0278
800/231-9900, 713/556-8363 Texas

Financial Planning Mind Tools

A utility program for financial planning, *Financial Planning Mind Tools* supplies a spreadsheet with the correct formulas and column headings to calculate present, net present, and future values; yields; rates of return; and basic statistics. It also does break-even analyses; depreciation schedules; accelerated cost recovery systems; and variable-rate, graduated-payment, graduated-payment adjustable, and wrap-around mortgages. List price: \$79.95. Requirements: with version 1 of *1-2-3* 128K,

with version 1A of *1-2-3* 192K, two disk drives; with *Multiplan* or *VisiCalc* 64K, one disk drive; with *SuperCalc* 64K, two disk drives.

Howard W. Sams & Co., Inc.
4300 W. 62nd St.
Indianapolis, IN 46268
800/428-SAMS orders only, 317/298-5400

Financial Facts

You can compute most data needed in personal and small-business financial management with *Financial Facts*. This program figures annual, nominal, and effective interest rates; loan principal, term, balance, regular payment, last payment, and amortization; straight-line, declining balance, and sum-of-years depreciation; required investment for future value; minimum investment for withdrawals; and annuities. List price: \$59.95. Requirements: 64K, one disk drive. Howard W. Sams & Co., Inc.
4300 W. 62nd St.
Indianapolis, IN 46268
800/428-SAMS orders only, 317/298-5400

Financier jr

Intended for people without a computer or accounting background, *Financier jr* organizes financial records on the PCjr. The program reports on bank account activities, budgets, investments, taxes, and personal property. The ledger system processes three types of transactions: expense, income, and account transfers. *Financier jr* also organizes personal property inventories. The program has an automatic feature for routine expense transactions. You can print checks and update relevant bank, budget, and tax records with minimal data entry. List price: \$99. Requirements: 128K, one disk drive, DOS 2.10, Cartridge BASIC. Financier, Inc.
2000 West Park Dr.
P.O. Box 670
Westboro, MA 01581
617/366-0950

Financier Tax Series

A tax planning program designed for professional or personal use, the *Financier Tax Series* does multiple year and multiple case "what if" analyses on a preconfigured spreadsheet. The program also figures lump sum distribution and depreciation. You can plan for up to nine years, with CPI adjustments for years 1985 and beyond. Other capabilities include graphics for evaluation of all tax items and over 50K of on-screen help messages. List price: \$175. Requirements: 128K, one disk drive.

Financier, Inc.
2000 West Park Dr.
P.O. Box 670
Westboro, MA 01581
617/366-0950

The Fundamental Investor

A combined investment and communication package, *The Fundamental Investor* provides access to the Dow Jones News/Retrieval service and the Warner Computer Systems data base. The program collects and stores fundamental stock data such as earnings per share and capitalization figures. *The Fundamental Investor* plots time series and performs screening and sorting of up to 1700 stocks with 40 parameters. List price: \$495. Requirements: 256K, two disk drives, DOS 2.00 or later version. Savant Corporation
P.O. Box 440278
Houston, TX 77244-0278
800/231-9900, 713/556-8363 Texas

Spread Financial Modeling Language

In addition to spreadsheet generation, *Spread Financial Modeling Language* offers planners sales analysis, product profitability analysis, currency conversion, loan evaluations, pro forma reports, forecasting, budgets, cash flow projections, and sensitivity analysis. *Spread Financial Modeling Language* allows models and files to be passed between micros or to a mainframe using normal asynchronous

communications software. Special features include a built-in editor, English-language commands, flexible reporting, substitution variables, "what if" calculations, and hierarchical consolidation. List price: \$500. Requirements: 256K, one disk drive, modem for communications. L & L Products, Inc.
Wheeler Professional Park
Hanover, NH 03755
603/643-4503

Investment Manager

A menu-driven program for both the professional and the serious personal investor, *Investment Manager* measures the investment performance of individual securities, security groups, and an entire portfolio. The program reports on inventory, transactions, security performance, portfolio performance, and taxes. *Investment Manager* utilizes beta and beta adjustment, key concepts in the Modern Portfolio Theory, for calculating a security's risk. It communicates with numerous financial data bases and works with 1-2-3 and *VisiCalc*. Included with the package is a subscription to Warner's Financial Database. List price: \$275. Requirements: 128K, one disk drive, modem for communications.

IMSI
633 Fifth Ave.
San Rafael, CA 94901
415/454-7101

Estate Tax Planner

An estate-planning program that prepares IRS Form 706, *Estate Tax Planner* determines the estate tax for a specific set of facts, then lets you change the parameters and watch the effects in a spreadsheet window. The program also determines whether trusts can help reduce the estate tax. *Estate Tax Planner* uses the graphics capabilities of 1-2-3, *SuperCalc 3*, and *VisiCalc IV*. The program also works with *Multiplan*, *Microplan*, *PerfectCalc*, *UltraCalc*, and other versions of *SuperCalc*. List price: \$100. Requirements: with *VisiCalc* 128K, one disk drive; with other programs 128K, two disk drives. TaxCalc Software, Inc.
4210 W. Vickery
Fort Worth, TX 76107
817/738-3122

Gapmanager I

Designed for banks, savings and loans, and credit unions, *Gapmanager I* is a comprehensive asset and liability system that works with any general ledger or application software for banking operations. The program accommodates up to 400 accounts and comes with communications software for downloading from mainframes. *Gapmanager I* helps financial managers identify interest rate risk due to mismatch of assets and liabilities maturing in future periods. The program has add-on modules for FDIC quarterly Call Reports for commercial banks and FHLBB quarterly Call Reports for savings and loans. List price: one-time licensing fee for assets under \$500 million \$3750, for assets over \$1 billion \$6250; annual maintenance fee after first year for assets under \$500 million \$450, for assets over \$1 billion \$750; add-on modules \$1000 plus \$150 annual maintenance fee. Requirements: 256K, two disk drives. Distributed Planning Systems Corp.
23632 Calabasas Rd. #107
Calabasas, CA 91302
818/992-4447

Bankreporter I

Designed for banks, savings and loans, and credit unions, *Bankreporter I* provides planning, reporting, budgeting, and "what if" analysis. The program's 50 planning accounts can be expanded to 400 by integrating *Bankreporter I* with *Gapmanager I*. *Bankreporter I* also works with any general ledger or prepackaged application system to allow automatic data transfer from mainframes into *Bankreporter I* spreadsheet formats. List price: one-time licensing fee for assets under \$500 million \$3750, for assets over \$1 billion \$6250; annual maintenance fee after first year for assets under \$500 million \$450, for assets over \$1 billion \$750. Requirements: 512K, two disk drives, 1-2-3 or *Multiplan*. Distributed Planning Systems Corp.
23632 Calabasas Rd. #107
Calabasas, CA 91302
818/992-4447

Pro/Vest

Designed for the professional investment manager, *Pro/Vest* is a portfolio accounting and reporting system for small- to medium-size institutions that require detailed management and client reporting capabilities. The program maintains equity accounts, cash balances, and market positions across a wide spectrum of investments, including fixed income securities and options. It provides automated access to financial data bases for updating prices, dividends, and earnings. You can custom-tailor report formats and exchange data with 1-2-3 and dBASE II. List price: \$5500. Requirements: with two floppy disk drives 512K, with a hard disk 256K.

Software Resources, Inc.
186 Alewife Brook Pkwy. #310
Cambridge, MA 02138
617/497-5900

Financer

A menu-driven program for basic financial calculations, *Financer* provides ten financial functions. The program calculates simple interest, present value of a future amount, future value of a present amount, amortization schedules, compound and installment loan interest rates, day of the week for any date, number of days between any two dates, and present value of a series of payments. List price: \$19.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Call Report System

Bankers can automatically produce schedules of quarterly Call Reports using *Call Report System*. Two versions are available to satisfy the requirements of either the Federal Depository Insurance Corporation or the Federal Home Loan Bank Board. List price: \$2250. Requirements: 256K, two disk drives. Distributed Planning Systems Corp. 23632 Calabasas Rd. #107 Calabasas, CA 91302 818/992-4447

Tax Decisions

Designed for tax professionals, *Tax Decisions* tests different tax strategies. The package is formatted like the IRS Form 1040 and its supporting forms and schedules. Many tax strategies can be tested and compared by changing a single line entry on any form or schedule. Five different tax plans can be maintained permanently within any client file. List price: \$279. Requirements: 128K, one disk drive.

Eagle Software Publishing, Inc.
993 Old Eagle School Rd. #405
Wayne, PA 19087
215/964-8660

Spectrum MicroTrade, Spectrum IR MicroSystems

The first of *Spectrum MicroTrade's* two packages lets traders screen institutional holdings by stock, owner, type of institution, value, change in shares, or date of filing. Traders can monitor holdings for all owners, just their firm's clients, or their own accounts. Traders can also examine owners' portfolios and limit them to stocks on daily buy/sell lists. The second package, a "trade and inquiry retrieval" system, stores historical trades and client inquiries and integrates them with current holdings.

Spectrum IR MicroSystems is designed for corporate investor relations departments. It incorporates institutional holdings and displays holdings (by stock or by owner), competitor summaries, ownership histories, and graphics.

The *Spectrum* programs cover 690 institutions with equity assets greater than \$100 million, over 500 domestic investment companies, and the 400 largest European investment companies. The data base covers 6000 publicly held corporations. List price: each *Spectrum MicroTrade* package \$4400, both packages \$6600, *Spectrum IR MicroSystems* with quarterly updates \$2500. Requirements: 256K, two disk drives (hard disk for *MicroTrade*), DOS 2.00 or later version. Computer Directions Advisors, Inc. 11501 Georgia Ave. Silver Spring, MD 20902 301/942-1700

CPL/Tactix, PC Version

A financial planning and data base program, *CPL/Tactix, PC Version* handles complex corporate budgets and reports. The program runs independently or linked to the *CPL/Tactix* mainframe version with 100 percent compatibility. The system consolidates data, creates reports, works with other systems and data bases, provides color graphics, and includes financial and mathematical functions. *CPL/Tactix, PC Version* offers full-screen program editing and data entry, unlimited dimensions, definable menus and formats, matrix manipulation, and syntax checking. The program performs "what if," goal-seeking, sensitivity, and regression analyses and calculates annuity, internal rate of return, depreciation, and present value. List price: \$2000 per PC, mainframe license \$85,000. Requirements: 512K, one disk drive, 8087 coprocessor. Segra International 444 Castro St. #918 Mountain View, CA 94041 415/961-1670

Dow Jones Reporter

Providing menu-driven access to the Dow Jones News/Retrieval service, *Dow Jones Reporter* captures data to disk or to a printer. The data base provides quotes and news stories from the *Wall Street Journal* and *Barrons* as well as profiles on various corporations. List price: \$100. Requirements: 64K, one disk drive, modem, subscription to Dow Jones News/Retrieval service.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Stockchart-II

Designed for the stock investor interested in technical analysis, *Stockchart-II* performs on-balance volume analysis. The program also has communications capabilities for automatic retrieval of stock quotes from the Dow Jones News/Retrieval service and Warner Computer Systems' financial data base. *Stockchart-II*

charts daily price, trend lines, price channels, volume density, 1- to 264-day moving average plots, and on-balance volume plots. List price: \$350. Requirements: 128K, two disk drives, modem, color graphics board.

Micro-Investment Software, Inc.
9621 Bowie Way
Stockton, CA 95209
209/952-8833

Foreign Loan Exposure I

International officers of commercial banks can manage foreign loan portfolios with *Foreign Loan Exposure I*. The program automatically produces the quarterly FDIC Country Exposure Report (FFIEC 009 Report). It can reflect re-negotiations, support any loan-numbering system and LIBOR and PRIME denominated loans, and automatically roll data into the *Gapmanager I* system. List price: One-time licensing fee \$4995, annual maintenance fee after first year \$600. Requirements: 256K, one disk drive, dBASE II.

Distributed Planning Systems Corp.
23632 Calabasas Rd. #107
Calabasas, CA 91302
818/992-4447

MicroForesight

FORTRAN-based *MicroForesight* is a financial modeling and planning program that uses English-language commands. Applications include capital budgeting, merger and acquisition analyses, strategic planning, risk management and Monte Carlo Simulation, lease versus buy alternatives, multilevel consolidations, and pro forma financial statements. The program's modules consolidate data, generate and edit reports, and perform forecasting, statistical, sensitivity, and risk analyses. List price: \$2000. Requirements: 512K, 8087 coprocessor, 5MB hard disk. Information Systems of America, Inc.
500 Northridge Rd.
Atlanta, GA 30338
404/587-6800

The Entrepreneur's Financial Workplate

Designed to help the entrepreneur or financial manager compile a corporate business plan, *The Entrepreneur's Financial Workplate* is a set of seven 1-2-3 templates. The program covers analysis and projection of revenues, costs of goods sold, fixed expenses, profit-and-loss/income statements, cash flow, balance sheets, and break-even points. List price: \$69.95. Requirements: 192K, two disk drives, 1-2-3.

Riverdale Systems Design, Inc.
3333 Henry Hudson Pkwy.
Riverdale, NY 10463
212/549-1692

Portfolio Decisions

A portfolio management package, *Portfolio Decisions* aids investors and financial advisors in tracking purchases, earnings, and sales transactions. The program offers up to eight categories of investments: common stocks, preferred stocks, options, bonds, mutual funds, Certificates of Deposit, treasury bills, and warrants. It provides "what if" simulation for planning purposes, and accounting and audit trails for tax and capital gains purposes. *Portfolio Decisions* also provides access to on-line investment information services for price updates. List price: \$249. Requirements: 128K, one disk drive.

Eagle Software Publishing, Inc.
993 Old Eagle School Rd. #405
Wayne, PA 19087
215/964-8660

Finance Projections

The template collection *Finance Projections* is designed to help businesses plan cash budgets. The package prepares break-even analyses, loan projections, cash budgets, pro forma balance sheets, and income statements. It offers depreciation tables, 10- to 30-year tables, and five ACRS tables. The program also calculates financial ratios and net present values. *Finance Projections* follows Small Business Administration requirements. The pro-

gram can be backed up and modified for specific needs. List price: \$59.95. Requirements: 64K, two disk drives, *VisiCalc*, *Multiplan*, *SuperCalc*, *PeachCalc*, or 1-2-3.

Software Models
P.O. Box 1029
Crestline, CA 92325
714/338-5075

Savings Certificate: Interest Calculator

You can analyze investment opportunities and annuities such as IRAs with *Savings Certificate: Interest Calculator*. The program uses the amount of deposit, interest rate, frequency of compounding, and length of investment in its calculations. It lists all required inputs, such as present worth, future worth, and present value, for each selected investment category. List price: \$34.95. Requirements: 64K, one disk drive.

B & E Software Consultants, Inc.
2172 Donner St. NW
North Canton, OH 44720
216/497-1221

Financial Analyst

For loan, depreciation, and investment analysis *Financial Analyst* performs 17 common calculations. The loan analysis option determines loan payment size, principal based on fixed payments, remaining balance after a specified number of payments, loan amortization, "rule of 78" payoff, and discount points. The depreciation option includes straight line, double declining balance, "sum of years digits," and accelerated cost recovery schedules. The investment analysis option includes compound value of investment and annuity, minimum investment for regular withdrawals, deposit amounts to accumulate future sums, and present value of a future amount. List price: \$50. Requirements: 64K, one disk drive.

Syntax
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

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1651 Third Avenue, New York, NY 10128.



Loan Amortization Schedule

You can calculate monthly, quarterly, semiannual, or annual loan payments with *Loan Amortization Schedule*. The program calculates the payment based on the principal and amortization period, or the amortization period given the principal balance and payment. The report shows beginning balance, payment number, payment amount, interest, principal, and balance. You can print the whole schedule or start and stop at desired payments. Interest and principal reductions are totaled and displayed for the end of each year and for a selected period. List price: \$50. Requirements: 64K, one disk drive.

Ted Day
105 English Dr.
Santa Cruz, CA 95065
408/427-2443

OptionVue Plus

A strategy system for the serious private investor in options, *OptionVue Plus* maintains your position in any number of stocks, indexes, cash-carry commodities, convertible securities, and warrants. In addition to comparative graphics analysis, the program makes specific buy and sell recommendations based on various assumptions, including your price forecast for the underlying security. Commissions, dividends, cost of money, expiration dates, and Reg-T margin requirements are taken into account. The program supports automatic data capture from the Dow Jones News/Retrieval service. List price: \$495. Requirements: 192K, two disk drives.

Star Value Software
12218 Scribe Dr.
Austin, TX 78759
512/837-5498

Financial Fastrax

A collection of 32 spreadsheet templates, *Financial Fastrax* handles personal money management, investment analysis and planning, estate planning, retirement planning, loan computations and amortization schedules, education cost planning, depreciation, calendar mathematics,

and calculation of compound interest and internal rates of return. The collection is available in two volumes: Volume I contains financial calculation utilities; Volume II contains advanced personal planning and analysis. List price: each volume \$60. Requirements: with *SuperCalc* 128K, two disk drives; with *1-2-3* 192K, two disk drives.

Integrated Equity Planning
98-211 Pali Momi St. #302
Aiea, HI 96701
808/488-4766

PeachPlan

An account-oriented financial planning worksheet requiring no formulas or formatting procedures, *PeachPlan* creates a pro forma income statement and balance sheet. The program displays projected budget data for any 12-month period within a 100-year span. A bar graph can display account data to reflect seasonal variations and other business patterns. *PeachPlan* works with spreadsheets such as *VisiCalc*, *PeachCalc*, and *SuperCalc* and with the *IBM Peachtree General Ledger* or the *Peachtree Business Accounting System General Ledger*, permitting flexibility in developing budgets and reports. List price: \$295. Requirements: 128K, two disk drives.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

Wall Street Plotter

For the investor making trading decisions, *Wall Street Plotter* analyzes particular stocks by price and volume. The program generates price/volume, on-balance volume, point-figure, and 30-day moving average charts. It comes with historical data for nine stocks of your choice. Updating is done daily through the keyboard; weekly averages are computed automatically. Up to 300 days of trading data and 210 weekly averages are available for each stock. List price: \$169. Requirements: 64K, one disk drive, graphics board.

Spring Dale Software
1507 Evesham Rd.
Voorhees, NJ 08043
609/795-1454

CD Tracking & Marketing System

A certificate of deposit (CD) productivity tool, *CD Tracking & Marketing System (CTMS)* enables financial institutions to market, track, and control the processing of CD instruments. Controls include data entry screens, maturity date processing with wire instructions, simple or compound interest calculations, and document preparation. Analysis reports are provided by term, rate, maturity date, or effective date. The program generates marketing reports by investor, by CDs within investors, by callback dates, and by state; it can also create other ad hoc reports. It prepares signature cards, customer letters, certificates, safekeeping receipts, waivers of collateral, and local agency contracts. List price: \$4000. Requirements: 256K, two disk drives (hard disk recommended).

Vance Info Systems
2818 Clay St.
San Francisco, CA 94115
415/922-6539

Lease Versus Purchase Analyzer

You can analyze the real cost of acquiring capital equipment on either a lease or purchase basis with *Lease Versus Purchase (LVP) Analyzer*. The program performs a comprehensive analysis to determine the less costly method of equipment acquisition. All factors are evaluated on a present value, after-tax basis. Before-tax cost and raw dollar amounts can also be shown. *LVP Analyzer* performs a purchase conversion analysis of an existing lease to determine whether it would be less costly to exercise a purchase option. List price: \$195. Requirements: 128K, one disk drive.

Software Services of Tampa, Inc.
4410 Ranchwood Ln.
Tampa, FL 33624
813/273-1894

MicroPROPHIT

A financial modeling and planning system adapted from PROPHIT II (a mainframe modeling system marketed by Control Data since 1970), *MicroPROPHIT* creates models of up to 9000 lines and 135 columns. It includes over 50 built-in math and financial functions and has report consolidation features. *MicroPROPHIT* is available with industry-specific models. List price: \$695. Requirements: 256K, two disk drives (hard disk recommended). Via Computer, Inc.
7177 Construction Ct.
San Diego, CA 92121
619/578-5356

Historical Price Charts, Commodity Futures Real-Time Tic Charts

Commodity or stock traders can update daily price files by modem from the M. J. K. Associates data base with *Historical Price Charts*. The program plots daily price charts with moving averages and parabolic stop lines. It also indicates the relative strength of charts along with divergence calculations that help you see opportune times to enter and exit the market. You can dial direct with a Hayes Smartmodem or use Tymnet. An accounting program tracks your trades, equity, profits, and losses.

Commodity Futures Real-Time Tic Charts charts the tic-by-tic quotation data stream broadcast by satellite or FM radio via Bonneville Telecommunication's Market Monitor. Tic charts are drawn in real time as quotes on commodities and financial futures are received from the exchanges. You can chart up to 80 commodities at a time. The package includes historical daily price charts and data management, moving averages, open contract position evaluation, and an accounting program to track your trades, equity, profit, and loss. List price: *Historical Price Charts* \$595, *Commodity Futures Real-Time Tic Charts* \$895. Requirements: *Historical Price Charts* 192K, one disk drive, Hayes Smartmodem, graphics

board; *Commodity Futures Real-Time Tic Charts* 256K, one disk drive, graphics board, serial port, subscription to Bonneville Telecommunication's Market Monitor.

Ensign Software
7337 Northview
Boise, ID 83704
208/378-8086

Tax Mini-Miser

Using a full-screen display for data entry, *Tax Mini-Miser* computes the effects of six alternative tax strategies for a single year or projects the tax effects of a single strategy for up to six years. Special keys increase the data in columns by percentage or amount, replicate entries in columns, display the help screen, and return to the menu. A California version simultaneously computes California state taxes and federal taxes. List price: \$295. Requirements: 64K, two disk drives.

Sunrise Software
36 Palm Ct.
Menlo Park, CA 94025
415/441-2351

Portfolio II

A stock market investment analyzer, *Portfolio II* compares price information entered daily or weekly with the purchase price to establish gains and losses for up to 40 individual securities and for the whole portfolio. Criteria you set for profit-taking and stop-loss positions are automatically applied to each stock in the portfolio. The program then recommends sell-offs and evaluates their impact. You can reset the criteria at any time without affecting the data base and can perform experiments to optimize the potential yield. Trends based on each security's price history, accumulated by *Portfolio II*, are presented as line graphs that display the stop-loss and profit-taking limits. The program accommodates stock split situations without sacrificing the accumulated price history. List price: \$30. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Valuecon Business Forecaster

A data analysis and forecasting package, *Valuecon Business Forecaster* offers trend forecasting, exponential smoothing, regression analysis, and the Box Jenkins methodology. Other features include Census X-11 seasonal adjustment, presentation and analytical graphics, and an editor. List price: \$995. Requirements: 192K, one disk drive.

Valuecon Technologies, Inc.
P.O. Box 241391
Memphis, TN 38124-1391
901/365-7929

Personal Computer/Professional Finance Program II

A financial package for individuals or small businesses without accounting expertise, *Personal Computer/Professional Finance Program II* maintains records of assets and debts and provides income expense and net worth reports. The program performs all bookkeeping functions, requires only one entry per transaction, prints checks, and has functions for automatic monthly bill paying. *Personal Computer/Professional Finance Program II* can pass data directly into *PC/Tax Cut*, a tax preparation and planning program. List price: \$245. Requirements: 128K, two disk drives.

Best Programs, Inc.
5134 Leesburg Pike
Alexandria, VA 22302
703/931-1300

"Superb documentation. Marvelous program for keeping track of income, expenses, checkbook, and assets. So many features and capabilities that it takes several hours to become acquainted with it, but it is well worth it." Bob Stephan, Pebble Beach, California.

"This program is easy to get started with and has the flexibility to grow as users define additional categories and subcategories for their budgeting. It offers reconciliation of credit card and other accounts as well as the usual checking account balancing." Bruce L. Noren, Beavercreek, Ohio

TaxWizard 1984/85

A tax preparation package, *TaxWizard 1984/85* offers a total of 20 forms, including alternative minimum tax, income averaging, small business schedules, and depreciation. The program is menu-driven, and its on-screen help facility has instructions for preparing Form 1040. List price: \$79.95. Requirements: 128K, one disk drive.

Gamma Productions, Inc.
817 Tenth St. #102
Santa Monica, CA 90403
213/451-9507

Internal Rate of Return

For each internal rate of return (IRR), *Internal Rate of Return* shows a graph and a value. The program holds as many as 20 cash flows, including negative values, and allows precision of up to five decimal places. It tests for negative and multiple IRRs from negative 99 percent to positive 100 percent and can be expanded or reduced for optimum display. Because cash flow values remain in memory, you can change a few values without going through many of them. List price: \$50. Requirements: 64K, one disk drive.

Ted Day
105 English Dr.
Santa Cruz, CA 95065
408/427-2443

the cheapware Tax Record

You can keep a record of income and expenses incurred during any calendar year with *the cheapware Tax Record*. You can define up to 32 categories for either income or expenses and categorize all types into eight classes. The program provides printouts in ledger form by month or by any category or class you choose. It displays all data in 40-column width and uses color to indicate credit or debit and other information. List price: \$22.50. Requirements: 128K, one disk drive.

Robert L. Nicolai
4038 N. Ninth St.
St. Louis, MO 63147
314/621-7618

TaxCalc

A tax-planning template for spreadsheets, *TaxCalc* figures three tax scenarios on the screen simultaneously. The program calculates an alternative minimum tax, income averaging, capital gains deductions, capital loss limitations, contribution limitations, and two-earner married-couple deductions. Using the spreadsheet window, you can experiment with the effects of various tax alternatives. The program is currently available for federal and California taxes. The program will not compute self-employment tax or investment interest. List price: *TaxCalc* \$150, *California TaxCalc* \$100. Requirements: 128K; two disk drives; *VisiCalc*, *Multiplan*, *SuperCalc*, or 1-2-3.

TaxCalc Software, Inc.
4210 W. Vickery Blvd.
Fort Worth, TX 76107
817/738-3122

Tax Relief I, Tax Relief II

Designed for personal use, *Tax Relief I* supports the 16 most common tax forms and schedules and a depreciation module. All calculations are automatic, including income averaging and alternate minimum tax. Multiple schedules are also supported. The menu-driven program prints substitute forms in an IRS-approved format. Input sheets are supplied with the package, and the program can be used throughout the year for tax planning.

Tax Relief II is a professional program with tax planning capabilities similar to those of the personal version. It supports 25 forms and schedules, maintains a detailed directory of clients, and displays summaries of each client's tax situation. *Tax Relief II* allows batch printing and printing on IRS forms, substitute forms, or blank paper for use with overlays. List price: *Tax Relief I* \$149, *Tax Relief II* \$349. Requirements: *Tax Relief I* 128K, one disk drive; *Tax Relief II* 128K, two disk drives.

Micro Vision
145 Wicks Rd.
Commack, NY 11725
516/499-4010

Estate Tax Planner

Devised for estate planning, *Estate Tax Planner* permits simultaneous analysis of up to eight scenarios. The program analyzes estate tax liability, present value of taxes, deferred payment of estate tax liability, and liquidity and performs other calculations. Types of input include marital deduction codes, growth rate assumptions, multiple businesses, and outright and split-interest bequests to charities. List price: \$750. Requirements: 128K, two disk drives.

Aardvark/McGraw-Hill
1020 N. Broadway
Milwaukee, WI 53202
414/225-7500

The Professional Portfolio

Meeting the accounting and reporting requirements of professional investors, *The Professional Portfolio* is a securities portfolio management system. It performs accounting, reporting, billing, performance measurement, and automatic dividend posting on a current and historic basis. The program includes a report generator that allows flexibility in producing reports. *The Professional Portfolio* handles a range of securities, allows for multiple managers, offers automatic or manual pricing, and performs "what if" analysis. List price: \$4000. Requirements: 128K, two disk drives.

Advent Software, Inc.
510 Third St.
San Francisco, CA 94107
415/543-7696

Venture Financial Planning System

Designed for business planning, strategic planning, capital investment analysis, and financial reporting, *Venture Financial Planning System* contains logic, accounting procedures, calculations, and 16 reports. You specify parameters and enter data to develop a comprehensive analysis of any business. *Venture* supports any periodicity, such as a 24-month business plan or a 10-year strategic plan. It also performs consolidations, "what if" analyses, and automatic calculation of de-

preciation, cash, or debt. List price: \$395.
Requirements: 192K, one disk drive.
Weiss Assoc., Inc.
127 Michael Dr.
Red Bank, NJ 07701
201/530-9260

Stock-Aid

Maintaining a portfolio of up to 40 stocks, *Stock-Aid* provides automatic price updating from the Dow Jones News/Retrieval service or CompuServe. Eleven types of information are given for each stock, including hold and sell recommendations based on market conditions or modifiable decision logic. Ten stocks can be displayed on the screen at one time. Any data source can be used, but Value Line Data is recommended. List price: \$49.95. Requirements: 64K, one disk drive, Hayes Smartmodem or compatible.
Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Futtrak

Designed for futures market hedgers and traders, *Futtrak* monitors and manages futures portfolios. The program generates up-to-the-minute reports on calculations, cash-futures hedges, year-to-date and month-to-date profits and losses, audit trails, and margin rates.

Futtrak assesses the effectiveness of each hedge and helps determine the appropriate adjustment to achieve specific financial goals. The program simultaneously examines cash market and futures market positions. The *Futtrak* system offers accounting, auditing, record keeping, and cash flow information for cash and futures market portfolio positions as well as graphics and technical analysis capabilities. List price: \$19,500. Requirements: 512K, 640K for market quotation data feed, 10MB hard disk.
Investment Support Systems, Inc.
1455 Broad St.
Bloomfield, NJ 07003
201/338-0321

Dow Jones Market Manager, Analyzer, and Microscope

You can record and maintain tax information for each investment transaction with *Dow Jones Market Manager*. The program has a "tax-lot" system that lets you match transactions against open positions and make investment decisions to minimize tax liability. You can enter buys, sells, short sales, and buy-to-cover transactions for stocks, bonds, options, mutual funds, and treasuries. The program values your existing positions with one keystroke. It matches all sell transactions with existing buy long positions and accommodates buy transactions for existing short positions, allowing you to choose the closing transaction's gain or loss. *Dow Jones Market Manager* offers reports for security holdings by portfolio, security holdings by symbol, and realized gain/loss by portfolio. It also produces a tax record of all completed transactions and year-to-date transactions.

Dow Jones Market Analyzer has relative strength and comparison charts for evaluating the performance of stocks against each other or against an index such as the Dow Jones Industrial Average. The program has individual price and volume charts with moving averages that can be simple, weighted, or exponential for time periods that you select. It provides automatic entry of historical data on stocks and automatic updating of daily data on stocks, bonds, mutual funds, and options. *Dow Jones Market Analyzer* provides access to all Dow Jones News/Retrieval data bases.

Dow Jones Market Microscope has a screening routine that lets you select up to 20 of 68 financial indicators from Media General Financial Services and Corporate Earnings Estimator. The program's Rand Matrix Report provides a summary of the screening report and numerically ranks stocks according to selected fundamental indicators. It lets you know whether each stock meets or exceeds the limits you have set for the indicator. A price alert routine prints a report of all stocks that have reached critical levels for

buying or selling. List price: *Dow Jones Market Manager* \$299, *Dow Jones Market Analyzer* \$349, *Dow Jones Market Microscope* \$349. Requirements: *Dow Jones Market Manager* and *Dow Jones Market Microscope* 128K, two disk drives, Hayes Smartmodem or equivalent; *Dow Jones Market Analyzer* 128K, one disk drive, Hayes Smartmodem or equivalent.
Dow Jones and Co.
P.O. Box 300
Princeton, NJ 08540
609/452-2000

Dow Jones Investment Evaluator, Dow Jones Home Budget

Personal investors can retrieve current stock market quotes and financial information from the Dow Jones News/Retrieval service with *Dow Jones Investment Evaluator*. The program creates 15 portfolios of up to 50 securities each, stores them on disk, and automatically updates them with the latest quotes. You can evaluate your position with reports showing purchase value, current value, gains, and losses. *Investment Evaluator* has both beginning and advanced modes.

Dow Jones Home Budget generates reports on balances in each of your asset, liability, and reserve accounts, indicating areas of under- or overspending. It keeps a ledger of all transactions and reports on transactions for a specified time period. The program produces monthly account summaries with bar graphs, giving you an ending balance in each account and a profit-and-loss summary. It generates a net worth statement and can be programmed to flag tax-deductible expenses. *Dow Jones Home Budget* automatically posts regular transactions, such as mortgage payments and other fixed bills. List price: *Dow Jones Investment Evaluator* \$149, *Dow Jones Home Budget* \$139. Requirements: *Dow Jones Investment Evaluator* 128K, one disk drive, DOS 1.10; *Dow Jones Home Budget* 128K, one disk drive, DOS 1.10 or 2.00.
Dow Jones and Co.
P.O. Box 300
Princeton, NJ 08540
609/452-2000

TexSolver-12

A numerical problem-solving program, *TexSolver-12* provides one-keystroke execution of over 50 financial calculations, including compound interest, present value, and internal rate of return. The program also performs common mathematical functions and displays all functions on screen for reference. List price: \$49.95. Requirements: 64K, one disk drive.

Microtex

P.O. Box 111054

Carrollton, TX 75011

214/980-9833

MAGIC

Traders can use *Moving Average Generated Investment Criteria (MAGIC)* to generate a set of trading rules for any market vehicle or index by making retrospective runs with historic price data. Using those parameters with real-time prices, *MAGIC* figures the buy and sell signals to guide current market decisions. The program helps develop optimum trading strategies tailored to each vehicle. The package has three modules: *DMAGIC* for data entry and processing, *MAGIC* for moving average/oscillator computations, and *\$MAGIC* for computing trading profit and loss. Each *MAGIC* run provides printouts of 12 overbought/oversold oscillators, which can be used, singly or in combination, to develop trading strategies. *\$MAGIC* computes each long or short trade, listing the entry and exit prices, and profit or loss. The printout also includes pertinent data from each trading campaign, such as the number of profit and loss trades, maximum risk while trade is open, and total profits and losses. List price: *MAGIC*, version 1 (includes *DMAGIC*) \$49.95, *\$MAGIC* (includes *DMAGIC* and version 2 of *MAGIC*) \$79.95. Requirements: 64K, two disk drives.

\$Ware Tools for Investors

P.O. Box 645

San Luis Rey, CA 92068

619/757-0329

Econometric Software Package

Designed for analysts, planners, economists, and statisticians, *Econometric Software Package (ESP)* is a forecasting and planning program. It stores historical data, computes a range of statistics, and applies regression techniques to estimate models and generate forecasts. The program can provide information such as the expected demand for a product. It monitors the effects of economic changes in an industry on a company's sales and profits. Analyses can be replicated using alternative scenarios. Data can be either read from ASCII text files or transferred from on-line data sources and files created by 1-2-3, *Multiplan*, *dBASE II*, or *Data Base Manager II—The Integrator*. Data from Chase Econometrics can be directly transferred to and from *ESP* data banks. List price: \$795. Requirements: 256K, two disk drives (hard disk recommended), DOS 1.10 or 2.00 (8087 coprocessor recommended).

Alpha Software Corp.

30 B St.

Burlington, MA 01803

617/229-2924

Financial Futures Calculator

Designed for liability managers, hedgers, traders, and arbitrageurs, *Financial Futures Calculator* computes the relationships between the cash market and popular financial futures contracts such as treasury bonds, domestic certificates of deposit, and Eurodollar contracts on the International Monetary Exchange. Conversion factors, prices, and implied repo rates are calculated for the bond and note contracts. Bond and note data bases are incorporated into the program for automated input. Implied forward rates from the cash market yield curves are computed for discount securities and depository instruments. A treasury bill parity rate matrix is produced, displaying the equilibrium values determined from the futures and cash markets in treasury bills together with the repo market. List price: \$625. Requirements: 128K, one disk drive.

Bond-Tech, Inc.

529 Locust Hill Dr.

Englewood, OH 45322

513/836-3991

Softrend

Designed for business applications, *Softrend* is a managerial forecasting program. Features include result comparison, curve-fitting models, and exponential smoothing methods. List price: \$395. Requirements: 64K, one disk drive.

Valuecon Technologies, Inc.

P.O. Box 241391

Memphis, TN 38124-1391

901/365-7929

Winning on Wall Street

Designed for stock market investors and traders, *Winning on Wall Street* has three integrated programs that support investment decisions. *Trader's Data Manager* is a data base with graphics and communications capabilities. It tracks securities and market indexes, including price/volume statistics and user-defined indicators. The program offers both manual data entry and automatic downloading from Remote Computing (Dial/Data) and the Dow Jones News/Retrieval service. The program automatically stores daily, weekly, and monthly data and produces charts and reports.

Trader's Forecaster performs technical analysis and forecasting based on data retrieved by *Trader's Data Manager*. It includes point and figure charting and a selection of classical and proprietary analysis techniques with definable formulas. *Trader's Accountant* is a portfolio accounting system that handles securities transactions for up to 999 portfolio accounts, plus liquid accounts. It reports profit and loss, splits, margins, interest, and tax data. Prices can be updated manually, automatically, or from *Trader's Data Manager*. List price: *Trader's Data Manager* \$200, *Trader's Forecaster* \$250, *Trader's Accountant* \$350, *Winning on Wall Street* package \$700. Requirements: 192K, two disk drives, color graphics board, Hayes Smartmodem 1200 or 1200B.

Summa Software Corp.

P.O. Box 2046

Beaverton, OR 97075

503/644-3213

PC/TaxCut

A tax preparation and planning program, *PC/TaxCut* performs all calculations, applies maximums, checks for consistent answers, and prints 18 IRS forms and schedules. Data can be changed at anytime. A page prompt directs the user to explanations in the 350-page manual. *PC/TaxCut* includes a tax planner that helps you forecast taxes anytime during the year. The program integrates with *PC/Professional Finance Program II*. List price: \$255. Requirements: 128K, one disk drive.

Best Programs, Inc.

5134 Leesburg Pike

Alexandria, VA 22302

703/931-1300

"Easy to use and flexible for entering and preparing data. One irksome feature is that the program does not have the capability to selectively print a form. If you have to redo a single form or a portion of the tax package (or need a second copy), the program spews out reams of paper."

Bruce L. Noren, Beavercreek, Ohio

Tax Preparer

Designed for tax professionals and individuals, *Tax Preparer* displays the appropriate IRS form on the screen and guides you through data entry with a "road map" and built-in calculator. The program prints 21 IRS-accepted forms and schedules and prints on the 1040 form. For the individual taxpayer *Tax Preparer* does year-long record keeping and year-end tax filing. The program answers "what if" tax planning questions. For the tax professional the program provides automatic client billing and record filing. HowardSoft publishes midyear tax planning updates to accommodate changes in tax laws and filing formats. List price: \$295. PC requirements: 64K, one disk drive. PCjr requirements: 128K, one disk drive.

HowardSoft

8008 Girard Ave. #310

La Jolla, CA 92037

619/454-0121

Summa Switchboards

You can retrieve investment data from the Dow Jones News/Retrieval service, Remote Computing's Dial/Data, Interactive Data Corporation's data base, or Warner's data base with the appropriate *Summa Switchboard*. Retrieved data can be downloaded into 1-2-3, *Multiplan*, *dBASE II*, *WordStar*, and *Winning on Wall Street*. List price: each service \$150. Requirements: 192K, two disk drives, Hayes Smartmodem 1200 or 1200B.

Summa Software Corp.

P.O. Box 2046

Beaverton, OR 97075

503/644-3212

Softseas

A time-series decomposition program modeled after the Census X-11 seasonal adjustment program, *Softseas* isolates and measures the trend, cyclical, seasonal, and irregular components of a time series. Features include full-screen editing, graphics, and various report options. List price: \$225. Requirements: 64K, one disk drive.

Valuecon Technologies, Inc.

P.O. Box 241391

Memphis, TN 38124-1391

901/365-7929

The Bond Swap Analyzer

A program that analyzes the profitability of up to ten bond swaps under various market conditions and assumptions, *The Bond Swap Analyzer* computes yield or price, duration, and accrued interest on each bond. You can designate the income reinvestment rate and the horizon date yields. Net cash flow, profitability, and realized rates of return are displayed for each set of assumptions. The program calculates break-even reinvestment rates, horizon yields, and spreads on each swap to determine the optimal market conditions for making a swap. List price: \$1700. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Technical Data Corp.

45 Milk St.

Boston, MA 02109

617/482-3341

Softregres

A time-series regression analysis program, *Softregres* is designed for business application forecasting. Techniques available range from regression estimation to simulation with multiple regression models. The program can correct for auto-correlation. List price: \$495. Requirements: 64K, one disk drive.

Valuecon Technologies, Inc.

P.O. Box 241391

Memphis, TN 38124-1391

901/365-7929

Microtax Series

Organized around either federal or state tax structures, *Microtax* is a group of menu-driven tax preparation programs that can be used separately or together. Each program uses predefined IRS rules for descriptive fields. *Microtax Bronze* prepares 14 schedules and forms, provides for multiple clients, prints IRS forms, and automatically selects alternative tax methods. *Microtax Silver* prepares individual or professional tax returns on 35 schedules. A depreciation module computes according to either an Accelerated Cost Recovery System or nonrecovery methods. *Microtax Gold* prepares individual tax returns and works with a laser printer. *Microtax Partnership* prepares partnership returns; *Microtax Corporate* prepares corporate and subchapter-S returns. Used with *Microtax Silver*, *Microtax State Tax Packages* provide returns for 26 states with crossovers of common double filing such as New York and New Jersey or Missouri and Kansas. Information from the federal forms is automatically transferred to the state forms, and the program alerts you to any information that may have to be changed or added. All *Microtax* programs print on IRS forms, substitute forms, or blank paper for use with overlays. All programs except *Microtax Bronze* allow batch printing. List price: *Microtax Bronze* \$295, *Microtax Silver*, *Microtax Partnership*, and *Microtax Corporate* \$995 each, *Microtax Gold* \$1195, *Microtax State Tax Packages* \$250 to \$800. Requirements: 96K, two disk drives.

CLR Microtax

2395 Midway Rd.

Carrollton, TX 75006-2504

800/642-7689

Wall Street Window

Combining technical stock analysis techniques and portfolio management capabilities, *Wall Street Window* provides automatic data base communications, high-resolution graphics displays, and a spreadsheet template. Charts cover high/low/close volume, profit and loss, moving averages, relative strength, trends, oscillators, and comparisons. Up to five stocks can be displayed simultaneously in four colors. The program's Window mode offers selection of daily, weekly, or monthly prices. *Wall Street Window* includes a portfolio management worksheet for 1-2-3 or *VisiCalc*, and current values are automatically updated using data from the Dow Jones News/Retrieval service. The communication program retrieves historical price and volume data. Up to 100 stocks, each with over a year's daily quotes, can be stored on a single disk. List price: \$395. Requirements: 192K, two disk drives, color graphics board, Hayes Smartmodem, 1-2-3 or *VisiCalc*. R & D Software Assoc., Inc. P.O. Box 2727 Reston, VA 22090 703/476-6597

Software 1040

A tax preparation package for accountants, *Software 1040* prepares IRS Form 1040, all lettered schedules, and the 1040ES, 4868, and most other numbered schedules. Data is entered on columnar input sheets. Full-screen, page-by-page facsimiles of the input sheets are displayed for data entry and verification. *Software 1040* performs all necessary calculations, makes optimum tax selections, and produces returns on preprinted forms. It also generates a filing instruction letter and a mailing label for the client as well as an itemized list of the forms prepared for billing purposes. *Software 1040* provides accountants with a multifaceted summary report, comparing prior year and current year figures, with adjustments highlighted. A status report keeps track of the tax season work load. Supplemental programs are available to prepare returns for

over 40 states. List price: federal forms \$1800, state forms \$400 per state. Requirements: 256K, 10MB hard disk, DOS 2.00 or later version.

1040 Software, Inc.
A Prentice-Hall Company
10 Nevada Dr.
P.O. Box 1010
New Hyde Park, NY 11042
516/775-5566

Amortizer III

A program for handling loan information and loan amounts, *Amortizer III* calculates original loan amount, interest rate, payment amount, or number of payments. The program accommodates variable interest rates, multiple-loan combinations, negative amortization, and interest-only loans with balloon payments. List price: \$79. Requirements: 64K, one disk drive.

Good Software Corp.
12900 Preston Rd.
Dallas, TX 75230
214/239-6085

SoftTax

A tax preparation and simulation template for *VisiCalc*, *SoftTax* prepares and prints complete tax returns for the IRS. *SoftTax* uses *VisiCalc* for data entry. All input screens use IRS formats for each schedule or form, and data is automatically merged from associated forms. You can enter net change amounts to income and adjustment categories to perform "what if" analyses. The program recalculates all taxes as well as marginal and overall tax rates. The individual version contains 21 forms and schedules; the preparer's version contains 30 forms and a batch-print facility, a client cover letter and bill, and a parameter file to set print options. The professional version adds trust, partnership, and corporate forms and schedules. List price: individual version \$199, preparer's version \$499, professional version \$850. Requirements: 128K, two disk drives, *VisiCalc*.

Design Trends Ltd.
644 Danbury Rd., Box G
Wilton, CT 06897
203/834-1560

Dow Jones Spreadsheet Link

Receive the latest stock quotes with *Dow Jones Spreadsheet Link*, a program that extracts information from the Dow Jones News/Retrieval service and inserts it directly into a *VisiCalc*, *Multiplan*, or 1-2-3 spreadsheet. *Dow Jones Spreadsheet Link* automatically logs on; once properly configured for a particular system, the program executes the logon command, enters the data base, and extracts the requested information unattended. The program extracts any numeric information from the Dow Jones data bases, including current and past stock quotes, descriptions of corporations listed on the service, and fundamental data. List price: \$249. Requirements: 64K, one disk drive, serial port, subscription to the Dow Jones News/Retrieval service.

Solutions, Inc.
13 State St.
P.O. Box 989
Montpelier, VT 05602
802/229-0368

Mortgage Loan Servicing System

With the aid of *Mortgage Loan Servicing System*, mortgage bankers can process and maintain both conventional and FNMA-type loans. The system manages mortgage loan portfolios for individual investors, providing daily and monthly reports. Accounting transactions are reflected immediately; fuller edits and control reports are produced at the end of the day. The package permits on-line inquiries for account status, year-to-date transactions, escrow analysis, and insurance data. A name and city search facility helps find information when the account number is not known. *Mortgage Loan Servicing System* is adapted from software for the IBM System/34, System/36, and System/38 but doesn't share data with them. List price: \$5500. Requirements: 128K, 10MB hard disk.

Satter Computing Services
2330 S. Congress Ave.
West Palm Beach, FL 33406
305/968-0750

Profin

Designed for small-business owners, *Profin* is a financial analysis package that helps make investment decisions. The menu-driven program uses a question-and-answer format to forecast and budget investment possibilities. *Profin* allows "what if" calculations and analyzes discounted cash flows, return on investments, and projected capital expenditures. Data can be integrated with *Multiplan*, *VisiCalc*, *SuperCalc*, and other spreadsheet files. List price: \$295. Requirements: 64K, one disk drive. Business Software Pty. Ltd. 12021 Wilshire Blvd. #194 Los Angeles, CA 90025 213/410-3912

Market Link

A communications program, *Market Link* retrieves quotes from the Dow Jones News/Retrieval service while unattended. Using function keys, investors build a list of stock symbols for which quotes can be acquired at six preset times. Quotes are stored on disk for review at a later time. The program automatically turns off the screen when it detects an absence of activity. The Dow Jones News/Retrieval service and The Source can each be dialed with one keystroke. List price: \$59.95. Requirements: 128K, one disk drive, Hayes Smartmodem or compatible. Smith Micro Software P.O. Box 604 Sunset Beach, CA 90742 213/592-1032

MoneyTrack

Designed for individuals with multiple sources of income, small businesses, and professionals, *MoneyTrack* records expense payments and financial transactions for up to 99 funds, 99 businesses, and 900 ledger accounts. The program files up to 3500 records per floppy disk and 12,000 per hard disk. *MoneyTrack* prepares reports covering transactions, balances, repeating items, and entry audit. It prints checks following up to nine formats, copies repeated transactions, flags checks that have cleared the bank, prepares a year-end transaction summary, and generates balances forward for each

fund, asset, and liability. List price: \$295. Requirements: 128K, two disk drives. Pacific Data Systems, Inc. 6090 Sepulveda Blvd. Culver City, CA 90230 800/343-9194, 800/421-4706 California, 213/559-8713

The Rate of Return Analyzer

A program that calculates total rates of return, *The Rate of Return Analyzer* simultaneously handles up to 14 fixed-income securities, based on users' assumed market levels and reinvestment rates. The program includes graphics capabilities. List price: \$1350. Requirements: 128K, two disk drives, DOS 2.00 or later version. Technical Data Corp. 45 Milk St. Boston, MA 02109 617/482-3341

Finar

Designed for tabular data, *Finar* is a large-scale sequential-logic financial modeling system. User-constructed prompts are in basic English. *Finar* handles up to 32,000 elements and consolidates up to 1000 worksheets. The program includes a built-in editor, a report generator, and financial and mathematical functions. List price: \$1800. Requirements: 128K, two disk drives (hard disk recommended). Finar Research, Inc. 2750 S. Wadsworth #A132 Denver, CO 80227 303/232-2993

Fixed Income Portfolio Manager

A portfolio manager for up to 32 fixed-income portfolios with up to 400 issues each, the *Fixed Income Portfolio Manager* figures portfolio statistics, weighted averages, and distributions. Customized reports and graphs can include up to 50 fields of information. Matrix pricing permits rapid repricing of portfolios. List price: \$2850. Requirements: 128K, two disk drives, DOS 2.00 or later version. Technical Data Corp. 45 Milk St. Boston, MA 02109 617/482-3341

MiniModel

A financial modeling system, *MiniModel's* model size is limited only by disk space. The model time horizon can be advanced to eliminate old data automatically. Actual operating results can be fed into the model and protected from erasure. Models can be consolidated and then processed under a separate set of customized rules. *MiniModel* includes 45 financial commands to create rule sets. List price: \$495. Requirements: 128K, two disk drives, CP/M-86. Westico, Inc. 25 Van Zant Norwalk, CT 06855 203/853-6880

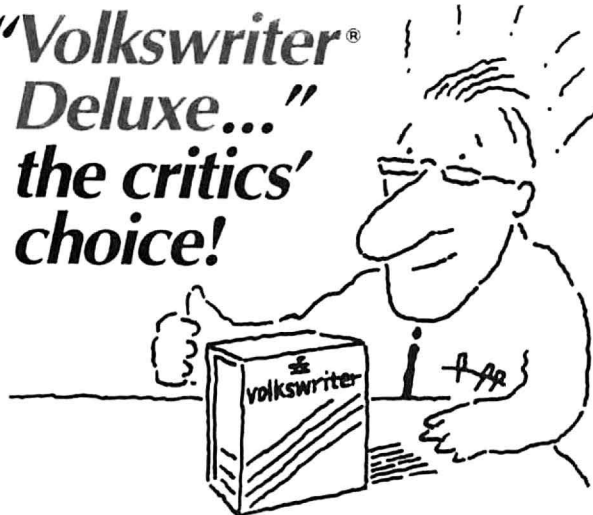
Tax Strategist

A program that evaluates tax reduction strategies, *Tax Strategist* computes federal income tax liability for up to ten years. It automatically calculates the amount of tax shelter needed to reach a desired tax reduction. The program uses tax tables, income averaging, and alternative minimum taxes over a ten-year period. For each year it selects the most advantageous method among tax alternatives. *Tax Strategist* provides printed reports and can integrate data from XQ Software's *Investment Strategist*. List price: \$395. Requirements: 128K, two disk drives. XQ Software, Inc. Division of Quadram Corp. 4350E International Blvd. Norcross, GA 30093 404/564-1975

Net Worth

A menu-driven program, *Net Worth* helps users monitor investment portfolios. It provides cash-equivalent summaries of assets and liabilities, annual portfolio income figures, year-to-date capital gain and loss summaries, latest closing prices on owned securities, and automatic weekly updates of stock trading ranges and closing prices. Other features include a reward-to-risk computation of factors affecting market trades, automatic transfer via modem of Dow Jones News/Retrieval service information, graphics

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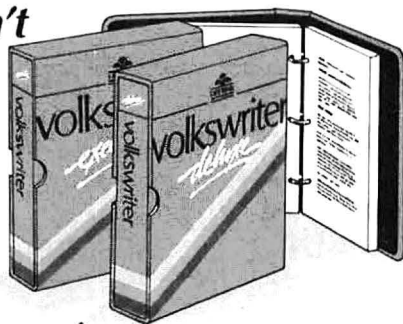
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411 Pacific Street
Monterey, California 93940
(408) 373-4718 / TWX 176786

screen displays, and report generation. You can manually update the data base without subscribing to the Dow Jones service. List price: \$59.95. Requirements: 128K, two disk drives.
Bullish Investment Software
P.O. Box 853
Mansfield, TX 76063
800/433-3605, 817/473-9249

Master Tax, Standard Tax

Designed to help prepare Federal income tax returns, *Master Tax* processes 33 forms and schedules. The program calculates depreciation and amortization for 27 rental properties. *Master Tax* includes a tax questionnaire and a word processor. It automatically chooses the most advantageous tax calculation. Output can be printed on preprinted forms, overlays, or computer-generated forms. *Standard Tax* is a Form 1040 preparation package that prepares 28 forms and schedules. List price: *Master Tax* \$1795, *Standard Tax* \$995. Requirements: 128K with DOS 1.10, 192K with DOS 2.00 or later version, two disk drives.

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1061 Fraternity Circle
Kent, OH 44240
216/678-9015

Broker's Notebook

A portfolio management and prospecting tool for retail securities brokers, *Broker's Notebook* generates personalized client and prospect letters based on security holdings and client interest criteria. It also features capital gains and losses reports, formats for extensive client notes, and cross-referencing for security objectives. You can sort using up to five key fields from a total of 40 stored categories. *Broker's Notebook* includes electronic price and dividend updating and lets you combine portfolios from several clients to create one large account. List price: \$1500. Requirements: 256K, two disk drives.

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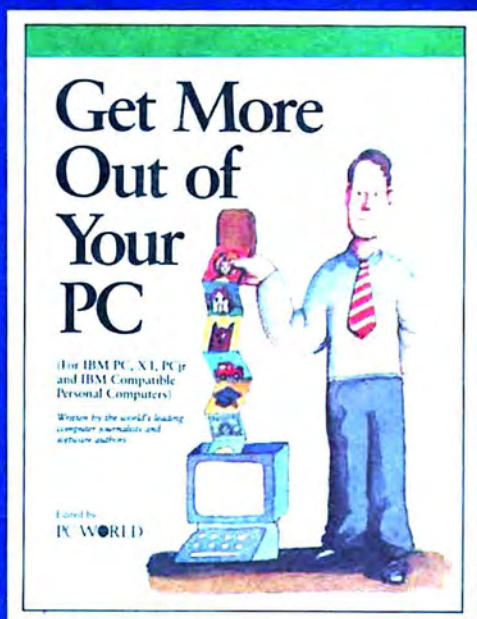
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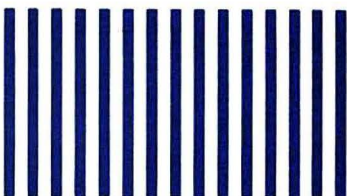
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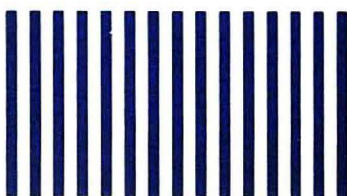
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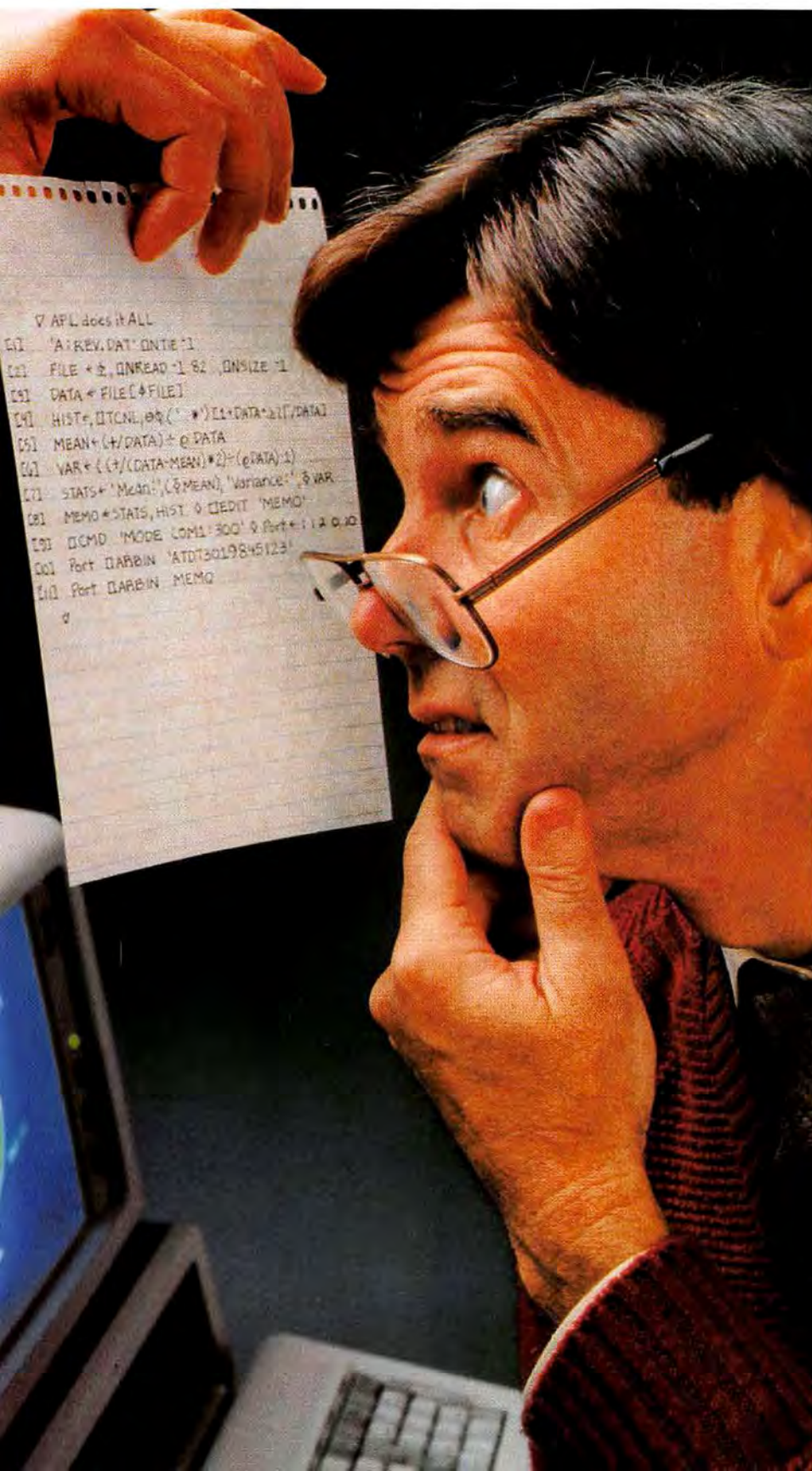
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The program is written in an application development language called the APL*PLUS/PC System. Briefly, here's what it does. First, it sorts a DOS file containing revenue data and plots the revenues as a histogram. It calculates mean and variance revenues. Then with the help of a full-screen editor, it creates a memo combining the histogram, statistics and descriptive text. Finally the program issues a DOS command to the PC, dials a host computer, and electronically mails the memo. All in just 11 lines.

If you have problems that can't be handled by the software you're currently using, you need the APL*PLUS/PC System. It costs \$595.00, and runs on the IBM PC with 192 KB of RAM as well as on a number of compatible machines.

See your local dealer for a demonstration, or contact STSC for the name of the dealer nearest you. Call (800) 592-0050, or write STSC, Inc., 2115 East Jefferson Street, Rockville, Maryland 20852. In Maryland, call (301) 984-5123.

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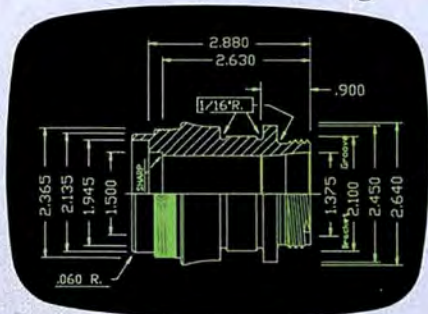
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Architectural layout courtesy of Lansing Pugh, Architect Solar Panel Assembly plot courtesy of Future Technology, Inc.




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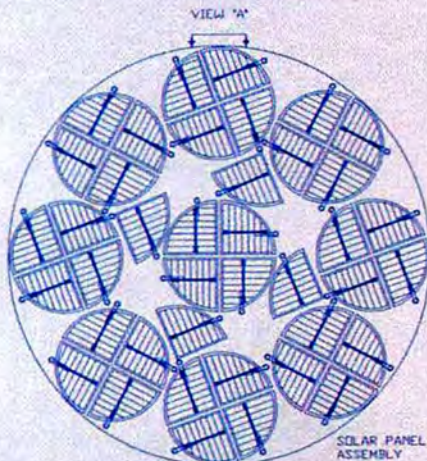
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Job-Specific Applications

Katie Seger

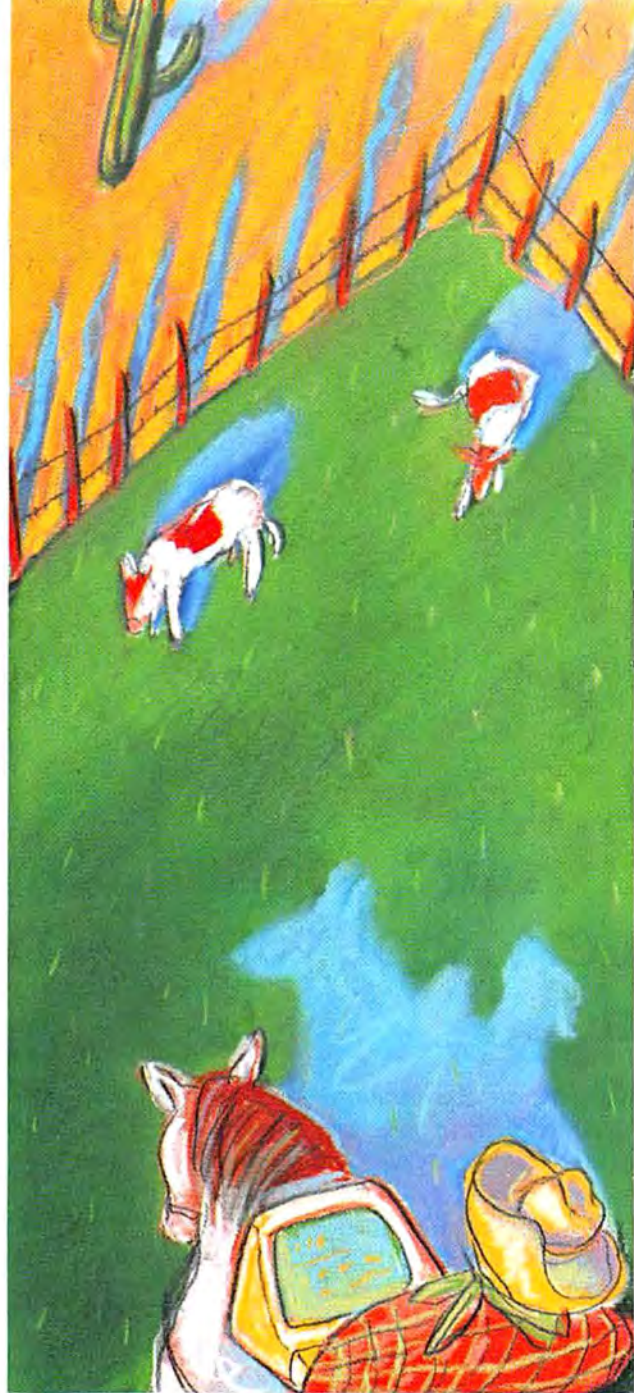
Word processors, data base management systems, and spreadsheets are generic programs, used in a variety of jobs in business and industry. But generic programs may not meet the specialized needs of many professions and businesses. People with programming experience may write their own programs to perform specific tasks or use specially written macros to adapt application programs to specific work needs. Many people, however, turn to job-specific, or vertical market, software to meet their unique computing needs.

Better than generic application programs, job-specific software performs particular tasks for real estate agents, farmers, lawyers, architects, doctors, truckers, ranchers, and engineers. For example, a generic data base program may be sufficient to handle a busy pediatrician's record keeping. But a job-specific program would allow the doctor to store, sort, and search more information, including patient histories, diagnoses, chart notes, and insurance and billing records. The trade-off for specialized features

is usually a larger price tag than for many best-selling generic application programs.

Robert E. Ivancevich, marketing vice president of Physicians Practice Management (PPM), an eight-year-old company, says that job-specific software may be hard to find because most retail stores can't afford to stock it or to train their salespeople to use it. Demand for these programs is much lower than for generic application programs. Industry publications such as medical and banking journals often carry job-specific software advertisements, Ivancevich says. Professional associations may have information on specialized software for their members. But Ivancevich thinks that the best information comes from referrals, suggesting that people talk with others in their profession about software and systems.

Ivancevich recommends that buyers take their time in the vertical market. Most people see job-specific software as a one-time-only purchase, he says, pointing out that PPM customers often take four to six months to select and purchase a package. The office manager and staff should be involved as much as possible in the selection procedure. "An important thing to remember," he says, "is that for the most part the person who buys the vertical mar-

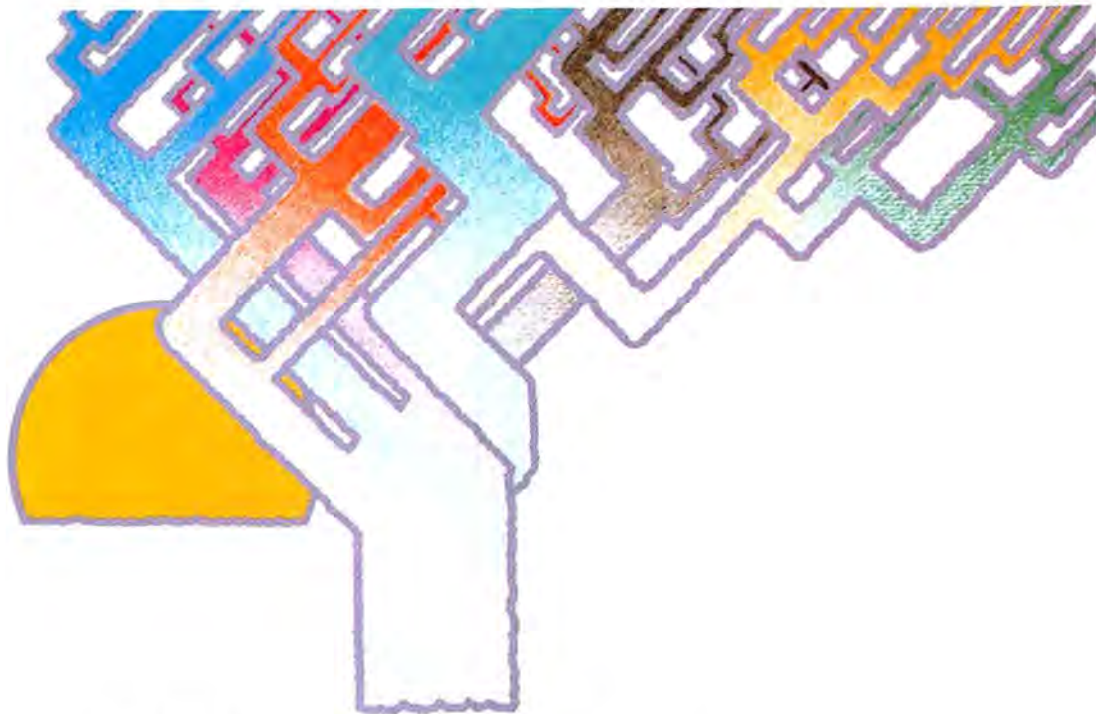


ket program is not the person who will be using the system." Staff should be involved in the selection process not only because it minimizes their natural resistance to change, he says, but also because they will be working with the software daily.

Ivancevich emphasizes the last step in the purchase. "Training is essential. Most vertical market software is too complex to learn by yourself." Documentation is often lengthy, and most packages combine many programs; training is necessary to get the most out of the purchase. Many of the the larger job-specific software firms offer training with their packages.

Job-specific software requires a greater commitment of time and money than do generic application programs. But when you use the right tool for the right job, increased work productivity is the reward.

*Katie Seger is an Assistant Editor
at PC World.*



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Agriculture

RATS

An agricultural program, *RATS* calculates nutrition ratios for domestic and wild ruminants such as dairy and beef cattle, sheep, and deer. Answers to prompts and selections from menus help control amounts and ratios of roughages. The program selects protein and mineral supplements if roughage proves inadequate. *RATS* comes with sample data files that can be modified according to supplies and seasonal variations. List price: \$425. Requirements: 128K, two disk drives. Westra-Danen Assoc. Inc. 12910 50th St. #204 Edmonton, Alberta T5A 4L2 Canada 403/478-2985

Crop Management System

Divided into three programs, *Crop Management System* analyzes crops by acre or by field. A worksheet program calculates pump station efficiency, motor horsepower, and plant efficiency factors. A field program builds a history file of problems for a field; the field can be an entire farm or a subdivision of a farm. The third program produces reports for banking, budget projections, cost accounting, income tax information, and yearly cost comparisons. List price: \$549. Requirements: 64K, one disk drive. PD, Inc. 2750 N. Texas St. #110 Fairfield, CA 94533 707/422-0572

Agri-Management

Designed for farmers and ranchers, *Agri-Management* is a menu-driven accounting program that provides double-entry bookkeeping and a definable chart of accounts. It creates a net worth statement with short-, intermediate-, and long-term assets and liabilities. *Agri-Management* permits simultaneous check writing and data entry. The check and the deposit registers automatically credit and debit specified accounts. *Agri-Management* produces monthly reports of individual enterprises and the business as a whole. List price: \$695. Requirements: 64K, two disk drives. Software Techniques of Colorado, Inc. 1300 Lory St. Ft. Collins, CO 80524 303/482-2697

Price-It

A pricing and inventory program, *Price-It* is designed for those mixing and selling feeds. The program stores information on ingredients and formulas in either English or metric units. Each formula contains retail, wholesale, and bagging markups. You can specify a minimum inventory for each ingredient and obtain a printout of ingredients with inventories below the minimum. A printed price list of formulas, sorted by number and arranged by category, shows actual, wholesale, and retail costs per ton and per bag. List price: \$395. Requirements: 64K, one disk drive. Agricultural Software Consultants, Inc. 1706 Santa Fe Kingsville, TX 78363 512/595-1937

CropMaster

Detailed field and crop histories on fertilizer, seed, and pesticide use can be tracked with *CropMaster*. The program helps you record and maintain grain and crop inventories and generate budget and cost reports on individual fields. *CropMaster* works with up to 99 farms and 350 fields. List price: \$395. Requirements: 128K, two disk drives. Professional Farm Software 219 Parkade Cedar Falls, IA 50613 800/553-2910, 800/772-2106 Iowa

Engineering and Construction

Construction Accounts Payable/Receivable

Operating independently or while linked to the manufacturer's general ledger and job cost systems, *Construction Accounts Payable/Receivable* can distribute the amount of a single invoice to ten separate general ledger accounts and jobs. It automatically posts to cash and accounts payable and maintains vendor activity totals. The accounts payable segment calculates supplier checks based on invoices selected for payments. You enter discounts as a percentage along with the expiration date. Invoices can be selected for payment individually or based on the due date, and the appropriate discount is calculated. The accounts payable segment revokes discounts based on check issue date, a feature that can be overridden manually. It also prints checks and 1099s and provides a paid or unpaid item listing and an aging summary for all items.

The accounts receivable segment posts directly to various general ledger accounts; it allows an invoice to be entered at any time during the cycle and keeps track of contract deposits made before the invoice is billed. The program prints reports that list invoices not yet billed, paid and unpaid items, an aging summary of all items, and customer statements and invoices. For cash flow analysis the program also separates current receivables

from those retained. List price: \$1500. Requirements: 64K, hard disk, CP/M-86, 132-column printer. Construction Data Control, Inc. 6410 Northbelt Pkwy., Ste. A Norcross, GA 30071 404/448-4722

Construction Payroll

Handling records for both salaried and hourly employees, *Construction Payroll* operates independently or while linked to the manufacturer's general ledger and job cost systems.

The program maintains employee information, pay amounts, hour entry, and verification; computes employee pay, miscellaneous deductions, miscellaneous pay, and employer contributions; and prints management reports. Pay types range from regular to vacation, holiday, and overtime pay. Lump sum payments such as bonuses can also be entered. The program accounts for individual state tax rates, health insurance rates, and miscellaneous deductions such as stock plans and savings bonds. Payroll checks can be printed. *Construction Payroll* includes management reports on monthly, quarterly, and yearly payroll totals for each employee and prints payroll journals and information for state and federal unemployment tax reports. List price: \$1500. Requirements: 64K, hard disk, CP/M-86, 132-column printer. Construction Data Control, Inc. 6410 Northbelt Pkwy., Ste. A Norcross, GA 30071 404/448-4722

Construction Job Cost

Management can detect overruns by using *Construction Job Cost*. This job-cost tracking program operates independently or while linked to the manufacturer's accounts payable and payroll systems. Separate supplier, subcontractor, and direct labor costs can be entered automatically from other systems. *Construction Job Cost* updates estimated completion costs

based on percentage complete reports. You can select reports by detail or summary. Specific jobs or portions of jobs can be selected for printing. Using original cost budgets, the program monitors actual expenditures and provides cost-to-complete projections. List price: \$1500. Requirements: 64K, hard disk, CP/M-86. Construction Data Control, Inc. 6410 Northbelt Pkwy., Ste. A Norcross, GA 30071 404/448-4722

ACI-214 Analysis

A 1-2-3 template for concrete producers and engineering firms, *ACI-214 Analysis* computes and plots quality control information based on concrete strengths. It follows the American Concrete Institute's guideline 214 to prepare reports and graphs based on the breaking strengths of concrete samples. List price: \$495. Requirements: 192K, two disk drives, 1-2-3. Systemics 3050 Spring St. West Bloomfield, MI 48033 313/851-2504

Construction General Ledger

Using double-entry accounting procedures, *Construction General Ledger* produces a full range of accounting reports with detailed audit trails showing the origin of each posting. Automatic proof totals ensure that separate books are always in balance. The program accommodates percent accounting methods and maintains information at two levels, such as company and division or division and department. *Construction General Ledger* automatically receives and posts information from other integrated systems and allows new period input before closing the present period. Budgets for each month may be assigned to all accounts for variance reporting. List price: \$1500. Requirements: 64K, hard disk, CP/M-86, 132-column printer. Construction Data Control, Inc. 6410 Northbelt Pkwy., Ste. A Norcross, GA 30071 404/448-4722

EsPRI Estimating

A menu-driven construction cost estimating system, *EsPRI Estimating* lets you build your own data base and tailor the system to your needs or estimation methods. The program uses a preassigned work assembly that permits either checklist or simultaneous takeoff of multiple items and automatic computation of components. *EsPRI Estimating* can give a total cost or cost breakdown. List price: \$2690. Requirements: 128K, two disk drives. Contractors Management Systems 1760 Reston Ave. #101 Reston, VA 22090 703/435-3172

"The EsPRI Estimating system was designed with a builder in mind." Kenneth W. French, Houston, Texas

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"EsPRI Estimating cuts estimating time by 80 percent and increases accuracy substantially." A. DiSarro Construction Co., Schenectady, New York

Structural Analysis Software for Micros

A package of 11 programs, *Structural Analysis Software for Micros* combines computer graphics with linear and nonlinear finite element truss-and-frame analysis. You can create a three-dimensional mesh, rotate it in three dimensions, store it on disk, and perform truss-and-frame analyses. The original mesh can then be recalled and the deflected structure overplotted. *Structural Analysis Software for Micros* analyzes nonlinear material properties and trusses with large deflections, performs combined stress analyses, and determines the properties of beam cross-sections that have arbitrary shape. The programs are written in BASIC. List price: \$96. Requirements: 64K, one disk drive, color graphics board. Kern Publications P.O. Box 1029 Duxbury, MA 02331 617/934-0445

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TModel—Transportation Modeling System

Transportation engineers or planners can project long-range roadway needs with *TModel—Transportation Modeling System*. The program uses land-use planning to analyze the hourly traffic volumes of either an existing or a planned roadway network. *TModel* uses dynamic node modeling, including one- to three-way stop signs and traffic signals. It can model up to 80 zones, 350 nodes, 1200 links, and 28 turn-movement locations. *TModel* has no link category restrictions or artificial link weighting, and the program's distribution and assignment operations are performed in RAM. List price: \$1200. Requirements: 128K, one disk drive. Professional Solutions, Inc. 3765 N.W. 173rd Pl. Beaverton, OR 97006 503/645-4422

Bid Writer

Equipment dealers, contractors, and engineers can use *Bid Writer* to prepare customer proposals for inventory parts and labor. Bids can include heading information, subtotals, totals, and items from an established library of frequently needed products. The program also produces a list of library records and proposals on file. List price: \$240. Requirements: 128K, two disk drives. Key Systems, Inc. 512 Executive Park Louisville, KY 40207 502/897-3332

Images-2D 2.0

An engineering analysis program, *Images-2D* performs two-dimensional static and dynamic analyses for beams, trusses, triangular plates, and springs. The menu-driven program prompts you for structural geometry, joint and member properties, material properties, and load configuration. The program analyzes results of loads, deflections, and beam stresses. When doing dynamic analysis, *Images-2D* solves for frequencies and mode shapes, which can be plotted and animated in full color. By entering responses to an earthquake, you can also do seismic analysis. List price: \$1699. Requirements: 192K, 8087 math coprocessor, two disk drives, color graphics board. Celestial Software Inc. 125 University Ave. Berkeley, CA 94710 415/841-7175

Program SST

A data base of AISC steel section tables, *Program SST* lets you view properties of a single section or group of sections to satisfy your design criteria. You can add and delete data base sections. Program source code is provided, which you can customize to meet specific needs. List price: \$150. Requirements: 64K, one disk drive. TechArt Associates P.O. Box 370 Berkeley, CA 94701 415/525-0870

Plan/Trax

Designed as a planning and monitoring tool for engineering, architectural, and construction projects, *Plan/Trax* is a critical path scheduling, costing and resource planning system. The menu-driven program produces the project planning and status reports of PERT (Project Evaluation and Review Techniques) systems. *Plan/Trax* sets up a budget after you divide each project into tasks, allocate fixed costs and labor requirements, and assign beginning and ending dates. When you provide periodic updates, the program automatically compares actual expenses with projected expenses to help monitor profits and costs. List price: \$595. Requirements: 256K, one disk drive. Omicron Software 57 Executive Park S #590 Atlanta, GA 30329 404/325-0124

Engineering Software for Micros

Combining graphics with engineering problem solving, *Engineering Software for Micros* is a package of 25 programs that show how to write computer-aided design (CAD) software and how to use a microcomputer for professional engineering work. You can create engineering drawings; store, recall, update, and merge them; and produce three-dimensional isometric views. Physical properties such as weight, electrical resistance, and thermal capacity may be added to the components in the drawing. Stored drawings can be recalled by application programs that perform mechanical analysis, heat transfer analysis, circuit analysis, and matrix operations. Also included are programs that perform Fourier series and transform analyses. List price: \$50. Requirements: 64K, one disk drive, color graphics board. Kern Publications P.O. Box 1029 Duxbury, MA 02331 617/934-0445

Stress and Strain

A package of programs for solving two- and three-dimensional problems, *Stress and Strain* graphically displays elements in loaded bodies and shows the stress resultants on each face drawn to scale. You can change the elements' orientations and watch the stress change accordingly. List price: \$85. Requirements: 64K, one disk drive, color graphics board.

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617/934-0445

Preliminary Cost Estimating

Designed for architects and contractors, *Preliminary Cost Estimating* estimates construction costs on 36 building types or combinations. Costs are adjusted for factors such as inflation, topography, and building type. Cost figures are derived from a combination of Dodge, Means, and Marshall figures. List price: \$1995. Requirements: 64K, one disk drive.

ACCI Business Systems, Inc.
4625 North Frwy. #200
Houston, TX 77022
713/697-3566

Statics

Engineers can visualize the mechanics of a problem with *Statics*, a collection of programs that graphically display forces and moments. Two main programs solve two- and three-dimensional statics problems. When you enter forces and moments applied to a rigid body at specified points, *Statics* automatically sets up and solves equations of equilibrium using the Gauss-Jordan technique for solving simultaneous equations. The result appears graphically on the screen, showing the applied loads and reactions. Forces and moments are displayed as vectors. List price: \$65. Requirements: 64K, one disk drive, color graphics board.

Kern Publications
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

Beamjois

Beamjois is designed to select a Douglas fir wood member or a prefabricated truss joist to take imposed loads (in accordance with the 1982 Uniform Building Code) for either a simple or cantilevered span. The program asks questions regarding type of structure, distribution of loads, moisture content, and span. *Beamjois* uses the answers to calculate the moment, shear, and reactions and checks the member against a data bank of allowable stresses for different grades of lumber under various conditions. The process can be repeated with different-size members until the optimum size is reached. List price: \$98.72. Requirements: 64K, one disk drive.

J. J. Jordan, Architect-Engineer
5236 Overbrook Way
Sacramento, CA 95841
916/332-6610

Retwalls

You enter the amount of applied load and wall height, and *Retwalls* determines the construction requirements of a poured concrete or concrete block retaining wall, the sizes of the concrete elements, and the necessary size and spacing of steel reinforcement. The program is designed primarily for walls built against earth but can also be used for freestanding walls. *Retwalls* lists preset soil factors and requests site conditions such as wall height and thickness, footing size, and surcharge load and distance. With this information the program shows a diagram of the wall and footing with all pertinent data, including moments, and indicates whether the wall is satisfactory. If it isn't, *Retwalls* suggests changes in dimensions. List price: \$78.44. Requirements: 64K, one disk drive.

J. J. Jordan, Architect-Engineer
5236 Overbrook Way
Sacramento, CA 95841
916/332-6610

Images-3D Static and Dynamic Analysis

A finite element analysis program, *Images-3D Static and Dynamic Analysis* defines complex models with 1 to 300 nodes and 1800 degrees of freedom. A library offers the following element types: beam, truss, single-noded spring, two-noded spring, triangular membrane plate, and triangular membrane plus bending plate. You can view the model from any perspective, using options such as rotation, zoom, hidden line removal, out-of-plane clipping, surface plotting, boundary plotting, and element-numbering features. After a static and dynamic analysis, you can plot static deflected shapes and animated dynamic mode shapes. A hard disk version is available. List price: \$3900. Requirements: 512K, two disk drives, 8087 math coprocessor, color graphics board.

Celestial Software Inc.
125 University Ave.
Berkeley, CA 94710
415/841-7175

Load 123

A template for 1-2-3, *Load 123* calculates 24-hour building heating and cooling loads. Algorithms and psychometric analysis are based on ASHRAE procedures (RP 138). The program features a library of 13 roof and 41 wall types. Heating loads are calculated for transmission losses and infiltration. Cooling loads are calculated for conduction, solar, internal loads, and infiltration. Building or block load output includes peak heating and peak total cooling load; sensible and latent loads for equipment, people, roofs, walls, and lights; and peak month and hour. There are up to 250 zones per run. Zone calculation output includes peak total cooling load, sensible and latent cooling loads, cfm, cfm/ft², hour of peak total cooling load, and peak heating load. List price: \$120. Requirements: 512K, two disk drives, DOS 2.00 or later version, 1-2-3.

E. Jessup & Assoc., Mechanical
Engineers
4977 Canoga Ave.
Woodland Hills, CA 91364
818/348-2068

Duct 123

A template for 1-2-3, *Duct 123* calculates duct size, velocity, pressure drop per 100 feet, static loss or regain, cumulative static pressure, total pressure loss, and cumulative total pressure drop for each duct section. Duct work may be sized by the equal friction or constant velocity method. List price: \$40. Requirements: 256K, two disk drives, DOS 2.00 or later version, 1-2-3.

E. Jessup & Assoc., Mechanical Engineers
4977 Canoga Ave.
Woodland Hills, CA 91364
818/348-2068

Pipe 123

A template for 1-2-3, *Pipe 123* sizes piping and calculates pressure drop in each section of the system based on flow. The program sums the pressure drops to give the pump head required. Pipe sizes are determined to minimize noise and air entrapment. The program can be customized by changing the safety factor, velocity and pressure drop limitations, piping materials, fittings, or number of pipe sections. List price: \$40. Requirements: 256K, two disk drives, DOS 2.00 or later version, 1-2-3.

E. Jessup & Assoc., Mechanical Engineers
4977 Canoga Ave.
Woodland Hills, CA 91364
818/348-2068

Facility Personnel/Space Requirement Projections

Architects and planners can collect, update, and report space requirements using *Facility Personnel/Space Requirement Projections*. The program lets architects describe a company's organizational structure, project personnel and other space requirements, and model corporate space requirements when designing office and open space areas. List price: \$1500. Requirements: 64K, two disk drives.

ACCI Business Systems, Inc.
4625 N. Freeway #200
Houston, TX 77022
713/697-3566

Heatcool

Heatcool determines the required BTUH (British thermal units per hour) and CFM (cubic feet per minute) of heating and cooling units for any building. The program asks for major design factors such as outside and inside design temperatures, solar and shading data, and U-values. You enter data for individual room characteristics such as areas of external walls, windows, doors, and ceilings; number of people; heat-producing equipment; and outside ventilation. The program records those factors and can print or revise them. *Heatcool* provides 16 options for individualizing reports, maintains a running total for all data, and calculates the most efficient building design. List price: \$99.76. Requirements: 64K, one disk drive.

J. J. Jordan, Architect-Engineer
5236 Overbrook Way
Sacramento, CA 95841
916/332-6610

A/E Integrated Project Management

Architectural and engineering firms can handle a variety of accounting functions with *A/E Integrated Project Management*. The program processes time sheets; income statements; multistate payroll; and city, state, and federal taxes and produces invoices for hourly as well as percentage jobs. You can compute all job reports in-house, compare budgeted with effective rates, and keep records on 5 to 200 employees per firm. The number of jobs you can input is limited only by disk space. The *A/E Integrated Project Management* program handles up to 14 phases and up to ten tasks per phase. List price: \$6250. Requirements: 128K, 10MB hard disk, DOS 2.00 or later version.

ACCI Business Systems, Inc.
4625 N. Freeway #200
Houston, TX 77022
713/697-3566

Diaframs

A three-part program, *Diaframs* computes wind shears, allowable plywood thickness, and maximum direct loads. The program's modules compare the wind shear with the seismic shear (loaded automatically from *Sherwall*, if available) and present as many as three selections of plywood grade and fastenings to satisfy the shear requirements for roof or floor diaphragms. List price: \$74.61. Requirements: 48K, one disk drive.

J. J. Jordan, Architect-Engineer
5236 Overbrook Way
Sacramento, CA 95841
916/332-6610

TK!SolverPack for Mechanical Engineering

You can solve common mechanical engineering problems with the *TK!SolverPack for Mechanical Engineering*. This applications package has equations, values, and tables designed for use with the *TK!Solver* program. The 13 models include applications for heat transfer, stress and strain, spring, and natural frequency of vibration. List price: \$100. Requirements: 128K, one disk drive, *TK!Solver*. Software Arts, Inc.

27 Mica Ln.
Wellesley, MA 02181
617/237-4000

S/SAM

A professional static structural analysis program, *S/SAM (Static Structural Analysis on Micros)* analyzes three-dimensional frame structures consisting of up to 100 elements. *S/SAM* features three-dimensional graphics for finite element mesh generation, graphics display of deflections, and stress postprocessing that calculates direct and principal stresses. Members may have five cross-sectional shapes. List price: \$385. Requirements: 64K, one disk drive, color graphics board.

Kern Publications
433 Washington St.
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

TK!SolverPack for Building Design and Construction

Designed to be used in conjunction with the *TK!Solver* program, the *TK!Solver-Pack for Building Design and Construction* is for architects, building designers, and construction engineers. It contains 15 models with equations, values, and tables for solving common problems in planning and estimating residential construction, such as simple column design, concrete and roofing estimation, solar heat gain, rafter and stair design, and exterior wall cost estimation. Many of the models can be modified for commercial applications. List price: \$100. Requirements: 128K, one disk drive, *TK!Solver*.

Software Arts, Inc.
27 Mica Ln.
Wellesley, MA 02181
617/237-4000

CADDraft

You can create, edit, and plot two-dimensional designs with *CADDraft*. The menu-driven CAD program has a grid system that lets you select designs for display with a cursor control device such as a mouse or a digitizer. Designs consist of lines, arcs, circles, rectangles, symbols, and text. *CADDraft* allows dragging of symbols and elements and rubber-banding of line and output scaling. You can place components on up to ten layers. Once a symbol has been created, it can be stored in a library for subsequent designs.

CADDraft provides three line types, three colors, and a 5000-point data base. It has Zoom, Pan, Move, Copy, Edit, and Delete commands; definable Rotate commands; and variable-size plot windows. It supports the Epson FX-80 and MX-80 (with Grafrax) and IBM dot matrix printers and the Houston Instrument DMP-40 (A-size) plotter. List price: \$495. Requirements: 320K, two disk drives (hard disk recommended), IBM Color/Graphics Adapter, serial port, mouse or digitizer.

Personal CAD Systems, Inc.
981 University Ave.
Los Gatos, CA 95030
408/354-7193

F-Chart 123

Solar heating designers and engineers can calculate solar heating system performance using *F-Chart 123*. Used with 1-2-3, the program analyzes air or water solar heating systems. Program output includes the annual percentage of heating load supplied by the solar heating system. List price: \$60. Requirements: 256K, two disk drives, 1-2-3.

E. Jessup & Assoc., Mechanical Engineers
4977 Canoga Ave.
Woodland Hills, CA 91364
818/348-2068

Sound 123

A 1-2-3 template, *Sound 123* calculates the attenuation between a fan and a room required to achieve sound control. Attenuation is displayed for the center frequency of each octave band. Designers can enter specific sound levels of the proposed fan or let the program supply the approximate levels. The program also calculates duct attenuation, bend attenuation, branching losses, end reflection effect, room absorption effect, and resultant sound pressure level in the room for each octave band center frequency. List price: \$40. Requirements: 256K, two disk drives, 1-2-3.

E. Jessup & Assoc., Mechanical Engineers
4977 Canoga Ave.
Woodland Hills, CA 91364
818/348-2068

CADPlan

Designed for architects, engineers, and builders, *CADPlan* facilitates the creation of two-dimensional designs. A data base management system maintains statistics on design components. After selecting a grid in either English or metric units, you can create designs with lines, arcs, circles, rectangles, text, and three colors. You can copy, move, rotate, delete, and undo, pan around the design, or zoom in and out. Images can be stored as symbols in *CADPlan's* library for use in subsequent designs. The program supports a pen and a tablet, a mouse, or a digitizer. Optional

modules add data base extraction capabilities and automatic dimensioning. List price: \$1300, *Data Base Extraction* \$350, *Automatic Dimensioning* \$250. Requirements: 320K, one disk drive, color graphics board, serial port, choice of pen and tablet, mouse, or digitizer.
Personal CAD Systems, Inc.
981 University Ave.
Los Gatos, CA 95030
408/354-7193

Pipeline Friction Loss Calculator

Engineers and piping designers can calculate friction losses and other system properties with *Pipeline Friction Loss Calculator*. From the nominal diameter, length, schedule, temperature, and flow rate, the program indicates fitting losses within the total pipe loss. *Pipeline Friction Loss Calculator* computes only for water or fluids with the same properties as water. The program works with actual water temperatures. List price: \$49.95. Requirements: 64K, one disk drive.

B & E Software Consultants, Inc.
2172 Donner St. NW
North Canton, OH 44720
216/497-1221

Matrimatics

You can do general engineering and scientific calculations with *Matrimatics*, a package of four programs that solve simultaneous linear equations and perform symmetric, tridiagonal, and full matrix inversions. Program data is entered at the keyboard or transferred from previously created data files. The programs can be used as subroutines or used with applications. Complete listings and a detailed manual are included. List price: \$99. Requirements: 64K, one disk drive.
Micro Vision
145 Wicks Rd.
Commack, NY 11725
516/499-4010

Construction Job Cost Estimating Templates

A collection of 18 spreadsheet templates for architects and contractors, *Construction Job Cost Estimating Templates* are designed for residential construction projects. The programs help you estimate the cost of building a home, allowing for contingencies, overhead, and profit margin. All data files and formulas are automatically keyed into the spreadsheet program. You can overlay files or save them separately. The program can be backed up and modified for specific needs. It works in conjunction with *VisiCalc*, *Multiplan*, *SuperCalc*, *PeachCalc*, or 1-2-3. List price: \$59.95. Requirements: 64K, two disk drives, spreadsheet program.

Software Models

P.O. Box 1029

Crestline, CA 92325

714/338-5075

Construction Master Accounting System

A job costing and accounting system for commercial contractors, *Construction Master Accounting System (CMAS)* includes Accounts Payable and Receivable, General Ledger, Job Costing, and Payroll modules. The menu-driven program features on-line error checking, single-entry accounting, and an on-line manual with help key access. Job Costing and General Ledger are updated by other modules automatically. You define and modify the formatting and breakdown of job costs. Data is retained for the life of a project and can be generated for any periods specified. CMAS can handle multiple companies and departments and offers password security, complete accounting trails, a log of all system users, a report generator within the general ledger, the ability to cross monthly and yearly accounting boundaries, and automated invoicing. List price: \$4890. Requirements: 128K, 10MB hard disk.

Data-Basics, Inc.

11000 Cedar Rd. #110

Cleveland, OH 44106

216/721-3400

Designer 3D

Professional designers can create three-dimensional graphics with *Designer 3D*. The drawings can be rotated in three dimensions, enlarged, and viewed in perspective. Physical properties can be attached to drawing elements. The program also includes three-dimensional curve-fitting routines. The manual contains program listings in BASICA with documentation. List price: \$85. Requirements: 64K, one disk drive, color graphics board.

Kern Publications

433 Washington St.

P.O. Box 1029

Duxbury, MA 02331

617/934-0445

Flashcalc 1.00

A chemical engineering program for chemical plant designers and on-site troubleshooters, *Flashcalc 1.00* solves ten types of equilibrium flash problems and accommodates as many as 900 petroleum fractions. The program contains information on 87 hydrocarbons and inorganics and offers fast calculations with precision close to that of a mainframe. Given a feed stream of up to 20 components, the program supplies all properties of feed, liquid, and vapor at temperature and pressure. *Flashcalc* allows all input and output to be saved on disk and permits multiple calculations without reentering data. The program has warning messages and default values to screen out faulty data. List price: \$700. Requirements 128K, one disk drive.

Process Systems International

RD #3 Foxchase-Friendship Rd.

Vincentown, NJ 08088

609/268-0571

BA200-Beam Analysis and Design

A spreadsheet-type program, *BA200-Beam Analysis and Design* analyzes and designs beams with various end conditions. Point loads, uniform loads (full or partial span), and moment loads can be applied. The beam can be designed in steel, timber, concrete, or any material whose properties are specified. You select appropriate beam sections and alternates from tables. Features include color graphics, routines to save and retrieve analysis data, and the ability to use metric, SI, or English units. List price: \$500. Requirements: 128K, two disk drives.

C-Squared B-Squared Software Design

763 27th Ave.

San Francisco, CA 94121

415/751-1337

PSpice

An electrical circuit simulator, *PSpice* is a tool for designing and checking circuits. You enter a circuit description into a text file with any text editor. The program calculates the quiescent (DC) bias point, node voltages, currents, small signal parameters, the sensitivity of any node voltage at the bias point to any device or parameter value, and the frequency response of the circuit to any combination of input voltages. Noise models are built into the program. The behavior of the circuit over time, the transient response, and a variety of input voltages including piecewise linear, pulse, and sinusoidal can be applied in combination to drive the circuit. An option for *PSpice* lets you customize semiconductor device equations. List price: \$650. Requirements: 512K, two disk drives, 8087 coprocessor, DOS 2.00 or later version.

MicroSim Corp.

14101 Yorba St. #202

Tustin, CA 92680

714/731-8091

Piping/DMV Estimating, Sheet Metal Estimating

Designed for contractors, *Piping/DMV Estimating* and *Sheet Metal Estimating* use simple data to price piping and duct systems for construction. The programs have single-key parts descriptions that let you enter data without keying in parts numbers or selecting from a series of menus. A master parts file is preloaded with 5700 items and has a capacity of approximately 11,000 items. List price: each program \$4900, both \$7400. Requirements: 128K, two disk drives.

Esccomate

309 Commerce Dr. #5
Fort Collins, CO 80524
303/484-8200

P.O. Box 483
Merrifield, VA 22116
703/573-3885

Psychometric Chart

For designing heating and air conditioning systems, *Psychometric Chart* uses the ASHRAE equations to solve for eight moist air properties: dry bulb temperature, wet bulb temperature, relative humidity, humidity ratio, vapor pressure, dew point, enthalpy, and specific volume. Barometric pressure and any two known properties can be entered in either English or International System Units. The program determines the heating and cooling loads for two entered points. It also calculates adiabatic mixing, which can be included in load calculations. List price: \$49.94. Requirements: 64K, one disk drive.

B & E Software Consultants, Inc.
2172 Donner St. NW
North Canton, OH 44720
216/497-1221

QualityAlert

Automating statistical quality control, *QualityAlert* lets users analyze process capability, construct eight types of control charts, generate sample data, and determine when quality deviations occur. The program is designed for both attribute and variable data. The system displays numerical data, statistics, and graphics or prints hard copy on a graphics printer. List price: \$795. Requirements: 64K, one disk drive, graphics board.

Penton Software, Inc.
420 Lexington Ave. #2846
New York, NY 10017
800/221-3414, 212/878-9600

Micro-CAP, Micro-Logic

Designed for electronics engineers and students of electrical engineering, *Micro-CAP (Circuit Analysis Program)* and *Micro-Logic* are electronics labs implemented in software, complete with facilities for constructing any electronic or logic circuit, respectively, and the instruments for analyzing it. The programs are versions of mainframe simulators. Engineers create circuits using keyboard-driven graphics functions. The systems allow engineers to perform "what if" analyses to see how their circuits will function. With *Micro-CAP*, AC, DC, and transient analyses of electronic circuits can be performed. The transient analysis graph is similar to an oscilloscope, the AC analysis resembles a spectrum analyzer, and the DC analysis looks like a curve tracer display. With *Micro-Logic* engineers can perform timing simulations and review waveforms and I/O patterns for digital circuitry. List price: *Micro-CAP* \$475, *Micro-Logic* \$450. Requirements: 192K, two disk drives, color graphics board.

Spectrum Software
1021 S. Wolfe Rd. #130
Sunnyvale, CA 94086
408/738-4387

CAPPS

An automated numerical control (N/C) programming system, *CAPPS (Computer Aided Part Programming System)* eliminates the need to use a high-level language and manual programming to create N/C programs. The menu-driven program creates complex machining routines by asking basic machine-shop questions as well as specific questions about tooling and fixturing. Part Families contain logic pertaining to various types of workpieces. *CAPPS* can be used with machine tools either indirectly through a punched-tape system or directly by downloading to the tool itself. List price: with ten Part Families of average complexity \$7000, downloading facility \$1500. Requirements: 128K, 10MB hard disk.

National N/C Applications, Inc.
6789 Main St.
Williamsville, NY 14221
716/631-3993

Engineering and Scientific Utilities

The two programs in *Engineering and Scientific Utilities* are *UNITSCON* and *PROPUTIL*. *UNITSCON* controls the choice of over 18,000 combinations of input and output dimensional units for other application programs. Written in a color graphics format with on-line help and error recoveries, it configures other programs to a consistent set of I/O units. Double-precision data and protocol selections on disk can be referenced by other programs. *PROPUTIL* is an interactive data base manager with data entry, searches, file building, and block copying capabilities. It manages consistent data files of materials or fluids for reference by other programs. List price: \$250. Requirements: 128K, one disk drive.

IMPULSE Engineering
P.O. Box 3540
San Francisco, CA 94119-3540
415/788-4611

Insurance

Group Policy Analysis

To help clients compare group medical insurance plans, *Group Policy Analysis* generates quotes and reports on several companies. The menu-driven program lets users obtain a census and produce group insurance illustrations showing options such as dental coverage, maternity coverage, or prescription card service. Users can create displays and reports using rate data for up to 20 major insurance companies. An optional automatic rate-updating service keeps rates and coverage details current. List price: \$450 (includes data for four companies), each additional company \$45 at time of order, \$145 thereafter. Requirements: 64K, one disk drive.

R. R. James & Assoc., Ltd.
920 David Rd. #305
Elgin, IL 60120
312/742-4703

Comparative Policy Analysis

Designed to compare existing insurance policies with newer coverage, *Comparative Policy Analysis* provides charts and tables that examine nine current policies in light of a new insurance product. The program does not automatically determine the most beneficial policy. List price: \$395. Requirements: 128K, two disk drives.

Insurance Micro Software, Inc.
1611 W. Harry
Wichita, KS 67213
316/265-5695

CLOSE

For life and health insurance agencies, *CLOSE* is a client file manager that develops lists of prospects for additional insurance coverage. When selecting groups of clients, you choose from two menus of characteristics. The resulting file is compatible with *WordStar*, letting you generate personalized mass mailings. *CLOSE* reports on revenue production by agent and by date, commissions by carrier and by account, policy actions with agendas for essential contacts, anniversaries, and portfolios by client information such as name or birthday. *CLOSE* is written in *dBASE II*, and source code is available. List price: \$595, source code \$75. Requirements: 128K, two disk drives, *dBASE II RunTime*.

Adler Computer Technology
21777 Ventura Blvd. #228
Woodland Hills, CA 91364
213/703-0350

Insurance Property and Casualty Agency Management System

A menu-driven system for property and casualty insurance agencies, the *Insurance Property and Casualty Agency Management System* automates daily record keeping. The system offers automatic invoicing; daily and month-to-date transaction reports; balance sheets; profit-and-loss statements; and month-end reports, including detailed current and payable accounts, detailed customer transaction activity, and aged accounts receivables. All entries are interactive, making double posting unnecessary. Options include customer on-line policy information and coverage, customer on-line daily transaction inquiry (with current balance due), expiration and producer reports, and word processing. List price: \$1500, with options \$3000. Requirements: 128K, 10MB hard disk.

Dimensional Business Systems
250 N.W. Fourth Diagonal
Boca Raton, FL 33432
305/368-0270

Impact

An aid for reinsurance brokers, lead underwriters, and corporate risk managers, *Impact* helps price catastrophe treaties or project umbrella coverage needs. The program calculates subject premium, payback in years, company retention, and the cost of the cover per thousand dollars of coverage. List price: \$495. Requirements: 128K, 10MB hard disk, RM/COBOL. Insurance Technology Consultants
1437 W. Palmyra, Ste. F
Orange, CA 92668
714/773-1754

The Insurance Package

An automation system for insurance agencies, *The Insurance Package* manages personal and policy records and provides reports for clients, companies, and producers. The program handles receivables and payables and produces statements and invoices, deposit slip summaries, cash receipts, check registers, and expiration and installment-due lists. Sales and marketing modules feature statistical sales analysis, cancellation lists, client profiling for target marketing, word processing, and batch printing of letters and mailing labels. *The Insurance Package* prints claims on ACORD forms. List price: \$4200. Requirements: 256K, 10MB hard disk.

Mirror Images Business Systems, Inc.
504 Broadway
Troy, NY 12180
518/274-0066

Compu-RISK

A series of programs to help insurance agents shape coverage for their clients, the Compu-RISK software includes *The Premium Allocation Program*, which distributes a premium among divisions or cost centers based on each center's previous losses. *The Retrospective Rating Plan Program* facilitates an unbiased cost analysis of several plans. *The Paid Loss Retro Program* does the same for paid and incurred loss plans. *The Captive Program* analyzes rental and equity plans. Other programs evaluate self-insurance

plans, Workers' Compensation retention, and IBNR (Incurred-but-Not-Reported) loss. List price: each program \$165. Requirements: 64K, one disk drive.
Compu-RISK Software
1326 Wilder St.
Thousand Oaks, CA 93162
805/497-6200

Estate Liquidity Analysis

The estate-planning program *Estate Liquidity Analysis* forecasts cash demands on a couple's estate if one of them were to die. The program also tracks cash demands in the event of a second death. It forecasts the value of real estate, marketable securities, personal life insurance, business interests, cash, and other assets. The program computes liabilities such as taxes, mortgages, and loans as well as such costs as administrative fees and federal and state death taxes. List price: \$99.50. Requirements: 128K, one disk drive.

Insurance Micro Software, Inc.
1611 W. Harry
Wichita, KS 67213
316/265-5695

Cash Needs Analysis, Personal Needs Analysis

Using a simplified, one-page display, *Cash Needs Analysis* projects a family's financial position in the event of a working spouse's death and plans for the financial needs of the remaining spouse. *Personal Needs Analysis* analyzes the projected financial position of a family in the event of the death, disability, or retirement of a working spouse. The program projects social security and other retirement benefits and lets you compare coverage provided by different insurance policies. List price: *Cash Needs Analysis* \$75, *Personal Needs Analysis* \$99.50. Requirements: 128K, one disk drive.

Insurance Micro Software, Inc.
1611 W. Harry
Wichita, KS 67213
316/265-5695

Instant

Designed for insurance wholesalers, surplus lines brokers, and managing general agencies, *Instant* supports marketing and sales solicitation, policy entry and invoicing, receivables and payables (including custom broker statements), statistical analysis and sales reporting, general ledger maintenance, and claims processing and reporting. The program is menu-driven and works with *WordStar*. List price: initial license \$5000, annual license \$1500. Requirements: 128K, 10MB hard disk, RM/COBOL.

Insurance Technology Consultants
1437 W. Palmyra, Ste. F
Orange, CA 92668
714/773-1754

Claims

The status of any claim or loss can be monitored in detail with *Claims*. Unlike classical batch loss systems, which are based on an inflexible statistical file, *Claims* lets you amend statistical information at any time. Losses paid and expenses are maintained separately. The program handles reserve setups, loss or expense fast tracks, reserve increases or decreases, partial and final loss payments, loss payments after closure, expense payments (with or without reserve reduction), and final expense payments. The program reports on losses by company or carrier, producer, adjuster, state, line of business, coverage, and policy. List price: \$795. Requirements: 128K, 10MB hard disk, RM/COBOL.

Insurance Technology Consultants
1437 W. Palmyra, Ste. F
Orange, CA 92668
714/773-1754

Legal

PC-CyLaw Series

A time and billing system for lawyers, *PC-CyLaw* provides time and disbursement accounting, client billing with definable invoices, and accounts receivable. Other modules available offer calendar and docket scheduling, management reports, data base inquiry, and a general ledger. List price: basic version \$895, *Calendar and Docket* and *General Ledger* \$495 each, *Management Reports* and *Data Base Inquiry* \$345 each. Requirements: 128K, two disk drives.

Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

Legal Billing

A time-billing package for small to medium-size professional firms, *Legal Billing* prints client statements, accounts receivable and aging reports, and lawyer time reports. List price: \$399. Requirements: 64K, one disk drive.

Satori Software
5507 Woodlawn N
Seattle, WA 98103
206/633-1469

Lawsearch

Certified by West Publishing to access the Westlaw data base, *Lawsearch* uses Westlaw's highlighting scheme, captures files to disk or printer, and converts screen files to text files. Features include forward and reverse pagination, on-screen editing, and two programmable function keys for quick logon. List price: \$350. Requirements: 96K, one disk drive, serial port. Direct.aid, Inc.

P.O. Box 4420
Boulder, CO 80306
800/443-8080

Legal Tender

A time and billing program for law firms with up to 30 attorneys, *Legal Tender* generates reports on work load, daily transactions, client status, and client trust accounts. Law firms set flat-rate and hourly fees for each attorney, and the program automatically bills clients. *Legal Tender* includes a calendar with space for up to 2400 memos for trial and posting dates. The program integrates with *Firm* accounting programs. List price: \$995. Requirements: 64K, two disk drives. American CompuSoft
23113 Plaza Pointe Dr.
Laguna Hills, CA 92653
714/472-8186

Law Time Management

A time billing and accounts receivable system for attorneys, accountants, and other professionals, *Law Time Management* is designed for both small and large practices. It tracks chargeable and non-chargeable time and expenses, client receivables, and payments. The system handles up to 65,000 records each of clients, cases, unbilled charges, and accounts receivable information. List price: \$1500. Requirements: 192K, 5MB hard disk. Megamata, Inc.
8845 W. Olympic Blvd. #201
Beverly Hills, CA 90211
213/659-4851

Master Legal System/PC

A menu-driven legal management system, *Master Legal System/PC* has modules for legal, patent, and trademark information. The program features help screens, automatic indexing, definable print formats and security levels, and records with space for case names, titles, licenses, and related information. You can modify and delete records or merge records from separate modules. An optional state or foreign country law table is available for each module. The table automatically validates input and computes correct action due dates and attorney response dates. With a color monitor, screen records are displayed in color. List price: first module \$5000, second module \$3000, third module \$2000, law tables \$500. Requirements: 256K, 10MB hard disk. Master Data Center, Inc.
29100 Northwestern Hwy.
Southfield, MI 48034
313/352-5810

IMS-Law Office Management System

Attorneys can track time and expenses with *IMS-Law Office Management System*. Different hourly, fixed, contingency, and percent-of-settlement rates can be assigned to each attorney. You can override the standard fee at the time of billing and bill matters monthly, quarterly, or semiannually. The billing cycle for each client and each matter can be set independently. An appointment scheduler keeps track of each attorney's appointment and docket schedule and automatically checks for conflicts. The program also accounts for nonbillable time. List price: \$2000. Requirements: 128K, 5MB hard disk. International Micro Systems, Inc.
6445 Metcalf St.
Shawnee Mission, KS 66201
913/677-1137

Manufacturing and Industrial

Comsen's Distribution Systems

A collection of inventory and distribution programs, *Comsen's Distribution Systems* keep track of multiple locations and fuel product inventories. The programs generate customer tickets in delivery-zone sequence and produce accounts receivable reports. Three programs are available for gasoline, fuel oil, and liquid propane distribution. List price: each program \$7000. Requirements: 128K, 5MB hard disk. Comsen, Inc.
20-A Erford Rd. #103
Lemoyne, PA 17043
717/737-6971

Comsen's Trucking System for Truckload, Comsen's Trucking System LTL

Dispatching, freight billing, and automatic rating are the key functions of *Comsen's Trucking System for Truckload*. The program produces shipper and sales analysis reports that include comparisons by revenue, tonnage, and commodity. Fuel and mileage are reported by state. *Comsen's Trucking System for Truckload* also produces reports on vendors, vehicle maintenance, accounts payable, general ledger, and shop inventory. The payroll module

processes checks and records for staff and salaried drivers as well as owner/operator/driver settlements. *Comsen's Trucking System LTL* includes the same features and capabilities for less-than-load trucks. List price: each program \$14,000. Requirements: 128K, 10MB hard disk. Comsen, Inc.
20-A Erford Rd. #103
Lemoyne, PA 17043
717/737-6971

Systems Aided Manufacturing Management

An MRP (material requirements planning) system for manufacturers, *Systems Aided Manufacturing Management* includes modules for inventory control, master scheduling, MRP, shop floor control, purchase order control, capacity planning and control, bill of material, and product costing. List price: \$6000. Requirements: 128K, 10MB hard disk. Eastman Micro Systems, Inc.
620 W. 1950 N
West Bountiful, UT 84087
801/292-0664

TMM Maintenance Inventory Control Systems

Designed for industry maintenance departments, *TMM Maintenance Inventory Control Systems* tracks spare parts. The program uses daily work order and receipt-from-vendor entries to automatically update the inventory and value-of-inventory data base and to compute inter-departmental charge-backs for parts. It produces a variety of reports including inventory, daily and monthly activity, reordering, and a parts catalog. *TMM Maintenance Inventory Control Systems* can integrate with optional *TMM Corrective Work Order* and *TMM Preventive Maintenance Work Order* modules, which also stand alone. List price: \$1500, each optional module \$1500. Requirements: 256K, hard disk. TMM Systems
Division of Weiss Assoc., Inc.
127 Michael Dr.
Red Bank, NJ 07701
201/530-9260

mrp2

A system of modules for material requirements planning, *mrp2* helps manufacturers track materials and work orders, schedule production, and perform job costing. The *Material Planning* package generates and reschedules orders based on available inventory, purchase orders, work orders, and other planning requirements. Single-level pegging traces the material requirement to the item that generated it. The package tracks daily net changes with the option for complete regeneration. It incorporates a three-year, 1000-day dynamic shop calendar.

The *Shop Floor Control and Capacity Planning* package provides labor information for each work center, lists the operations, materials, and labor necessary to produce an item, and plans up to 1000 workdays. The package also produces work orders, allocation reports by item number, on-order tallies, exception reports, and dispatch reports by work center. It summarizes and reports the planned, firmed, and released work by work center.

mrp2's Job Costing package projects material, labor, burden, and outside operation costs for an item, using standard and current cost groups and elementary and total cost types. It provides standard job cost and variance reports for the inventory, purchasing, and shop floor functions and outputs general ledger data for use by an accounting system. For planners, the *Master Scheduling* module simulates any key component of a company's operation and creates a production schedule that can be input to the *Material Planning* package. It calculates bills of material, option ratios, service part propagation reports, and available-to-promise estimates. List price: *Material Planning* \$7070, *Shop Floor Control and Capacity Planning* \$2880, *Job Costing* \$1785, *Master Scheduling* \$1310. Requirements: 256K, two disk drives. Twin Oaks, Inc.
P.O. Box 136
Cottage Grove, MN 55016
612/458-1604

Churchmouse

A real-time manufacturing control package, *Churchmouse* lets small to medium-size manufacturers track inventories, production, and costs. The system provides bills of material and reports on inventory, purchasing, material and capacity planning, and costing. All functions offer on-line help. *Churchmouse's* data base is compatible with Twin Oaks' *mrp2*. List price: \$1395. Requirements: 256K, two disk drives. Twin Oaks, Inc.
P.O. Box 136
Cottage Grove, MN 55016
612/458-1604

The Least Cost Formulator

A system that performs single- and multi-product analysis, *The Least Cost Formulator* determines the least-cost combination of materials to meet product requirements. A raw material table accommodates any number of raw materials and preblends, each having any number of attributes. Product formulations can contain any number of raw materials and constraints. Data files and results can be exported to 1-2-3. List price: one-time license fee for single product \$6000, for multiproduct \$12,000. Least Cost Formulations, Ltd.
1685 Chevron Way
Atlanta, GA 30338
404/394-8125

LABsolv

A statistical data base manager, *LABsolv* stores quality assurance test data for analysis and comparison to specifications. A query language lets you select, sort, and report information. *LABsolv* complements virtually any environment needing quality control. You can create detailed specifications by type, such as chemical, microbiological, physical, granulation, sanitary, and sensory. List price: \$5495. Requirements: 256K, 10MB hard disk, DOS 2.00 or later version. Applied Micro Solutions
McGrow, Pridgeon & Co., P.A.
Investment Bldg.
Baltimore, MD 21204
301/821-8300

Residual Lease Ratebook

Calculating equipment lease payments, rates, interest, and residual and term factors, *Residual Lease Ratebook* also lets you solve for any variable by working in reverse. Interest-rate calculations are not limited to quarter-point intervals. List price: \$95. Requirements: 64K, one disk drive.

Heritage Computers, Inc.
624 Holcomb Bridge Rd.
Roswell, GA 30076
404/998-8994

General Electric Credit Auto Lease

A menu-driven program for automobile dealers and independent leasing companies, *General Electric Credit Auto Lease* helps prepare forms for leasing new automobiles. For an additional fee the manufacturer will customize the program for state forms such as tax, tag, and title. List price: \$195. Requirements: 128K, one disk drive.

Heritage Computers, Inc.
624 Holcomb Bridge Rd.
Roswell, GA 30076
404/998-8994

Manufacturing Productivity System W-10

Intended for productivity supervisors and upper-level managers, *Manufacturing Productivity System W-10 (MPS W-10)* is designed to monitor and improve employee performance. *MPS W-10* helps measure productive hours (in which good parts are produced) against payroll hours for all employees. Managers can receive hourly or daily reports of productivity and dollar savings subtotaled by unit, department, shift, plant, and division. List price: \$995. Requirements: 96K, two disk drives. DataSource Systems Marketing Corp.
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

H-MRP

An on-line material requirements planner for small manufacturers, *H-MRP* consists of six modules, each requiring the previous module to run. The system's main menu is contained in the *H-Champ* module, which coordinates the operations and output from the other modules. *H-BOMM (Bills of Material Management)* lets planners do bill-of-material and other spreadsheet calculations using data from either a hard disk or a large-scale computer. *H-Buy* is a purchasing and receiving manager that tracks the arrival, quality, and history of purchases to help manufacturers compare the performance of suppliers. *H-Store* monitors the arrival and storage location of incoming materials. Maintained by receiving personnel, it lets managers trace a transaction to its original purchase order and receiving clerk. *H-Make* helps production managers generate and track work orders, back orders, and the progress of work on the floor.

A master scheduler for planners, *H-Plan* outlines the production strategy for an item, suggesting materials and deadlines based on previous experience. Middle managers can examine portions of the plan that pertain to them. Data from *H-MRP* works with other spreadsheets and accounting packages. List price: complete package \$9995, *H-Champ* \$695, *H-BOMM* \$1495, *H-Buy* \$2495, *H-Store* \$3495, *H-Make* \$2495, *H-Plan* \$3495. Requirements: 256K, 10MB hard disk. Helmsman Systems, Inc.
1030 S. Winchester Blvd. #205
San Jose, CA 95128-3787
408/246-8300

INMASS

Designed to optimize manufacturing efficiency, *INMASS (Integrated Manufacturing Software Series)* consists of six modules that monitor various aspects of production. The modules are *Inventory*, *Bill of Materials*, *Job Costing*, *Order Entry*, *Purchasing*, and *Material Requirements Planning*. The package works with Microcomputer Consultants' *Income* financial accounting package and, like *Income*, provides multiuser access under Concurrent DOS. List price: each module

\$600. Requirements: 256K, hard disk, DOS 2.00 or Concurrent DOS. Microcomputer Consultants
P.O. Box 1377
Davis, CA 95617
800/824-5952, 916/756-8104 California

Preventive Maintenance

Consisting of 19 menu-driven programs, *Preventive Maintenance* lets managers set up an equipment inventory complete with descriptive and accounting information; establish preventive maintenance tasks and schedules for equipment; print weekly job schedules, inventory lists, future work schedules, and other reports; retain and extract historical information on preventive maintenance jobs; and track labor and material costs. List price: \$495. Requirements: 128K, one disk drive. Josalli, Inc.
P.O. Box 460
Enka, NC 28728
704/252-9146

Age/Con, Perdec, Relcode

Designed to optimize the economic lives of fleet vehicles and machinery, respectively, *Age/Con* and *Perdec* help managers decide when plant equipment should be replaced. You enter acquisition and operating costs, resale values, and interest rates, and the program calculates the optimum year for replacement. *Relcode* determines the relative economy of replacing vehicle or machine parts on a preventive basis or as they fail. It analyzes the history of component failure in a given machine and predicts, using tables or histograms, how long a part will safely last. List price: (Canadian dollars) *Age/Con* \$3950, *Perdec* \$2950, *Relcode* \$2950. Requirements: 64K, one disk drive. Executec, Specialized Software Division
3455 Drummond St. #704
Montreal, Quebec
H3G 2R6 Canada
514/849-0147

Station Master

A customized bookkeeping system for gas stations, *Station Master* maintains inventories, tracks orders, and monitors accounts receivable. *Station Master* also handles payroll, produces profit-and-loss statements and projections, and reports on pricing and mix for up to three work shifts. An Auto Entry feature prompts for the required daily bookkeeping entries. List price: \$1995. Requirements: 128K, two disk drives.

Small Business Computer Systems, Inc.
313 Llewellyn Rd.
Ambler, PA 19002
215/542-9639

Manufacturing Inventory Control System

Multilevel bills of material (including finished goods, subassemblies, and parts) can be handled by the *Manufacturing Inventory Control System*. A planning module calculates current part and subassembly inventory requirements and projects future needs. The system prints a "where used" list, creates purchase orders, adjusts inventory levels based on receipts and shipments, and recosts all finished goods and subassemblies according to current average cost of parts. *Manufacturing Inventory Control System* also prints work orders and monitors production. List price: \$2500. Requirements: 128K, hard disk.

International Micro Systems
6445 Metcalf St.
Shawnee Mission, KS 66201
913/677-1137

Cricket

Manufacturers can generate preventive maintenance schedules and machine histories with *Cricket*. The program also reports on supplies inventory, reordering needs, asset time and material consumption, employee time allocation, and financial asset information. Help is supplied on line. *Cricket* data bases can be shared by

mrp2 and *Churchmouse*, other Twin Oaks programs. List price: \$465. Requirements: 256K, two disk drives.
Twin Oaks Inc.
P.O. Box 136
Cottage Grove, MN 55016
612/458-1604

Max, The Production Manager

An integrated planning, production, and control system for manufacturing, *Max, The Production Manager* runs on single- or multiuser systems. Bill of Materials and Inventory Control modules control resource management; Master Scheduling and Material Requirements Planning modules control production planning; Purchasing Control and Shop Floor Control modules control implementation. A common data base links the modules, allowing changes in one loop to be reflected throughout the system. An interface module lets you translate data into ASCII format for use with other applications and load data into *Max, The Production Manager*. Accounting modules are also available. List price: \$16,000, interface module \$2000, accounting modules \$700 each. Requirements: 320K, 10MB hard disk with backup, clock board.

Micro MRP, Inc.
1065 E. Hillsdale Blvd. #114
Foster City, CA 94404
415/345-6000

Coatings Formulator

A menu-driven program designed for paint chemists, *Coatings Formulator* aids single-component formulations. Products can be designed to meet specific weight solids, volume solids, and ratio requirements. *Coatings Formulator* produces multiple formulas with varying pigments-to-binder ratios and multiple reactive solutions for chemically cross-linked systems. Resins, pigments, additives, and solvents can be formulated by individual class. List price: \$695. Requirements: 64K, one disk drive.

Formulation Software Systems
7765 W. 91st #1125
Playa del Rey, CA 90203
213/823-9625

Medical

Medicalis, Dentalis, MicroVet, MicroMed—Radiology Version, MicroPractic, MicroMed—Anesthesiology Version

One of seven stand-alone medical software packages, *Medicalis* is an accounting and practice management system for doctors and medical office personnel. The program keeps patient histories, including diagnoses, chart notes, and dependent information. It performs cycle billings, cross-references service codes, produces customized reports and patient statements, and prints out information on most insurance forms. A second version of *Medicalis* is a larger program for up to 20 office locations and 99 doctors.

Five other programs in the Articulate Publications software line perform the same accounting and management functions as *Medicalis*, but each program includes features for a particular medical specialization. For dentists and oral surgeons, *Dentalis* provides predetermination and preauthorization of insurance benefits. *MicroVet* registers pets by species, breed, gender, and whether or not the pet has been spayed or neutered. *MicroMed—Radiology Version* handles multi-location entries from several offices. The program allows high-volume patient turnover and purges all accounts with a zero balance. *MicroPractic* allows space in each statement for a description of patient injuries, treatment, and progress and for

doctor's notes. The program produces a nonactive patient listing. *MicroMed-Anesthesiology Version* generates bills based on time unit fees that include base, risk, and elapsed time units. The program computes bills using different time unit fees for each doctor.

Articulate Publications offers two communications programs that integrate with the *MicroMed* software line. *InterCom Utilities* provides file transfer capabilities, data base access, and remote access. *InterCom Complete* includes an electronic claims submission feature that allows doctors to send Medicare insurance claims to, and receive information from, various insurance companies.

List price: *Medicalis* \$2900, *Medicalis* multilocation version \$3500, *Dentalis* \$2900, *MicroVet* \$3000, *MicroMed-Radiology Version* \$3500, *MicroPractic* \$2900, *MicroMed-Anesthesiology Version* \$3700, *InterCom Utilities* \$325, *InterCom Complete* \$750. Requirements: 96K, hard disk.
Articulate Publications, Inc.
402 N. Larchmont Blvd.
Los Angeles, CA 90004
213/871-1350

P.M.S. Medical Billing System, P.M.S. Paperless Electronic Claim Module

Designed to handle billing for up to ten doctors, *P.M.S. Medical Billing System* tracks up to 10,000 active accounts and up to 32,000 transactions per calendar year. The modular system is operated through a main directory. The program processes standard insurance forms, produces itemized statements at the time of service, and generates 25 management reports. The *P.M.S. Paperless Electronic Claim Module* operates with the *P.M.S. Medical Billing System* to provide electronic insurance claim processing, including Medicare and MediCal claims. List price: *P.M.S. Medical Billing System* \$2495, *P.M.S. Paperless Electronic Claim Module* \$500. Requirements: 192K, 10MB hard disk, DOS 2.00 or later version, with *Electronic Claim Module* 1200-bps modem.

Professional Medical Software
650 Foothill Blvd.
La Cañada, CA 91011
818/790-9054

Nutrient Analysis

Designed for dietitians and hospital and rest home food service personnel, *Nutrient Analysis* comes with a data base of 1000 foods, documented by the U.S. Department of Agriculture. The data base can be expanded to 10,000 foods. Once a patient's sex and age group are entered, the program determines the patient's recommended intake of cholesterol and 26 nutrients. The program analyzes individual food items, meals, and daily, weekly, and monthly menus. *Nutrient Analysis* can be integrated with other IPC Datadiet programs. List price: \$599. Requirements: 128K, two disk drives. IPC Datadiet

350 N. Lantana #565
Camarillo, CA 93011
805/484-1616

Workload Reporting

Designed for medical laboratory administrators, *Workload Reporting* works with *VisiCalc* to measure productivity against workload guidelines defined by the College of American Pathologists. The program displays and prints test and employee lists, workload and staffing worksheets, and recording, work unit, staffing, productivity, and revenue reports. List price: \$695. Requirements: 98K, two disk drives, *VisiCalc*.
Laboratory Consulting, Inc.
2702 International Ln.
Madison, WI 53701
608/241-4151

Blood Gas Consultant

For health care professionals, *Blood Gas Consultant* is an arterial blood gas interpretation package. The menu-driven program does a complete acid-base and respiratory analysis of blood gases or does each analysis separately. *Blood Gas Consultant* stores data and compares chronic respiratory diseases for analysis of acute disorders. Printouts can be included in patient medical records. List price: \$595. Requirements: 128K, one disk drive.
Medical Software Consortium
502 Springmont Dr.
Hopkinsville, KY 42240
502/886-0208

Denti-Log, Medi-Log

Offices of up to ten dentists or doctors can use *Denti-Log* or *MediLog* to handle scheduling, patient recall, and accounts receivable. Designed to handle up to 10,000 accounts, 25,000 patients, and 75,000 transactions, each program generates monthly statements and prints insurance claim forms in standard American Dental Association or American Medical Association format. *Denti-Log* and *Medi-Log* produce family bills and patient statements that double as insurance information forms, and the programs include an option to calculate service charges on overdue accounts. Both programs generate practice management and financial analyses. List price: each program \$3500. Requirements: 128K, 10MB hard disk, DOS 2.00 or later version.
Colwell Systems, Inc.
201 Kenyon Rd.
Champaign, IL 61820
217/351-5400

Medical Office Management System, Dental Office Management System

Designed to handle billing and accounts receivable, *Medical Office Management System* and *Dental Office Management System* feature practice analysis, patient and drug recall, open-item accounting, and appointment scheduling. The programs can handle multiple practices. *Medical Office Management System* provides automatic insurance claim preparation for Blue Shield, Medicare, Medicaid, and Universal AMA. *Dental Office Management System* prepares patient statements and third-party insurance claims, including superbills and pretreatment estimates. List price: *Medical Office Management System* \$5000, *Dental Office Management System* \$4500. Requirements: 128K, 10MB hard disk.
MTA Medical Systems
4825 Hefffield Circle
Syracuse, NY 13215
315/488-1518

Menu Forecasting

Hospitals and rest homes can keep track of patient food request cycles for advance meal planning and food purchasing with *Menu Forecasting*. The program projects the number of patient orders for each food item. List price: \$800. Requirements: 128K, two disk drives.

IPC Datadiet

350 N. Lantana #565
Camarillo, CA 93011
805/484-1616

Nutritional Assessment

Medical professionals can diagnose, treat, and monitor nutritional deficiencies with *Nutritional Assessment*. The program accepts up to 23 physical measurements and laboratory test results for individual patients and calculates nutritional assessments. *Nutritional Assessment* uses height and weight measurements, white and red blood cell and lymphocyte counts, serum albumin levels, and iron binding and serum transferring capacities. List price: \$700. Requirements: 128K, two disk drives.

IPC Datadiet

350 N. Lantana #565
Camarillo, CA 93011
805/484-1616

CYMA Medical, Dental, Orthodontic, and Chiropractic

CYMA medical software includes four practice management programs: *CYMA Medical*, *Dental*, *Orthodontic*, and *Chiropractic*. Each program provides patient billing, third-party billing, contract billing, practice analysis, and patient recall. CYMA programs allow any combination of balance forward, open-item, and contract receivables with payment-book capabilities. Single or multiple practices can be managed with the CYMA system, which automatically generates insurance forms. The programs analyze the practice by practitioner and by procedure. List price: each program \$1695. Requirements: 48K, two disk drives.

CYMA Corp.

2160 E. Brown Rd.
Mesa, AZ 85203
602/835-8880

Medical Office Management PC, PCH, PCE

Designed for offices of up to ten doctors, *Medical Office Management PC* handles bookkeeping and appointment scheduling. The program prepares medical and payment records and separates patient claim forms and accounts receivable by practitioner. It performs fee productivity analyses by medical procedure. *Medical Office Management PCH* has all the same features but is designed to run with a hard disk. The program can handle up to 18,000 patient records per 5MB of storage. *Medical Office Management PCE* has the features of *Medical Office Management PC* in addition to word processing facilities and a free-form data base system. The program produces letters and reports and edits chart records. The data base maintains patient medical histories and statement and payment records. List price: *Medical Office Management PC* \$895.95, *Medical Office Management PCH* \$1295.95, *Medical Office Management PCE* \$1195. Requirements: 128K, two disk drives, for *PCH* 5MB hard disk. CMA Micro Computer
55722 Santa Fe Trail
Yucca Valley, CA 92284
619/365-9718

Medacs

A medical accounting system, *Medacs* can be customized for any type of medical care provider. The program performs most medical accounting functions, such as patient and third-party insurance billing (processing up to 9999 procedure and diagnostic codes), account aging, credit status, and accounts receivable. It offers financial and medical patient analysis and generates printed reports that include patient names, account numbers, and outstanding balances. *Medacs* comes in a single-user format for up to 10 doctors and a multiuser format for up to 100 doctors. List price: single-user package \$5000, multiuser package \$7000 (prices include training and installation consulting). Requirements: 256K, 10MB hard disk. Advanced Computer Systems

3131 S. Dixie Dr.
Dayton, OH 45439
513/294-0586

Patient Files

Designed for single-physician offices, *Patient Files* maintains records on up to 300 patients. The program records diagnosis, treatment, and vital statistics such as blood pressure, height, and weight. *Patient Files* provides space for physician notes in each file. List price: \$149. Requirements: 64K, two disk drives.

Professional Medical Software, Inc.

650 Foothill Blvd.
La Canada, CA 91011
818/790-9054

Physical Exam

Designed to organize the physical examination process, *Physical Exam* provides a listing format for vital statistics and 50 organ systems. Each listing has space for normal values and a descriptive paragraph written by the doctor. Normal values can be used as default values or disregarded and written over. Physicians can include a summation paragraph on each patient. *Physical Exam* prints reports for insurance companies. List price: \$99. Requirements: 64K, one disk drive.

Professional Medical Software, Inc.

650 Foothill Blvd.
La Canada, CA 91011
818/790-9054

ADS Veterinarians

For the small to medium-size veterinary practice, *ADS Veterinarians* is an accounting and appointment management program. It records fees and cash receipts and provides a daily revenue classification breakdown. Accounts receivable automatically ages to 120 days, posts finance charges, and generates statements. A general ledger/financial statements program can be modified. Enforced double entry accounting and account verification clarify audit trails. Financial statements are prepared monthly and compare yearly, monthly, and cumulative year-to-date balances to the previous year's values. List price: \$995. Requirements: 128K, 10MB hard disk.

ADS Software, Inc.

P.O. Box 13686
Roanoke, VA 24036
703/344-6818

Medical Manager

Designed for single or multiple practices, *Medical Manager* is an accounting and management package. The menu-driven program provides automatic third-party insurance billing and tracking of multiple insurance companies per patient. It has a report generator for formatting patient bills, statements, encounter and insurance forms, and recall notices. *Medical Manager* contains a flexible interest rate system. Reports analyze accounts, treatment, and appointments. List price: \$4000 to \$6000, depending on size of practice and number of doctors. Requirements: 128K, 5MB hard disk. Systems Plus, Inc. 1120 San Antonio Rd. Palo Alto, CA 94303 415/969-7047

Cook's Recipe Conversion

Chefs and kitchen workers can enter and store recipes and instructions with *Cook's Recipe Conversion*. Using the recipe data base, *Cook's Recipe Conversion* recalculates the amount of each ingredient needed for a prescribed number of servings. As serving amounts increase, the program changes measurement units; tablespoons become cups, and cups become pints. List price: \$700. Requirements: 128K, two disk drives. IPC Datadiet 350 N. Lantana #565 Camarillo, CA 93011 805/484-1616

Specialist

Designed for medical offices with up to nine doctors, *Specialist* is a menu-driven billing and accounts receivable program. Each of five versions (anesthesiology, family practice, internal medicine, radiology, and surgery) is suited to billing and procedural codes of the specialty. *Specialist* generates 25 reports and produces mailing labels. List price: single practice \$995, group practice \$1495. Requirements: 128K, two disk drives, CP/M-86. Digital Marketing Corp. 2363 Boulevard Circle #8 Walnut Creek, CA 94595 800/826-222, 415/947-1000

Computer Programs for Cognitive Rehabilitation

A collection of exercises for patients who have brain damage from strokes or head injuries, *Computer Programs for Cognitive Rehabilitation* helps psychologists and rehabilitation therapists test and evaluate visual perception and memory. Also included is a program that maintains patient history files. List price: \$250. Requirements: 64K, one disk drive. Life Science Assoc. 1 Fenimore Rd. Bayport, NY 11705 516/472-2111

Dental Office Management PC

Designed for dental offices with up to ten practitioners, *Dental Office Management PC* handles accounts receivable and insurance claims. An appointment system includes patient recall. The program produces statements, claim forms, account reviews, daily journals, monthly aged accounts receivable reports, productivity reports, and cost, time, and revenue comparisons. List price: \$959.95. Requirements: 128K, two disk drives. CMA Micro Computer 55722 Santa Fe Trail Yucca Valley, CA 92284 619/365-9718

Medical Office Management System, Dental Office Management System

Billing and accounts receivable systems for medical or dental offices of up to ten practitioners, *Medical Office Management System* and *Dental Office Management System* maintain financial records on up to 15,000 patients. The programs produce insurance claim forms in American Medical Association or American Dental Association format. List price: \$899. Requirements: 128K, one disk drive (hard disk recommended). Windham Software, Inc. 1985 Barnum Ave. Stratford, CT 06497 203/377-5292

P.A.R.I.S.

Physician's Accounts Receivable and Insurance System (P.A.R.I.S.) handles book-keeping and scheduling for up to 99 physicians or dentists. The program generates statements and ages accounts receivable with a complete audit trail. It also processes up to nine types of insurance claims. *P.A.R.I.S.* generates patient and practice analysis reports based on diagnoses and procedure codes, patient types, or payment types. List price: \$2495. Requirements: 128K, one disk drive, 5MB hard disk. Parker Computer Systems 2601 Ridgmar Plaza #1 to 4 Fort Worth, TX 76116 817/429-6482, 817/735-9515

Evrydiet

A program that calculates a diet plan to lose or gain weight, *Evrydiet* stores 60 days of diet information for up to 22 people. Using a data base that lists 24 nutrients in over 1000 foods, the program compares each person's nutrient intake to recommended daily allowances (RDAs) and calculates nutrition excesses and deficiencies. You can find out the percent of calories that comes from fat, protein, and carbohydrates. Designed for professional dieticians, the program generates charts. List price: \$59.95. Requirements: 128K, one disk drive. Evryware 1950 Cooley Ave. #6208 Palo Alto, CA 94303 415/321-2708

MediCard

A template for *VisiCalc*, *MediCard* prepares patient bills and American Medical Association claim forms for doctors. *MediCard* is designed for single-physician offices that process fewer than 100 claim forms per month. The program allows entry at any time during the month. *MediCard* displays and prints patient financial status statements. List price: \$249.95. Requirements: 96K, one disk drive, *VisiCalc*. CMA Micro Computer 55722 Santa Fe Trail Yucca Valley, CA 92284 619/365-9718

Medical Billing, Medical Insurance Claims

Two templates for medical practices, *Medical Billing* and *Medical Insurance Claims* work with the *VersaForm* data base manager. The *Medical Billing* template maintains patient ledgers and accounts receivable. You can print patient statements and reports on aged and delinquent accounts. The program is also a management tool, letting you monitor service by procedure, physician, or the entire practice.

The *Medical Insurance Claims* template prepares the forms used by Medicare, Champus, and most private companies. For California practices it also prepares MediCal forms and authorizations. The template uses *VersaForm's* features to fill in certain items automatically and to generate custom reports. With the report function you can track claims by type of insurance, those returned, and those unreturned. List price: *Medical Billing* \$195, *Medical Insurance Claims* \$150. Requirements: 128K, two disk drives, *VersaForm*. Applied Software Technology
170 Knowles Dr.
Los Gatos, CA 95030
408/370-2662

Medical Record System

Medical offices with as many as nine doctors can maintain patient records with *Medical Record System*. The program handles accounts receivable with aging and private and third-party insurance billing in American Medical Association, state, and Medicare formats. *Medical Record System* generates practice analyses by diagnosis and treatment. Doctors can search the data base by specifying parameters such as age and medication. A network version works with PCnet and Multilink. List price: \$3000, network version \$4500. Requirements: 192K, 10MB hard disk; network version 256K, network board.

Johnson Associates Software
P.O. Box 3069
Redding, CA 96049
916/221-0740

Threshold

A medical office management system, *Threshold* produces financial and statistical reports to monitor productivity and assist in retrieving information for clinical studies. It provides automatically aged statements based on an open-item accounting system. Insurance forms are produced automatically by entering daily charges and credits. Claims can be submitted electronically to any participating insurance agency. List price: \$5500. Requirements: 256K, 20MB hard disk, DOS 2.00 or later version.

Physicians Practice Management, Inc.
1810 S. Lynhurst, Ste. Q
Indianapolis, IN 46241
317/248-0357

Wellness Check

Designed for health departments, hospitals, companies, and schools, *Wellness Check* helps appraise health risks. Based on answers to a questionnaire covering a range of life-style topics, the program generates a report that includes a prognosis and advice on reducing health risks. *Wellness Check* includes software and educational booklets for teenagers (13 to 17 years old) and adults (18 years and older). List price: \$250. Requirements: 64K, one disk drive.

Rhode Island Dept. of Health
75 Davis St.
Providence, RI 02908
401/277-6957

Food Inventory Control

Designed for hospital food service personnel, *Food Inventory Control* maintains a data base of up to 4000 ingredients in perpetual inventory. Up to 4000 recipes can be entered into the program's second data base. *Food Inventory Control* calculates a recipe's total cost as well as the cost per serving. The program automatically breaks down the ingredients in each recipe chosen by the cook or dietitian and checks the hospital's inventory. When the ingredients drop to a prescribed level, the program issues a warning and prints vendor orders. *Food Inventory Control* dis-

plays restocking costs based on the most recent purchase of an item. Inventory checks can be performed daily or weekly. List price: \$1200. Requirements: 128K, two disk drives.

IPC Datadiet
350 N. Lantana #565
Camarillo, CA 93011
805/484-1616

A.D.A.M.

The *Automated Dental Accounting and Management System* (A.D.A.M.) handles bookkeeping and scheduling for dental offices with up to 8000 active patients. A.D.A.M. stores information on work performed, dependents, and insurance. It prints insurance claims, generates statements, maintains appointment schedules, and produces recall notices. A.D.A.M. uses American Dental Association Treatment Codes to produce performance analyses that can be shown in bar charts or printed reports. List price: \$6500. Requirements: 256K, 10MB hard disk, DOS 2.00 or later version (color graphics board recommended).
Dental Systems, Ltd.
59 Executive Park S #180
Atlanta, GA 30329
404/325-0135

Dietan

Designed for professionals in medicine and nutrition, *Dietan* is a nutrition analysis system that provides information on up to 29 nutrients and comes with a choice of data bases covering from 750 to 6000 foods. It produces six reports with graphs on aspects of a client's diet, showing deficiencies and excesses. *Dietan* can investigate a present diet, research new diets, or prescribe foods and supplements for special diets. List price: home version \$89, professional version up to \$630 depending on size of data base. Requirements: 64K, one disk drive, with largest data base 10MB hard disk.

Camrass Corp.
170 Broadway #201
New York, NY 10038
212/964-7427

Property Management

Real Estate Property Management, Real Estate Property Management II

For tracking a portfolio of rental properties, *Real Estate Property Management* maintains accounts for apartments, single-family houses, office buildings, marinas, warehouses, and shopping centers. The program records tax-related expenditures in 13 categories, such as landscaping and plumbing. It displays and prints cash flow figures for one property or for all. A remark field allows tracking of slow-paying tenants and reminds owners of lease expiration dates.

Real Estate Property Management II is a similar program that provides additional tenant lease data, a reformatted cash flow analysis for each record, and 26 account categories selectable by unit or property. It also performs depreciation (straight-line or ACRS method) and calculates loan amortization for the life of the property. List price: *Real Estate Property Management* \$149.95, *Real Estate Property Management II* \$249. Requirements: 48K, one disk drive.

Tomar Productions
P.O. Box 740871
Dallas, TX 75374
214/363-3059

Real Property Management

Using *Real Property Management* you can project and monitor 12 months of financial activity for a variety of rental properties. The program compares actual to budgeted income, keeps files on tenants, reports balance due by unit, supplies instant bank balance per property, reports lost revenue, and prints charts of accounts. An optional *Check Writer and Vendor* program prints checks. *Real Property Management* maintains records on any number of properties and handles up to 125 units per property on floppy disk or up to 998 units per property on hard disk. List price: *Real Property Management* \$295, *Check Writer and Vendor* \$85. Requirements: 192K, two disk drives.

Real-Comp Inc.
P.O. Box 1263
Cupertino, CA 95015
408/996-1160

Property Manager

An interactive trio of programs for rental management, *Property Manager* keeps ownership and tenancy records on multiple properties. The package consists of Eazyacct, a general ledger program; Eazymail, a mail merge program; and Owners, a property management program. *Property Manager* summarizes tenant payments and deposits and produces delinquent payment summaries. It also prints tenant bills and writes checks. List price: \$250. Requirements: 128K, two disk drives.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

The Landlord

Offices, shopping centers, ministorage units, or aircraft hangars can be managed with *The Landlord*, a property management system for any kind of rental property. *The Landlord* has two modules: The Property Manager for automated record keeping and The Financial Manager for bookkeeping and accounting. *The Landlord* handles up to 100 properties with a

maximum of 3500 units and 3750 tenants. It keeps track of tenant payments, identifies slow payers, spots upcoming vacancies, and provides detailed management reports for single or multiple owners. List price: \$595. Requirements: 128K, two disk drives.

Systems Plus, Inc.
1120 San Antonio Rd.
Palo Alto, CA 94303
415/969-7047

Property Listings/Comparables

Designed for real estate offices, *Property Listings/Comparables* maintains listings while tracking the prices of comparable real estate. You can select properties by any combination of attributes, such as minimum and maximum price range, number of bedrooms and bathrooms, heat type, location, or user codes. For investors a Performance Selections feature retrieves listings by maximum gross factor, maximum price per square foot of improvements, or minimum cash flow requirement. List price: \$425. Requirements: 48K, one disk drive.

Realty Software
1926 S. Pacific Coast Hwy. #229
Redondo Beach, CA 90277
213/372-9419

Property Management

A menu-driven program for residential and commercial property managers, *Property Management* handles bookkeeping chores for up to 1000 units. The program tracks rent payments, security and cleaning deposits, and building maintenance costs. It also produces individual tenant statements and prints mailing labels for monthly bills. The program's data can work with Peachtree Series VIII *Accounts Payable* and *General Ledger*. List price: \$495. Requirements: 128K, two disk drives.

Arrays, Inc./Continental Software
11223 S. Hindry Ave.
Los Angeles, CA 90045
213/410-3977

SolidRent

A management system for residential properties, *SolidRent* lets the operator track tenant payments and occupancy changes by property. The program also does financial reporting by property. List price: \$1995. Requirements: 128K, two disk drives.

Solid Software, Inc.
2625 Cumberland Pkwy. #250
Atlanta, GA 30339
404/433-0823

Property Management and Accounting System, Property Management Plus

A range of property management tasks can be performed with the *Property Management and Accounting System*. The program tracks rental income and maintenance expenses and creates reports for owners and managers. A Tenant Information report lists vital data for each unit, including monthly rent, lease expiration date, and occupants' names and phone numbers. An Expense Detail Report summarizes monthly expenses by check number, payee, and category. Owners' Reports provide operating statements with ledger detail and graph income and expenses by building. Other reports identify vacancies and late payers. The system also prints checks.

Property Management Plus, an enhanced version of the same system, provides additional reports on expired leases, ledger detail, and income by category. It also graphs income and expenses, prints rent statements, and calculates late charges. List price: *Property Management and Accounting System* \$450. *Property Management Plus* \$525. Requirements: 48K, one disk drive.

Realty Software
1926 S. Pacific Coast Hwy. #229
Redondo Beach, CA 90277
213/372-9419

Property Management

A menu-driven system designed for use by office staff, *Property Management* automates accounting and management tasks for property owners, operators, or condominium associations. The program serves multiple properties and can produce consolidated financial statements. Reports cover tenant activity, vacancy, and rent roll lease expiration. A general ledger module produces charts of accounts, balance sheets, income statements, and budget analyses. *Property Management's* other capabilities include vendor record keeping and check and label printing. List price: \$950. Requirements: 128K, two disk drives

Star Software Systems, Inc.
20600 Gramercy Pl. #103
Torrance, CA 90501
213/538-2511

Apartment House Manager

A collection of five programs that assist owners and managers with their monthly and yearly bookkeeping chores, *Apartment House Manager* provides a master file and status reports for all apartments. The program maintains a journal of all rent payments and building expenses, issues a monthly and year-to-date profit-and-loss statement, and prints a rent roll and form letters. A sort program lets managers rearrange status report information by tenant, last name, apartment number, or lease expiration date. The master file can be sorted by tenant. List price: \$395. Requirements: 64K, one disk drive.

User-Friendly Software Inc.
P.O. Box 1192
Melville, NY 11747
516/643-6618

Condo Manager

Managing the community associations of condominiums is the specialty of *Condo Manager*, which tracks members' dues and maintenance charges and can pass accounting data to spreadsheets. *Condo Manager* displays 14 screens for inquiry and data entry, prints bills, and compiles balance schedules, overdue lists, and other reports. List price: \$750. Requirements: 128K, two disk drives.

Coleman Business Systems
3654 Arcadian Dr.
Castro Valley, CA 94546
415/581-7125

Rental Manager

For tracking the rental units of multiple properties, *Rental Manager* keeps records of all receipts and disbursements and amasses detailed financial reports for owners. Bookkeeping entries are posted automatically to a built-in general ledger; the program can also tie in to spreadsheets and word processors. List price: \$750. Requirements: 128K, two disk drives.

Coleman Business Systems
3654 Arcadian Dr.
Castro Valley, CA 94546
415/581-7125

Solid PM, Solid PM Plus

Managers of commercial properties can track tenant payments and occupancy status with *Solid PM*. The package does financial reporting by property. *Solid PM Plus* includes an accounts payable module to track separate checking accounts by property and works with an optional *Percent of Sales* module that calculates rents based on sales. List price: *Solid PM* \$1995, *Solid PM Plus* \$2995, *Percent of Sales* \$495. Requirements: 128K, two disk drives.

Solid Software, Inc.
2625 Cumberland Pkwy #250
Atlanta, GA 30339
404/433-0823

Property Accounting and Management System

Tenant information, rental income, and expenses for multiple property investments can be monitored with the *Property Accounting and Management System*. The menu-driven program helps new users create property files. You can open and close accounting periods and update property entries; owner, manager, and tenant data; vendor accounts; general accounts; and receipts and disbursements. The system generates various reports. List price: \$995. Requirements: 128K, two disk drives.

Syntax

6642 S. 193rd Pl. #N107

Kent, WA 98032

206/251-8438

Rentman

For Realtors, managers, and real estate investors, *Rentman* organizes property and tenant management functions. The program performs income and expense accounting, amortization, check writing, and mortgage payment calculations. It also produces partnership and equity statements. An optional *Mailing List* module sorts addressees by category. List price: \$1495, *Mailing List* \$99. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Data Mill Inc.

P.O. Box 98

Thornton, PA 19373

215/358-1900

Skyline: The Property Management System

For multiple income properties *Skyline: The Property Management System* provides rent analyses, deposit and payment reports, occupant histories, vacancy and lease information, and other data for both residential and commercial real estate. Other features include on-screen documentation, windowing, and an on-line calculator. List price: \$1495. Requirements: 320K, hard disk.

The SOFTA Group, Inc.

778 Frontage Rd.

Northfield, IL 60093

312/446-7638

Real Estate

QuikCalc Loan Analyzer

Created for people without computer experience, *QuikCalc Loan Analyzer* calculates interest rates (over whole loans or early termination periods), payments and interest between dates, balance at specific dates, net present value, net loan proceeds, and early term balloon payments. Amortization schedules are included. List price: \$99.95. Requirements: 64K, one disk drive, *SuperCalc* or *VisiCalc*. Simple Soft, Inc.

480 Eagle Dr. #101

Elk Grove, IL 60007

312/364-0752

QuikCalc Real Estate Investor

Designed for Realtors, *QuikCalc Real Estate Investor* models both income-producing and residential properties and can be customized for each project. The program analyzes the five-year effects of a sale or purchase and works with *VisiCalc* or *SuperCalc* to analyze one property at a time. You can print reports for presentation. List price: \$129.95. Requirements: 64K, one disk drive, *VisiCalc* or *SuperCalc*.

Simple Soft, Inc.

480 Eagle Dr. #101

Elk Grove, IL 60007

312/364-0752

Real Estate Tools I

Mortgages and cash flow can be analyzed with *Real Estate Tools I*. Eleven applications, such as graduated payment and wraparound mortgages, uneven payment leases, and amortization schedules, perform more than 45 specific analyses. All calculations are in double precision, and cash flows with up to 12 digits are allowed. For variable or grouped cash flow applications, the program computes the internal rate of return, present value, net present value, and financial management rate of return. Investors can begin amortization schedules at any month of the year and prepare and print monthly or annual schedules. List price: \$299. Requirements: 128K, two disk drives.

Ansonn Software Inc.

2801 N. Surrey Dr.

Carrollton, TX 75006

214/446-4340, 214/867-2760

Construction Information System

Designed to help real estate developers track several building projects, the *Construction Information System* budgets construction loan amounts by activity and keeps track of contracts, change orders, and payments to subcontractors. The program calculates funds required to complete projects, analyzing percentage paid and breaking down costs per foot by construction category. It analyzes cash flow, makes loan draw requests, and charts distribution of funds to partners. The general ledger provides year-to-date detail on receipts, checks, and journal entries by chart of accounts. An optional *Accounts Payable* module channels several projects through one checking account; it can also forecast cash requirements and print checks. An optional *Management Display* module summarizes key information from each project for executive review. List price: \$6495, *Accounts Payable* \$895, *Management Display* \$295. Requirements: 128K, two disk drives (hard disk recommended).

Execu-data

6851 Canby Ave.

Reseda, CA 91335

818/343-1300

Superval, Version 2.0

A real estate investment analyzer for appraisers, syndicators, owners, managers, and consultants, *Superval 2.0* makes discounted cash flow projections for up to 50 years. The program automatically calculates lease rollovers on a monthly basis and computes new base rents, new escalation provisions, leasing commissions, and tenant improvement costs. It also figures internal rates of return, future equity fundings, multiple mortgages, and ground rent with participation formulas. You can enter irregular annual revenue and expense items. Resale price can be calculated on the basis of equity or overall capitalization rate, or these rates can be extrapolated from a resale price. Reports have definable labels, and data works with 1-2-3 and popular word processors. List price: \$950. Requirements: 128K, two disk drives.

Real Estate Applications Software, Inc.
29 Manor Rd.
Smithtown, NY 11787
800/645-4660; 516/360-8833 Alaska,
Hawaii, and New York

Property Management

By automating bookkeeping details, *Property Management* assists in managing income property. The program tracks up to 25 properties and up to 1000 units. It tracks all rents and deposits, assesses common area charges, and calculates rent per square foot. It also maintains 60 income and expense accounts and prints reports such as tenant listings, vacancy reports, and income and expenses. The program works with Peachtree's *General Ledger* and *Accounts Payable*. List price: \$495. Requirements: 128K, two disk drives, BASIC.

Arrays, Inc./Continental Software
11223 S. Hindry
Los Angeles, CA 90045
213/410-3977

Real Estate Models for the '80s

A set of 16 templates for use with *VisiCalc* or 1-2-3, *Real Estate Models for the '80s* performs many types of real estate analysis. Creative financing options—including wraparound mortgages, shared equity appreciation, adjustable rate mortgages, supplementary financing, no-interest mortgages, assumptions, and loan buydown analysis—can be assessed in light of “what if” contingencies. List price: \$65. Requirements: 64K, one disk drive, *VisiCalc* or 1-2-3.

Commercial Software Systems, Inc.
7689 W. Frost Dr.
Littleton, CO 80123
303/761-8062

Real Estate Investor II

For any type of improved real estate, *Real Estate Investor II* performs multiyear analysis of before- and after-tax cash flow and rate of return. It provides for nine loan types with variable parameters and eight depreciation methods. *Real Estate Investor II* computes return on investment, return on equity, internal rate of return, and financial management rate of return; provides a detailed sales analysis including sensitivity analysis; and produces a formatted report. List price: \$295. Requirements: 192K, one disk drive.

REMS Software
526 N.W. Second St.
Corvallis, OR 97330
503/757-8887

Real/Pack

A menu-driven data base program for real estate, lending, and appraisers' offices, *Real/Pack* lets you retrieve a record for comparison and appraisal by address, sales amount, square footage, or any other field. It prints on standard FNMA Form 1004 and comes with source code and documentation. List price: \$495. Requirements: 180K, two disk drives.

Alpine Data Services
635 Main St.
Montrose, CO 81401
303/249-1400

REAP

For real estate syndicators, appraisers, developers, and underwriters, *REAP (Real Estate Analysis Program)* combines mortgage and depreciation data to produce real estate projections for up to 40 years. Handling up to three mortgages per project, it generates tax shelter, net present value, and return-on-investment tables. *REAP* automatically compensates for low-income, residential, and commercial property and applies appropriate IRS tax regulations for construction period, front end, and other costs. After you enter the projected price and year of sale for a property, the program shows the predicted effects of the capital gains tax and recapture liability as well as the internal rate of return (IRR) on investment. *REAP* also shows equity required for user-specified IRR. List price: \$585. Requirements: 128K, two disk drives.

Dominion Financial Projection
2551 Alameda Ave.
Norfolk, VA 23513
804/855-2398

Real Estate Consultant

Created for real estate agents, investors, and developers, *Real Estate Consultant* analyzes investments, from single-family homes to large, multitenant commercial buildings. The program analyzes one property at a time to make financial projections for up to eight years. It can calculate partnership and syndication property transactions as well as single-owner sales and purchases. *Real Estate Consultant* handles variable interest rates, balloon payments, interest-only mortgages, and as many as eight wraparound mortgages. The program provides amortization and depreciation schedules and displays the internal rate of return (IRR) for each property. List price: \$275. Requirements: 64K, one disk drive.

Consultant Systems Inc.
3704 State St. #311
Santa Barbara, CA 93105
805/682-8927

EZ-RE Investor

Using *EZ-RE Investor* and 1-2-3, real estate investors can arrive at the best financial structure for purchasing properties. The package of three templates projects ten years of cash flow; figures deductions, tax at sell, and after-tax internal rate of return for five mortgage types; performs ACRS or straight-line depreciation; and recalculates globally for annual changes of expense, rent, interest, appreciation, and tax rate. The templates generate a report in industry format. List price: \$50. Requirements: 256K, 1-2-3, two disk drives. LB Assoc. Inc.
8817 Skokie Ln.
Vienna, VA 22180
703/938-9093

SOLD Series

Designed for real estate professionals, the *SOLD* series handles common office tasks. Each program comes with its own p-System operating system and is available in versions for the PCjr and the PC XT as well as the PC.

SOLD Real Estate Sales Management tracks listings, agent performance, and office inventory reports. The program offers 12 reports on subjects like income projections, pending settlements, or office sales. *SOLD Real Estate Office Accounting* is a general ledger program that uses "company dollar" formatting for financial statements and reports. Journal transaction capabilities and automatic error detection are included.

The *SOLD Residential Financial Analysis* program helps produce reports on equity analysis, closing costs, loan payment calculations, real cost of ownership, amortization schedules, and cash flow requirements. List price: *SOLD Real Estate Sales Management* \$395, *SOLD Real Estate Office Accounting* \$495, *SOLD Residential Financial Analysis* \$295. Requirements: 128K, two disk drives. Microventure, Inc.
17782 Cowan
Irvine, CA 92714
714/660-0122

Real Estate Investment Comparisons

Real estate personnel, investors, appraisers, and escrow closers can use *Real Estate Investment Comparisons* to compare the internal rate of return for several potential property investments. The package contains seven templates for popular electronic spreadsheets. One template analyzes each property to determine which type of financing will yield the desired income. Another summarizes and compares the impact of investments. Other templates project income tax liability and taxable gain on sales. One template figures each investment's internal rate of return and expresses it as a percentage. List price: \$59.95. Requirements: 64K; two disk drives; *VisiCalc*, *Multiplan*, *SuperCalc*, *PeachCalc*, or 1-2-3. Software Models
P.O. Box 1029
Crestline, CA 92325
714/338-5075

Real Analyzer

Buy, sell, exchange, or refinance? These are the questions *Real Analyzer* helps homeowners, income property investors, and real estate professionals answer. Its five menu-driven modules project cash flow and profitability (before and after taxes) in five-year blocks, extendable indefinitely. The program handles five types of loans, two depreciation schedules, and from 9 to 125 other assumptions (such as down payment, tax bracket, and interest rate) to help the investor compare options. Built-in formulas can be updated to reflect new tax laws. The program also runs on the PCjr. List price: \$195. Requirements: 128K, one disk drive. Real-Comp Inc.
P.O. Box 1263
Cupertino, CA 95015
408/996-1160

Lease Classification

A package for certified public accountants, internal auditors, and others who handle real estate finance, *Lease Classification* categorizes a lease for accounting purposes according to criteria set forth in F.A.S.B. 13. After prompting for the required parameters, the program classifies the lease as either Operating or Capital. If it's Capital, the lease is subcategorized as Sales-Type, Direct Financing, or Leveraged. *Lease Classification* automatically performs the 25, 75, and 90 percent tests and calculates the lessor's implicit rate of return. Lease payment frequency can be monthly, quarterly, semiannually, or yearly. Up to ten changes in rental amount are allowed over the lease term. Included with the program is an annuity-due amortizer that can be used for accounting and disclosure when the rental amount is constant. *Lease Classification* prints general- and special-purpose worksheets that can be used as data collection forms. List price: \$59.95, optional source code \$15. PC requirements: 64K, one disk drive. PCjr requirements: 128K, Cartridge BASIC. Personal Software Co.
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

The Property Analysis Model

By plugging in variables such as gross rents, vacancy and loss rate assumptions, and tenant pass-throughs, users of *The Property Analysis Model* can analyze up to two mortgages to optimize an investment strategy for a property. The program, an overlay for *VisiCalc* or *SuperCalc*, projects up to ten years of cash flow, reversion values, and other financial components of any real estate investment. It also calculates debt service and computes reversion values, after-sale expenses, and capital gains tax. List price: \$95. Requirements: 48K, one disk drive, *VisiCalc* or *SuperCalc*. Rockport Software Co.
1550 N.E. Loop 410 #215
San Antonio, TX 78209
512/824-2551

Advanced Real Estate Analyzer

An investment analysis tool for the professional real estate investor, syndicator, or broker, *Advanced Real Estate Analyzer* (AREA) is a menu-driven program that requires little computer experience. AREA prompts beginners for all necessary information to perform complex modeling. Experienced users can perform such computations as amortization for multiple mortgages; yearly cash flow, sales rate, internal rate of return (IRR), and capitalization rate throughout the projected period of ownership; and projections to determine the optimum time to hold a property. Models can be saved on disk. List price: \$595. Requirements: 128K, two disk drives.

Syntax
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

Real Estate Analyzer

Designed for investors and brokers, *Real Estate Analyzer* can be used to determine optimum holding periods for investments. Calculations include return on investment (ROI), internal rate of return, financial management rate of return, and after-tax cash flow. An economic modeling feature allows the investor to study scenarios based on five components of inflation. The program figures multiple loan payments, wraparound mortgages, interest-only loans, and balloon payments. It itemizes income and expenses and uses the investor's marginal tax rates on ordinary income and capital gains to compute after-tax cash flow and ROI. List price: \$250. Requirements: 64K, one disk drive. HowardSoft
8008 Girard Ave. #310
La Jolla, CA 92037
619/454-0121

Investor III

To help with real estate investment decisions, *Investor III* provides an analysis of the purchase, operation, and sale of properties. The program calculates pro forma cash flow, property appreciation, financial ratios, and tax yield. Capabilities include "what if" analysis, depreciation schedules, return on equity, and internal rate of return. List price: \$249. Requirements: 64K, one disk drive. Good Software Corp.
12900 Preston Rd.
Dallas, TX 75230
214/239-6085

Mortgage Maker

Designed for accountants, brokers, and others who arrange financing on monthly payment plans, *Mortgage Maker* consists of two separate routines. The first calculates monthly payments required for a loan of any value, term, and interest rate. The second routine prints complete amortization schedules. You enter principal, interest rate, term, and date of first payment, and the computer prints a schedule of payments, detailing the allocation of principal and interest as well as the principal balance for each monthly payment. The program can handle short-term notes with balloon payments. List price: \$20. Requirements: 64K, one disk drive. Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Real Estate Analysis Package

Investors and accountants can use *Real Estate Analysis Package* when making decisions about whether to acquire, hold, or dispose of property. The program handles three separate loans, balloon payments, and assumable loans. The *Real Estate Analysis Package* calculates internal rate of return and the return on total equity. It analyzes property income and highlights an investment's effect as a tax shelter. List price: \$149.95. Requirements: 64K, one disk drive. Execuware, Inc.
4018 Country Club Rd.
Winston-Salem, NC 27104
919/760-3576

Real Estate Planner

When superimposed on an electronic spreadsheet, *Real Estate Planner* determines break-even cash flow and predicts the best and worst scenarios for a real estate deal. The template figures taxable income on loss, tax payable on benefit, net cash flow for each period, cumulative cash flow through the latest period, and net present value of cash flow at any discount rate. The template's Sales Alternatives section computes sales price by three criteria—cash flow capitalization rate, discount rate (compounded annually), and ending gross annual income—letting you pick the most advantageous investing strategy. *Real Estate Planner* uses the graphics capabilities of 1-2-3. List price: \$100. Requirements: 128K; two disk drives; *VisiCalc*, *SuperCalc*, *Multiplan*, 1-2-3, *Perfect Calc*, *UltraCalc*, *Microplan*, or other spreadsheet. TaxCalc Software, Inc.
4210 W. Vickery
Fort Worth, TX 76107
817/738-3122

Real/Help

Using *Real/Help*, investors can explore elements of potential real estate deals, from tax benefits to the feasibility of syndication, and determine how much to pay for a property to meet their cash flow needs. The program calculates capitalization rate, gross multiplier, price and expense per square foot, return on investment, and internal rate of return. It models a financing package of up to five loans (amortized, interest-only, fluctuating-rate, balloon payment, and wrap), generates a five-year projection, and explores potential syndication benefits to both limited and general partners. List price: \$250. Requirements: 64K, one disk drive. DRF, Inc.
3333-F Soquel Dr.
Soquel, CA 95073
408/475-4456

Retail Sales

Mail Order Control, PC Mail Order System

A system that keeps track of mail-order sales and tax receipts, *Mail Order Control* is designed for low-volume sales. Serial numbers can be attached to each sales item for tracking software sales. The program supports discount sales, three tax rates, and a customer base. *PC Mail Order System* has all the features of *Mail Order Control* and adds inventory control, mailing lists and labels, and product invoicing. List price: *Mail Order Control* \$125, *PC Mail Order System* \$395. Requirements: *Mail Order Control* 64K, one disk drive; *PC Mail Order System* 128K, two disk drives.

Data* Easy
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Video Express

Developed for video stores, *Video Express* is a point-of-sales system that covers membership, inventory, variable pricing, sales, rentals, returns, and reports. List price: \$995. Requirements: 128K, two disk drives.

Alternative Software
1165 Barbara Dr.
Cherry Hill, NJ 08003
609/429-3838

PC-Support

An on-line data base system designed for computer retailers, *PC-Support* provides electronic mail and file downloading. It has a definable product search facility for specific applications. The system allows you to design specialized menus, product reviews, and customer feedback systems. A password system permits *PC-Support* to be partitioned by computer type and provides protected access. List price: \$200. Requirements: 128K, two disk drives, Hayes Smartmodem, serial port.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5865

Mr. QuarterMaster Sales

A stand-alone system, *Mr. QuarterMaster Sales* keeps track of product sales or use. The system can generate reports for any time period on a single product, all products, a single customer or department, or all customers and departments. The program also prints customer labels. List price: \$79. Requirements: 128K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

Stockroom Manager

Intended for businesses that have a great deal of stockroom activity, *Stockroom Manager* lets you have five separate files of 200 items each on the program disk. Each entry is classified by part number and a description up to 14 characters long. You can retrieve items from the files by part number or description. For each item, the program can also store data such as the quantity in stock, the unit price, and the location in the stockroom. List price: \$39. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Rental Management System

For businesses that have a revolving inventory, *Rental Management System* manages rental inventory. The system allows for placing, changing, canceling, and closing orders on as many as 60 kinds of inventory items. Inventory levels are automatically adjusted as orders are processed. The system displays inventory available for any given day on all inventory items up to one year in advance. List price: \$395. Requirements: 128K, one disk drive (two recommended), DOS 2.00 or later version.

USD Inc.
251 Round Lake Rd.
Vermontville, MI 49096
517/726-1155

Science and Mathematics

Forecast Plus

A forecasting package for any number of specific business applications, *Forecast Plus* includes data management and exploratory features. Functions include algebraic transformations, lags, and differencing. Exploratory graphics features include time plots, 4253HT smoothing, box plots, aggregate box plots, spread-versus-level plots, and auto-correlation functions. Forecasting procedures include simple moving averages, single and double exponential smoothing, Holt's two-parameter smoothing, Harrison's harmonic smoothing, Brown's quadratic exponential smoothing, Winter's multiplicative seasonal smoothing, robust decomposition, Census X-11 decomposition, regression trend analysis, multiple regression analysis, generalized adaptive filtering, and Box-Jenkins analysis. All procedures include time plots, forecasts, one-step-ahead forecasts, and forecast tables. List price: \$595. Requirements: 128K, two disk drives.

Walonick Assoc.
5624 Girard Ave. S
Minneapolis, MN 55419
800/328-4907, 612/866-9022

TK!Solver

An equation-processing program, *TK!Solver* is designed for engineering, finance, science, and education professionals who use mathematical models. Without programming, you can solve a single equation or sets of simultaneous equations. *TK!Solver* lets you solve for any variable without rewriting equations. It solves for unknowns on either side of the equal sign, converts units, and solves for lists of values. The program displays output in tables and plots. List price: \$399. Requirements: 128K, one disk drive.

Software Arts, Inc.
27 Mica Ln.
Wellesley, MA 02181
617/237-4000

Statplan II

A statistical analysis package, *Statplan II* contains a full-screen editor for data entry and editing. Procedures include basic statistics, correlation matrix, ANOVA, multiple regression, curve fitting, autocorrelation, seasonality adjustment, and cross tabs. Graphics include cross plots, histograms, time series plots, and regression and curve fit plots of actual and calculated data points. *Statplan II* can read and write DIF and ASCII files for data exchange with 1-2-3, *VisiCalc*, and *dBASE II*. *Statplan II* is written in BASIC, and source code is provided. List price: \$99. Requirements: 64K, one disk drive.

The Futures Group
76 Eastern Blvd.
Glastonbury, CT 06033
203/633-3501

Microstat

A file-oriented statistics package, *Microstat* calculates descriptive statistics, ANOVA, cross tabulations, chi-squares, correlations, stepwise multiple regressions, scatter plots, nonparametrics, time series, and probability distributions. List price: \$375. Requirements: 128K, one disk drive.

Ecosoft, Inc.
6413 N. College Ave.
Indianapolis, IN 46220
317/225-6476

LP88, DLP88, BLP88, MILP88, TSA88

A menu-driven system for solving linear problems with up to 255 constraints and 2255 bounded and unbounded variables, Eastern's series sets up and solves problems, controls computations, and generates tables. Features of each program include spreadsheet-style input and editing, input from sequential files, a storage system for problems and bases, sensitivity analysis output to sequential files, and optional 8087 support.

LP88 applications include production, scheduling, inventory, mixing, transportation, and networks. *DLP88* is a linear programming system that converts a primal problem into its dual form and vice versa.

BLP88 is designed for problems in which variables are restricted in value by upper or lower bounds; the program uses transformations and upper bound substitutions without adding the bounds to the constraint set.

MILP88 solves linear problems with 45 integer-valued variables and 1255 noninteger variables, using an application of the "branch and bound" method.

TSA88 solves transportation problems with up to 256 sources (origins) and 256 sinks (destinations). Applications include assignment and transshipment models as well as the classical linear programming transportation problem. List price: each program \$88. Requirements: *LP88* 128K, one disk drive; *DLP88* 192K, one disk drive; *BLP88* 192K, one disk drive; *MILP88* 192K, one disk drive; *TSA88* 128K, one disk drive.

Eastern Software Products
4804 Tarpon Ln.
P.O. Box 15328
Alexandria, VA 22309
703/360-6942

"LP88 has become a hit with our firm. Its two outstanding features are its ability to read data from 1-2-3 print files and its use of a spreadsheet-like editor to make changes in the initial basis. In all respects the program appears to work exceptionally well. I only wish that it could handle bigger problems." George Boomer, Los Angeles, California

Instat

Performing general-purpose data analysis and screening, *Instat* displays means, standard deviations, histograms, contingency tables, simple regression, t-tests, and chi-square tests. *Instat* supports six variable types, variable names, and missing values. Analyses can be specified interactively or in batch runs. A Describe command directs the program to choose the most appropriate display. List price: \$95. Requirements: 128K, one disk drive. Statistical Consulting Services
517 E. Lodge Dr.
Tempe, AZ 85283
602/838-7784

The Survey System

Designed to enter, edit, process, and present questionnaire data, *The Survey System* can produce crosstabs and scored variable tables. Tables can have multiple-column variables and be up to three pages long. *The Survey System* includes BASIC statistics routines. You can weigh questionnaires, select subsamples, and create new variables from the values of existing variables. An open-ended question coding and analysis program, which expands the number of codes for answers and allows additional categories and subcategories, is optional. A card reader program, a card reader device, and a connecting cable are also optional. List price: *The Survey System* \$495, coding and analysis program \$200, card reader program \$100, card reader device \$14.95, connecting cable \$25. Requirements: 128K, one disk drive. Creative Research Systems
1864 Larkin St.
San Francisco, CA 94109
415/771-0912

Survtab

To aid in market research and processing survey data, *Survtab* accepts and tabulates data from questionnaires. It does cross-tabulations and banner tables of up to 80 questions per questionnaire and can handle as many questionnaires as the disk allows. The program can also tabulate multiple-response questions. List price: \$180. Requirements: 64K, two disk drives. Statistical Computing Consultants
10037 Chestnut Wood Ln.
Burke, VA 22015
703/250-9513

TexSolver-10

The numerical problem-solving abilities of *TexSolver-10* allow calculations without complicated programming procedures. The program's range of mathematical functions includes trigonometry, statistics, and logarithms. *TexSolver-10* uses a "stack" operating logic, similar to that of Hewlett-Packard calculators, which offers temporary storage of intermediate results to minimize keystrokes. The available functions and stack contents are always displayed on screen. List price: \$39.95. Requirements: 64K, one disk drive. Microtex
P.O. Box 111054
Carrollton, TX 75011
214/980-9837

SPSS/PC

A program with room for 200 to 250 variables, *SPSS/PC* performs statistical analyses and formats reports. Functions include ANOVA, cross-tabulations, correlations and partials, multiple regression with up to ten lag variables, non-parametric tests, t-tests, hierarchical log and linear analysis, and frequency tables. List price: \$795. Requirements: 320K, 10MB hard disk. SPSS Inc.
444 N. Michigan Ave.
Chicago, IL 60611
312/329-2400

Mathematics Series

Four menu-driven mathematical analysis programs make up the *Mathematics Series*. The statistical package computes means, standard deviations, frequency distributions, simple linear regression (SLR) lines, SLR equation coefficients, and data points. For any two- or three-variable equation that uses basic arithmetic functions, the program plots the equation, its integral, its derivative, roots, maxima or minima, and the integral value over the plot range. A matrix program lets you solve for the inverse, determinant, and solution matrix for linear systems of up to 54 equations in 54 unknowns. List price: \$50. Requirements: 64K, one disk drive. Spectrum Software
1021 S. Wolfe Rd. #130
Sunnyvale, CA 94086
408/738-4387

StatPac

A menu-driven statistical package for professional researchers, *StatPac* includes a data manager and a word processor for editing files. Features include batch processing, frequencies, descriptive statistics, breakdown, cross tabs, correlation and regression, multiple regression, t-tests, one- and two-way ANOVA, and multiple-variable response. Data manipulation includes writing, listing, weighting, sorting, and aggregating cases. Data files can contain 5000 records and 255 columns of alphanumeric information. *StatPac* is menu-driven and reads fixed- or free-format ASCII files. List price: \$400. Requirements: 128K, two disk drives. Walonick Assoc.
5624 Girard Ave. S
Minneapolis, MN 55419
800/328-4907, 612/866-9022

dEng

Trigonometric and logarithmic functions as well as miscellaneous routines are included in *dEng*. Arguments are passed from a program to the function program and returned with mnemonic memory variables. Typical accuracy is 6 to 8 significant digits. All functions are provided in *dBASE II* source code. List price: \$79.95. Requirements: 128K, one disk drive, *dBASE II*.

Feller Assoc.

550 CR PPA, Rt. 3

Ishpeming, MI 49849

906/486-6024

ABstat

An interactive statistical package, *ABstat* is designed for data analysis. You can define equations in simple algebra and obtain the mean, standard deviation, and case number of each variable. Statistical procedures include descriptive statistics, analysis of variance, chi-square analysis, correlations, cross-tabulations, multiple regressions, and t-tests. *ABstat* can accept data directly from *dBASE II* files or ASCII files created by other programs. List price: \$395. Requirements: 128K, two disk drives.

Anderson Bell

P.O. Box 191

Canon City, CO 81212

303/275-1661

Statistician's MACE

A statistics program for scientists, business and financial analysts, statisticians, and engineers, *Statistician's MACE* calculates descriptive statistics, multiple regression analysis, and pairwise correlations. ANOVAs are calculated for completely randomized, completely randomized factorial, and randomized block. The program performs t-tests, nonparametric tests, and data transformations. List price: \$195. Requirements: 128K, one disk drive.

The Matrix Calculating Engine
(MACE), Inc.

2313 Center Ave.

Madison, WI 53704

608/241-4566

SigStat

A statistical analysis package, *SigStat* includes 36 programs for univariate and multivariate analysis of variance and covariance, general linear models, regression and factor analysis, canonical correlations, discriminant analysis, life table and survival rate, time series, probit, multidimensional scaling, cross-tabulations, scatter plots, and data transformations. A version is available that uses the 8087 coprocessor to handle up to 80 variables on 32,767 cases. List price: \$595 (\$395 for schools and nonprofit organizations). Requirements: 128K, one disk drive.

Significant Statistics

3336 N. Canyon Rd.

Provo, UT 84604

801/377-4860

Number Cruncher Statistical System

An integrated statistical system, *Number Cruncher Statistical System* covers means, variances, frequency tables, histograms, scatter plots, correlations, multiple regression, residual analysis, stepwise regression, robust regression, principal components analysis, survival analysis, life table analysis, t-tests, ANOVA, repeated measure ANOVA, analysis of covariance, discriminant analysis, forecasting, and transformations. The program reads ASCII files. List price: \$200. Requirements: 128K, two disk drives.

NCSS/Dr. Jerry L. Hintze

865 E. 400 N

Kaysville, UT 84037

801/546-0445

Miscellaneous

CUPlan

A reporting and forecasting system for credit unions, *CUPlan* can store five years of monthly financial and statistical data. The menu-driven program allows numeric and graphics data lookup and prepares nine formatted financial reports. You can build financial models and prepare multiyear forecasts for up to six years. Forecasts are prepared as pro forma, in-balance financial statements including interest, dividend, and reserve calculations. List price: \$1200. Requirements: 128K, two disk drives.

Robert Eldridge & Assoc.

3184 Kingsley Pl.

Lafayette, CA 94549

415/284-2937

DARTS III

Designed to help manage radio stations, *DARTS III (Datacount Accounts Receivable & Traffic Scheduling)* covers contract entry, logging, accounts receivable, and management reporting. The system produces logs, projections, affidavits, and cop statements and reports on sales management, aged trial balance, sales rep collection and performance, and average spot rates. The billing function offers calendar month, broadcast month, and demand cycles. List price: \$5200. Requirements: 256K, 10MB hard disk.

Datacount, Inc.

2207 Anderson Rd.

Opelika, AL 36801

205/749-5641

Membership Management System

A management tool for chambers of commerce and associations, *Membership Management System (MMS)* handles renewals and new members, prospect files, dues renewal, miscellaneous receivables, word processing, and special services such as insurance. *MMS* also produces listings, mailing labels, and a membership directory. The data base maintains information about meeting places and times, chairpersons, and telephone numbers and produces a calendar of meetings and events over a given time period. List price: \$3000. Requirements: 256K, hard disk.

Syntax
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

DataFlex

For application software development, *DataFlex* provides a data-transportable environment for 16-bit single- and multi-user systems. The program combines a relational data base manager with an image screen processor for designing I/O structures within records. The program finds and eliminates corrupted records, queries any file based on selection criteria to record and produce reports, and provides a text editor and a report generator. The multiuser version can work with a variety of local area networks. *DataFlex* applications are transportable across various processors, such as the Intel 8080, 8085, 8088, 8086, 80186, and the Zilog Z80; and across different operating systems, such as DOS 1.00 and 2.00, CP/M, CP/M-86, and MP/M-86. List price: single-user version \$995, multiuser version \$1250. Requirements: 96K with DOS 1.00 and 1.10, 128K with DOS 2.00 or later version, one disk drive.

Data Access Corp.
8525 S.W. 129th Terrace
Miami, FL 33156
305/238-0012

Night Auditor

Designed for hotels and restaurants, *Night Auditor* is a menu-driven program that summarizes daily accounts, accounts receivable, and cash. The daily accounts summary helps you monitor cash flow, including revenues, taxes, and reimbursements. The accounts report provides an account number, a title, and an amount for each account. The accounts receivable report categorizes credit card data into types of credit cards and types of charges made and tracks amounts paid for each account. The daily cash summary report automates reconciliation. A hard disk version of the program produces monthly reports. List price: \$825, hard disk version \$925. Requirements: 96K, two disk drives.

Santa Fe Software
1107 Early St.
Santa Fe, NM 87501
505/982-2367

WHERE'S THE BEEF!?

What, are we crazy? This is the *PC World Software Review*. Where's the software and prices?

Okay, here's the story: This is the *PC World Software Review* and this very issue will be on sale for the next six months. Now, if you have been paying attention, you know that software prices change frequently depending on availability and demand. Any prices we published in December would only be good to, say, February. We wanted a message that would be good whether you were reading this in January or June. So here goes: If you are looking for software, we've got it. All the popular brands like Lotus, Ashton-Tate, Software Publishing, BPI, Microsoft, etc. Just so that you don't think we only cater to the masses, we've got lots

of lesser known but highly respected brands like MDBS, Samna and Real World. And our prices are competitive with the Big Boys. So if you want to check it out, circle our number on the Reader Response Card. Or if you can't wait, drop us a line directly or call the 800 number and ask for a catalog. We'll send you our latest list of 100% Grade A Software. Priced lean. Stocked fresh. Raw computational power. From your friends at Ramware Software Products, where "Meat and Potatoes" software is our Bread and Butter! (Don't worry, we're not sure what it means either.)

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49 Carmer Avenue, Belleville, NJ 07109

Send name, address, telephone #, quantity and description of items you want, and payment as described, next. NJ residents add 6% sales tax. Domestic orders add \$3.50 shipping and handling (if order is > \$500, forget the \$&H). Foreign order: add 10% \$&H, minimum \$10. Payment may be made by check, money order, MasterCard and Visa. No COD's, please. Card will not be charged until order is shipped. There is no surcharge for credit card orders. Allow two weeks for personal check to clear. For MC/Visa orders, send card number, expiration date, bank name and signature. Prices and items subject to change.

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Restaurant Management

Restaurant food cost and inventory controls are handled with *Restaurant Management*. The program is designed for fast food outlets, family dining, fine dining, and institutional and catering outfits. It tracks inventory items, subrecipes, and menu items. The optional *Restaurant Payroll* module includes provisions for tip credit, voluntary deductions, and the latest IRS reporting requirements. The program works with FBS *Accounts Receivable*, *Accounts Payable*, and *General Ledger*. List price: *Restaurant Management* \$2500, *Restaurant Payroll* \$900. Requirements: 128K, two disk drives. Fisher Business Systems (FBS)
1010 Huntcliff Trace
Atlanta, GA 30328
404/587-1717

Pharmacy Blue

Designed for retail pharmacies, *Pharmacy Blue* is a management, billing, and accounts receivable program for prescriptions. You can maintain a prescription data file that works with customer accounts and drug inventory. Billing for in-house accounts receivable is performed on the pharmacist's specified billing schedule; third-party billing is printed on the necessary forms. The program supports nursing home activities. List price: \$5500. Requirements: 128K, one disk drive, 20MB hard disk.
Information Access Corp.
P.O. Box 871
Shalimar, FL 32579
904/862-5262

Club Scheduler

A program designed to help racquetball, tennis, health, and country clubs manage court reservations, course scheduling, and tee-off times, *Club Scheduler* also matches players seeking tennis or racquetball partners and golf foursomes. List price: \$695. Requirements: 64K, one disk drive.
Mysel Data Systems
6417 Loisdale Rd. #307
Springfield, VA 22150
703/569-9388

Law Enforcement Management System

Designed to help manage small to medium-size police departments, *Law Enforcement Management System* consists of four modules. *Records Management* generates shift briefing reports and maintains incident and case information on witnesses, suspects, and arrests. The module lists data relating to property inventories, traffic citations, and registration of licenses, permits, and firearms. *Dispatch* handles location and routing information; police, fire, and rescue calls; and hydrant locations. *Jail Administration* handles intake, movement tracking, court appearance scheduling, budgeting, and word processing. The fourth module, *General Administration*, performs various administrative functions. List price: *Records Management* \$5000, *Dispatch* \$1000, *Jail Administration* \$5000, *General Administration* \$2000. Requirements: 256K, hard disk.

Syntax
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

G.O.L.F.

A score-keeping program for golfing league secretaries, *G.O.L.F. (Golfing On Line Facility)* helps compute handicaps, using USGA rules or modified rules. *G.O.L.F.* keeps each player's name, phone number, and handicap along with 20 scores over a span of two years. The program generates ranking reports, individual score sheets, and a league roster. Leagues can have 400 players, and *G.O.L.F.* accommodates any number of leagues. List price: \$90. Requirements: 128K, one disk drive.
Taylor Consulting
51590 Bridgewater Ct.
South Bend, IN 46637

Church Management System

The *Church Management System* tracks members' names, addresses, occupations, skills, anniversaries, pledges, and committee assignments. You can forecast financial needs, track contributions in up to eight categories, print a contribution summary for members at tax time, and print mailing labels and financial reports. List price: \$2500. Requirements: 128K, two disk drives.
International Micro Systems, Inc. (IMS)
6445 Metcalf St.
Shawnee Mission, KS 66201
913/677-1137

Parishioner Time, Talent, and Treasure System

A data base for church records, the *Parishioner Time, Talent, and Treasure System* tracks family data, skills, talents, and contributions. It records contributions and prepares monthly and annual summaries. The menu-driven program is written in *dBASE II*. A program for printing mailing labels is included. List price: \$200. Requirements: 128K, two disk drives, *dBASE II* or *dBASE II RunTime*.
Feller Assoc.
550 CR PPA, Rt. 3
Ishpeming, MI 49849
906/486-6024

Personnel Agency Management

The *Personnel Agency Management* system automates time-consuming personnel agency functions. Data base management features help firms track and assimilate information about clients' needs, available candidates, and job openings. The program works with FBS *Accounts Payable*, *Accounts Receivable*, *Payroll*, and *General Ledger*. List price: \$2500. Requirements: 128K, two disk drives.
Fisher Business Systems (FBS)
1010 Huntcliff Trace
Atlanta, GA 30328
404/587-1717

Credimax

For small credit unions with up to 2000 members and under \$2 million in assets, *Credimax* is a data base manager and accounting system. It manages credit union accounts, including shares, certificates, IRAs, Christmas clubs, and loans. The relational data base offers multiple-key access, several levels of data protection, and recovery in case of power failure. Automatic payroll deductions can be posted at any interval, split between accounts, or applied as automatic transfers. *Credimax* updates balances and totals, and it leaves an audit trail for general ledger accounts. The program verifies transaction totals prior to posting. Report capabilities include statements, credit union status, delinquent loans, 1099 and 1099R forms, amortization schedules, dividend registers, audit trails, and mailing labels. List price: \$5995. Requirements: 128K, hard disk. Syntropy, Inc.
250 West Fork Rd., C.R. 142
P.O. Box 2215
Durango, CO 81301
303/247-3416

Metafile

Designed as an information management tool for application development, *Metafile* provides facilities for managing data bases, generating reports, writing programs, creating menus, preparing and revising text, communicating between computers, and operating within a local area network. The program reduces the time to write and revise structured, menu-driven applications. Impromptu access to data and commands is also provided to meet special processing needs. You can operate other software and access all DOS utilities without leaving *Metafile*. Other features include data file recovery, automatic data validation, keyed record access, syntax parsing, screen windowing/partitioning, panning and scrolling, multiple-level sorting, a printer control language, and word wrap. List price: \$995. Requirements: 128K, two disk drives, serial port. Sensor-Based Systems
1701 E. Lake Ave.
Glenview, IL 60025
800/323-3731

PDS:Typequote, PDS:Typespec

The two programs in the *Professional Design Series (PDS)* are meant for printing houses and production departments. Time and cost estimates are provided by *PDS:Typequote* for typesetting, illustration, photography, design, layout, and pasteup. The menu-driven program has two scratchpads for calculating total characters and total pasteup pages. It provides reports, with graphs, of category totals and allows you to perform "what if" calculations.

PDS:Typespec helps determine either how much space a certain manuscript will occupy in galley form or how long a manuscript must be to fill a set space. A "help-fit" feature will automatically recalculate specifications according to available space or text length. *Typespec* keeps a running tally of total depth for large jobs spec'd in sections. List price: *PDS:Typequote* \$695, *PDS:Typespec* \$395. Requirements: 128K, two disk drives. Verni Communications, Inc.
P.O. Box 783
Islington Station, MA 02090
617/329-4692

Maxi Mizer

A menu-driven management system for commercial printers, *Maxi Mizer* integrates estimating, job costing and scheduling, accounts receivable, accounts payable, payroll, and general ledger. Using a customized data base, the program helps shops produce accurate estimates. It includes only the equipment, materials, and labor costs in the shop; results are based on real cost, not estimates or industry averages. *Maxi Mizer* accommodates changes, updates, and special orders. Invoices, statements, and aging reports are generated automatically. The program handles payroll, including 941s and W-2s, and prints checks. Accounts receivable, accounts payable, and payroll flow into the general ledger, which produces income statements and balance sheets. List price: \$7500. Requirements: 256K, hard disk. Portage Newspaper Supply Co.
P.O. Box 5500
Akron, OH 44313
800/321-2183, 216/929-4454 Ohio

Publiphile

Designed for small publishers, *Publiphile* is a subscription-management information system. The program generates labels, invoices, renewal notices, and billing statements. List price: \$2450. Requirements: 128K, two disk drives, *dBASE II*. WPL Assoc.
1105-F9 Spring St.
Silver Spring, MD 20910
301/589-8588

SongWright

A music processor that allows you to enter songs, save them on disk, and edit them, *SongWright* plays the songs on the PC's speaker as it displays the words on the screen. It can transpose music into another key and print professional-quality sheet music. *SongWright* offers a range of two octaves in the treble clef, seven key signatures, four time signatures, whole notes to sixteenth notes, multipart harmony, ties, repeats, and multiple endings. You can edit for musical syntax and align lyrics and chord notations with music; there is no limit to song length. List price: \$24.95. Requirements: 128K, one disk drive. Michael Hulett
928 Fillmore St.
Denver, CO 80206
303/321-0481

Golf Tournament

Designed for golf leagues, golf courses, and country clubs, *Golf Tournament* is a 1-2-3 template for tournament records and handicapping. The program uses the Callaway, Peoria, or established handicapping method. *Golf Tournament* produces listings by best front nine, best back nine, and best overall scores. It can generate prize lists and divide contestants into four flights. List price: \$99.95. Requirements: 192K, two disk drives, 1-2-3. Systemics
3050 Spring St.
West Bloomfield, MI 48033
313/851-2504

Metafile

Designed as an information management tool for application development, *Metafile* provides facilities for managing data bases, generating reports, writing programs, creating menus, preparing and revising text, communicating between computers, and operating within a local area network. The program reduces the time to write and revise structured, menu-driven applications. Impromptu access to data and commands is also provided to meet special processing needs. You can operate other software and access all DOS utilities without leaving *Metafile*. Other features include data file recovery, automatic data validation, keyed record access, syntax parsing, screen windowing/partitioning, panning and scrolling, multiple-level sorting, a printer control language, and word wrap. List price: \$995. Requirements: 128K, two disk drives, serial port.

Sensor-Based Systems
1701 E. Lake Ave.
Glenview, IL 60025
800/323-3731

Licensed Animal Management System

A data base manager, the *Licensed Animal Management System* is designed for humane societies and animal protection agencies. All dog and cat license data is kept on line; "walking lists" for monitoring unlicensed pets are generated in zip code order; and data on breed and sex, spaying and neutering, former owners, and histories are maintained by the program. The *Licensed Animal Management System* keeps information about members, such as dues and contributions paid, interest areas, and history with the society. List price: \$3000. Requirements: 256K, hard disk, DOS 2.00 or later version.

Syntax
6642 S. 193rd Pl. #N107
Kent, WA 98032
206/251-8438

Credimax

For small credit unions with up to 2000 members and under \$2 million in assets, *Credimax* is a data base manager and accounting system. It manages credit union accounts, including shares, certificates, IRAs, Christmas clubs, and loans. The relational data base offers multiple-key access, several levels of data protection, and recovery in case of power failure. Automatic payroll deductions can be posted at any interval, split between accounts, or applied as automatic transfers. *Credimax* updates balances and totals, and it leaves an audit trail for general ledger accounts. The program verifies transaction totals prior to posting. Report capabilities include statements, credit union status, delinquent loans, 1099 and 1099R forms, amortization schedules, dividend registers, audit trails, and mailing labels. List price: \$5995. Requirements: 128K, hard disk.

Syntropy, Inc.
250 West Fork Rd., C.R. 142
P.O. Box 2215
Durango, CO 81301
303/247-3416

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Education, Personal Management, and Entertainment

Christine Whyte

Although the IBM PC was designed primarily as a business tool, its value in education, personal management, and entertainment has not been ignored. When the PC isn't being used on the job, it can be enlisted to teach family members new skills, help with personal finances, and entertain kids and adults.

Educational software for the PC encompasses two broad categories: software for home use, which represents the greater portion, and courseware for the classroom. Home software can range from learning games aimed at school-age children to training programs for adults on popular applications such as *WordStar* and *dBASE II*. Courseware is available for classrooms from kindergarten through grade 12.

Most home educational software is designed for drill and practice; the program asks questions and waits for a response. Subjects most often covered are math and spelling; reading, writing, science, social studies, and language arts are poorly represented. Learning games for very young children entertain while teaching underlying logic and spatial concepts. Application training software often takes the form of an electronic textbook with minimal interaction.

The availability of courseware for the PC is limited mainly because software developers see more Apple computers than PCs in the classroom. Generally, companies develop courseware subjects to coincide with textbook purchasing cycles, in which every few years school districts replace all books on a particular subject. Increasingly, teachers are participating in the design and testing of courseware and the workbooks and tests that usually accompany it.

Leroy Finkel, instructional computing coordinator for the San Mateo County, California, Office of Education, points out that in the past 18 months there have been noticeable improvements in software for the home and for the classroom. "Most improvements in the general software market are reflected in educational software: better graphics, increased interaction or student control, additional help screens, and more simulation," Finkel notes.

Simulation of the problem solving necessary in real life seems to be the most exciting new trend in educational software. Ellen Nelson, president of Decision Development Corporation in Concord, California, a courseware development firm, states that,

“Simulation is the type of instruction in which computers excel over traditional teaching methods. We plan to use more and more artificial intelligence in our software design.” Simulation tutorials use a “branching” technique that emphasizes interaction and creative thinking. Given a wrong answer, the program repeats the material, presents it in a new way, or hints at the right answer. Students learn at their own pace and, ideally, are stimulated instead of frustrated by this approach.

Parents should consider whether the programs they purchase for home use will complement the subject matter and teaching methods in their child’s classroom. To help avoid confusion, they should talk to people who know a program, read reviews, or see a demonstration. Careful program selection will result in more effective learning for the child.

Personal Management

Anyone who has complex personal finances or closets jammed with volumes of paper could probably use personal management software. Personal finance packages, the most popular type, can organize financial records, budget expenses, figure taxes, make projections based on past records, and even print checks. Personal record management programs can organize a coin or stamp collection, maintain a club membership mailing list, or keep a wine cellar inventory. Personal decision-making programs outline



options and financial strategies for spending discretionary dollars on real estate or life insurance. And while you get rich, you can also get in shape with diet and exercise software that advises the healthiest course of action.

Hank Scheinberg, president of Arrays, Inc./Continental Software, thinks that personal management programs will become increasingly practical. He predicts, "Within a year personal finance packages will be easy to use with communications programs, so that anyone will be able to exchange data with a bank or broker without leaving home." Home banking is now being done on a limited basis, but in its present stage most PC owners won't find it easy or convenient.

Entertainment

The PC doesn't have to be serious all the time, and educational games aren't the only type it plays. PC games have so proliferated in number and variety that a buyer can choose among arcade-style video games with elaborate graphics, text adventure games, card games, word games, chess, and golf. The games in every category address a wide range of interests and ages and vary in quality and fun per dollar value.

The best games retain loyal fans year after year. Sophisticated graphics and different skill levels have secured the enduring popularity of Microsoft's *Flight Simulator*. In games, as with educational software, simulation is an important trend. But according to Mike Slade, product manager for *Flight Simulator*, "Real-time graphics require special programming skills that aren't readily available." Although it may be some time before PC game players see more simulation games, they certainly won't be bored meanwhile.

As PCs enter more homes, software developers are considering the multitude of tasks a microcomputer can take on for the family. By continually improving practicality and computerizing tedious tasks, manufacturers may guarantee that home is where the PC is.

*Christine Whyte is Product
Review Editor for PC World.*

Education

Type & Learn

A program that combines learning about computers with learning to type, *Type & Learn* includes beginning, intermediate, and advanced tutorials. Through a variety of typing exercises, beginners learn the "home keys" and proper finger placement and usage, with a keyboard image on the monitor as a guide. The intermediate and advanced typing exercises include definitions of computer words and paragraphs of computer information. *Type & Learn* calculates and displays right/wrong scores, accuracy percentages, and speeds. The student's current scores are compared with previous scores. List price: \$49.95. Requirements: 64K, one disk drive.

SimSoft, Inc.
P.O. Box 7095
Port Huron, MI 48301
313/984-1570

Statcalc

An introduction to statistics, *Statcalc* lets you perform practical statistical calculations for typical applications. The program can save data and results. List price: \$39.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Arithmagic: Counting, Arithmagic: Addition, Arithmagic: Subtraction

Designed for the young child, *Arithmagic: Counting* includes "Introduction to Numbers" and "Counting," two games that teach the concept of numbers, the process of counting, and the relationships between numerals and their values. *Arithmagic: Addition* and *Arithmagic: Subtraction* teach adding and subtracting as extensions of counting. Both programs include animated games showing how being able to count means being able to add or subtract. Players may either press a numeral, causing that number of objects to appear, or see a number of objects and press the corresponding numeral. Changeable parameters let the parent or teacher tailor the game to a particular child. List price: each program \$29.95. Requirements: 128K, one disk drive.

CompuTeach
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

The ABC Primer

A program for children 2 to 6 years old, *The ABC Primer* introduces the alphabet and the computer keyboard. The screen displays each letter, an object beginning with that letter, and the name of the object. Five operating modes provide increasingly complex drills in letter recognition. The first mode, Just Watch, shows all 26 letters in sequence. In the second mode the child presses the <Space> bar to generate colorful pictures and letters. In the fifth mode the child matches a picture to the appropriate letter. A second volume of this program for the same age group is more difficult. It introduces lowercase letters, whole word matching, alphabetical sequences, and writing with letters whose size and color the child can change. Either volume can include a child's name in the program. List price: each volume \$39.95. Requirements: 64K, one disk drive, color graphics board.

TechArt
P.O. Box 370
Berkeley, CA 94701
415/525-0870

Word Whiz

Students in first through sixth grades can use *Word Whiz* to increase spelling proficiency, keyboard typing skills, and word familiarity. The program, with a vocabulary of over 1800 words, uses the flash-card technique. The degree of difficulty varies automatically with the number of correct and incorrect responses. Lessons are divided into three levels: grades 1 and 2, grades 3 and 4, and grades 5 and 6. The program also features statistics on the student's progress, sound and video enhancements, and a program editor to form custom vocabularies. List price: \$39.95. Requirements: 64K, one disk drive.

Alphanetics Software
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

SAT Math, SAT English

A set of three programs, *SAT Math* provides practice in arithmetic, algebra, geometry, square roots, fractions, quantitative comparisons, negative numbers, and graphs. The student can choose to be tested by topic or to opt for mixed questions. The three programs in *SAT English* develop vocabulary, reasoning, and interpretive skills. Exercises cover grammar, synonyms, antonyms, root words, analogies, and reading comprehension. List price: each program \$30. Requirements: 128K, one disk drive.

Micro Lab
2699 Skokie Valley Rd.
Highland Park, IL 60035
312/433-7550

ABsCenes I, ABsCenes II

Children learn to recognize letters and words with *ABsCenes I* and *ABsCenes II*, a pair of games that progress through three levels. At the first level, when the child presses any letter on the keyboard, an object beginning with that letter appears on the screen with the object's

name. In level two, objects appear at random on the screen, and the child must type in the correct first letter. At the third level the child must spell out the entire word. *ABsCenes I* and *II* are the same except for their graphics. List price: each program \$29.95. Requirements: 128K, one disk drive.

CompuTeach
353 W. Lancaster Ave.
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215/964-9103

Introduction to Mormonism

An encyclopedic overview of the Mormon church, *Introduction to Mormonism* includes a summary of the church's history, organization, and activities, a beliefs menu, a doctrines menu, and a hymns menu. List price: \$29.95, optional source code \$10. PC requirements: 64K, one disk drive. PCjr requirements: 128K, Cartridge BASIC.

Personal Software Company
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

DOS Tutorials

A trio of training programs, *DOS Tutorials 1.10*, *1.25*, and *2.X* provide both beginning lessons on using DOS commands and reference guides for more experienced computer users. Each tutorial explains how DOS works, defines DOS commands, has a 25-term glossary, and includes a built-in self-test. The programs are menu-driven and require only the cursor keys and the <Enter> key to select options. The *DOS Tutorials* have help screens to assist beginners in keyboard operation. Diagrams and sound supplement the text on screen. List price: *DOS Tutorial 1.10* and *DOS Tutorial 1.25* \$39.95, *DOS Tutorial 2.X* \$49.95. Requirements: *DOS Tutorial 1.10* and *DOS Tutorial 1.25* 64K, one disk drive; *DOS Tutorial 2.X* 128K, two disk drives.

Sophco, Inc.
P.O. Box 7430
Boulder, CO 80306
303/444-1542

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Introduction to Personal Computing

A quick course in the basics of computing, *Introduction to Personal Computing* covers word processing, electronic spreadsheets, communications, data bases, BASIC, and personal computer hardware. List price: \$59.95. Requirements: 64K, one disk drive.

Comprehensive Software
2810 Artesia Blvd.
Redondo Beach, CA 90278
213/214-1461

Beginning PC BASIC—Edubas I, Intermediate PC BASIC—Edubas II

Intended to teach elementary and advanced functions of the BASIC language, *Beginning PC BASIC—Edubas I* and *Intermediate PC BASIC—Edubas II* consist of 12 lessons each. Lessons include examples of applications, tests of understanding, reviews, and suggested exercises and solutions. The programs use graphics and animation. In addition to providing training, they can be used as reference guides for experienced programmers. List price: each program \$69.95. Requirements: 64K, one disk drive.

Europro, Inc.
P.O. Box 390605
Mountain View, CA 94039
408/248-9700

Introduction to Databases

Aimed at teaching data base concepts and usage, *Introduction to Databases* includes introductory tutorials on Lotus's 1-2-3, Ashton-Tate's dBASE II, and Innovative Software's T.I.M. The package also includes its own fully functional data base system. List price: \$59.95. Requirements: 64K, one disk drive.

Comprehensive Software
2810 Artesia Blvd.
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PC Expert

A comprehensive introduction to the IBM Personal Computer, *PC Expert* consists of three programs intended for first-time and intermediate users. *How to Use Your IBM PC With PC-DOS* introduces DOS commands and special keys on the PC keyboard and contains an overview of operating systems, programming languages, and application software. *Cdex Training for IBM PC-DOS* provides more comprehensive instruction in beginning and advanced DOS commands. Topics include DOS concepts, file operations, tree-structured directories, input/output devices, piping, and batch files. *DOS Director* lets you perform a full range of DOS 2.00 commands with a single keystroke for each. Once loaded, the program stays in memory so that you can work on other programs and readily return to it. The programs can be purchased separately. List price: *PC Expert* \$139.95, *How to Use Your IBM PC With PC-DOS* \$69.95, *Cdex Training for IBM PC-DOS* \$69.95, *DOS Director* \$39.95. Requirements: 64K, one disk drive.

Cdex Corporation
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Essential Mathematics—Jr. Hi Series

A set of over 169 lessons, *Essential Mathematics—Jr. Hi Series* supplements classroom instruction in addition, subtraction, multiplication, division, fractions, decimals, percents, prealgebra, and number concept skills. Lessons are sequenced to supplement popular texts. The program reports on student performance at the end of each lesson. List price: \$225, networking version \$450. Requirements: 128K, one disk drive.

BertaMax Inc.
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A set of eight programs, *Spelling in Context* teaches the spelling of frequently used words. Each program flashes a word on the screen and then displays a sentence with a blank, which the word to be spelled will fill. Students select flash

speeds. Each program contains 40 lessons (Level 1 contains 28), with ten words per lesson. If less than 90 percent of the words are spelled correctly, those missed are reviewed at the end of the lesson. List price: each program \$34.95, networking version \$69.90. Requirements: 128K, one disk drive.

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Chemicalc, Physicalc

An introduction to chemistry, *Chemicalc* summarizes key concepts, gives examples, and lets students perform typical calculations. *Physicalc* uses a similar format to introduce physics. List price: each program \$39.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

States 'n Caps

Intended for all age groups, *States 'n Caps* teaches the names of the states and their capitals. The program quizzes students by state, capital, or a combination of both. Scores and elapsed time are shown, and correct answers are provided when necessary. Color graphics and sound are included. Maps may be printed from the screen. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

Alphanetics Software
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

Vocabulator

A vocabulary-building program, *Vocabulator* lets students select the level of difficulty. Words appear at random or in alphabetical order. The program includes multiple-choice testing. List price: \$29.95. Requirements: 64K, one disk drive.

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Astro-aid, Astrobase, Astrocalc, Astrostell

A program of 44 astronomical functions, *Astro-aid* includes coordinate conversions such as equatorial and galactic; calendar conversions such as Julian, Gregorian, and solar; precession; notation; aberration; parallax; Kepler's and Newton's laws; and telescope design. The program also provides data on the solar system, constellations, and stars.

An astronomical data base system, *Astrobase* includes data on the 300 most important deep-sky objects, including galaxies, star clusters, nebulae, double stars, variable stars, and quasars. You can add up to 300 more objects and revise or delete information. The program searches by type of object, constellation, or location in the sky. *Astrocalc* calculates the positions of the sun, the moon, and the planets. The program uses date, time, latitude, and longitude to provide rise and set times, right ascension and declination, altitude, azimuth, phase, elongation, and angular size. The program also includes a graphics plot and a summary data table. *Astrostell* teaches you to recognize all 88 constellations. The program also provides lore and facts about the galaxies, bright stars, and other parts of each constellation. Constellations may be displayed by name or at random. List price: each program \$29.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Bio-cell

An introduction to cell biology, *Bio-cell* covers the structure and function of the cell parts and the relation of the cell to the organism. The program includes test questions and illustrations of key points. List price: \$29.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Word Attack!, Math Blaster!

A vocabulary-building program, *Word Attack!* teaches over 675 words, grouped by level of difficulty. The program introduces each word with its definition and sample sentences. Four learning activities and an arcade-style game reinforce the words to be learned. The program includes an editor for entering new words, and data disks with additional words are available. *Word Attack!* is designed for ages 8 through adult.

Math Blaster! teaches basic arithmetic with over 600 problems in addition, subtraction, multiplication, division, fractions, decimals, and percents. An editor allows more math problems to be added. The program is designed for grades 1 to 6 and can be used with remedial or learning-disabled students. Both programs are NEA teacher certified. List price: each program \$49.95. Requirements: 64K, one disk drive.

Davidson and Associates
6069 Groveoak Pl. #12
Rancho Palos Verdes, CA 90274
213/373-9473

Speed Reader II

Through self-paced lessons, *Speed Reader II* helps eighth grade to adult students increase their reading speed and comprehension. The program's 35 reading selections are divided into three skill groups: eye movement, column reading, and passage reading. Warm-up exercises flash letters and words on the screen to improve comprehension speed and display four words at a time to extend peripheral vision. A timed reading test for speed and comprehension follows each reading selection. The screen displays the number of words in the selection and the student's speed (in words per minute). *Speed Reader II* analyzes reading grade levels and includes an editing feature that allows entry of original reading selections and test questions. Four add-on disks are available. List price: \$49.95. Requirements: 64K, one disk drive.

Davidson and Associates
6069 Groveoak Pl. #12
Rancho Palos Verdes, CA 90274
213/373-9473

Brain CompuTeasers

Intended for ages 12 through adult, *Brain CompuTeasers* requires players to use their ingenuity to solve over 100 riddles in science, math, and general knowledge. Some of the riddles require knowledge of algebra. List price: \$19.95. Requirements: 64K, one disk drive. DEC Computing 5307 Lynnwood Dr. West Lafayette, IN 47906

Spanish I, II; French I, II; German I, II; Italian I, II

These foreign language programs offer "real world" testing situations to prepare students for travel abroad. An opening menu offers drills in verbs, nouns, and phrases. Questions can be multiple-choice or single-answer. The programs keep track of student performance and allow retesting on questions missed. The diagnostic capacity helps students evaluate their strengths. Teachers can use the printout features for creating tests. List price: each program \$29 (levels I and II are separate programs). Requirements: 128K, one disk drive. Acorn Software Products 353 W. Lancaster Ave. Wayne, PA 19087 215/964-9103

Eurographics, Geographics

Designed to help learn geography, *Eurographics* asks you to select a country on a color map of Europe. If you correctly name the country, its capital, and its largest city, the computer plays the appropriate anthem. *Geographics* is similar but shows a map of the United States and asks for information about individual states. List price: each program \$35. Requirements: 128K, one disk drive, color graphics board. Sunshine Computer Software Co. 1101 Post Oak Blvd. #9-493 Houston, TX 77056 713/552-0949

TK!SolverPack for Introductory Science

Designed for students and teachers, *TK!SolverPack for Introductory Science* gives equations, tables, and values for solving problems in high school and college biology, chemistry, physics, and general science. The program includes 12 models for topics such as balancing chemical equations, metabolism, population growth and genetics, and motion with constant acceleration. It is intended to supplement regular textbooks and must be used with the original *TK!Solver* program. List price: \$100. Requirements: 128K, one disk drive, *TK!Solver*. Software Arts, Inc. 27 Mica Ln. Wellesley, MA 02181 617/237-4000

Speed Reading ... The Computer Course

Besides teaching you to read faster and more efficiently, *Speed Reading ... The Computer Course* provides an understanding of the theory of speed reading. Exercises include words and phrases flashed on the screen at varying speeds and scrolled reading selections. The pace of selections is automatically adjusted as your proficiency grows. "Branch" programs emphasize areas needing more work. List price: \$125. Requirements: 128K, one disk drive. Bureau of Business Practice 24 Rope Ferry Rd. Waterford, CT 06386 800/243-0876

"It works if you'll practice." Stan Franklin, Memphis, Tennessee

Grade Point Average

Designed to speed the calculation of GPAs, *Grade Point Average* allows one-hand input of grades and a quick printout of results. List price: \$10.95. Requirements: 64K, one disk drive. DEC Computing 5307 Lynnwood Dr. West Lafayette, IN 47906

Learning and Practicing ... Series

Designed for students in the fifth, sixth, and seventh grades, the *Learning and Practicing ...* series covers fractions, equivalent fractions, percentages, decimals, money, and discounts. Each of the six programs is divided into three sections. The first section, a pretest, consists of word problems. In *Learning and Practicing With Discounts*, for example, one question is, "In March, coats were being sold at a discount of 30 percent. If a coat originally cost \$148, how much did it cost on sale?" Students who fail the pretest are advised to seek help before continuing. The second section provides calculation drills, and the third consists of additional word problems. All questions are multiple choice. List price: each program \$34.95. Requirements: 64K, one disk drive. Resource Software International 330 New Brunswick Ave. Fords, NJ 08863 800/526-2396, 201/738-8500

Let's Have Fun ... Series

These programs provide drills in basic arithmetic skills for students in grades 1 through 3. Students get three chances at each question before the computer skips the problem and goes on. Since problems are randomly generated, students will get new problems most of the time. List price: \$34.95. Requirements: 64K, one disk drive. Resource Software International 330 New Brunswick Ave. Fords, NJ 08863 800/526-2396, 201/738-8500

WISC-R Report Writer

Designed to help school psychologists and counselors evaluate scores on the Weschler Intelligence Scale for Children-Revised, *WISC-R Report Writer* analyzes results and produces reports. Analysis of the test scores indicates each child's academic strengths and weaknesses. The program is menu-driven, and reports include the child's address and other identifying information along with the analysis results. List price: \$125. Requirements: 64K, one disk drive. BertaMax Inc.
3647 Stone Way N
Seattle, WA 98103
206/547-4056

The Time Tunnel: American History Series

The Tunnel Master, ruler of *The Time Tunnel*, sends students into the past to meet and identify famous Americans. The program provides such clues as dates, surroundings, newspaper headlines, or names associated with the historical figure. Designed for grades 5 to 10, *The Time Tunnel* has two levels of difficulty and is organized into three historical periods: 1760-1860, 1860-1917, and 1917-1970. List price: \$89. Requirements: with DOS 1.10 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive. Focus Media, Inc.
839 Stewart Ave.
P.O. Box 865
Garden City, NY 11530
800/645-8989, 516/794-8900

Test Analysis Program

A test-scoring aid for teachers, *Test Analysis Program* provides the following reports: item statistics, frequency distribution, student responses, responses per item choice, and objective mastery. Responses for multiple-choice questions can be entered from the keyboard, with a card reader from Mountain Computer, Radio Shack, or HEI, or with a Scantron 1200 data terminal. Cards with 50 or 100 items can be used for up to 500 students per scoring run. You can save all records

for future use. List price: \$125. Requirements: 128K, one disk drive, DOS 2.00 or later version. BertaMax Inc.
3647 Stone Way N
Seattle, WA 98103
206/547-4056

Gradebook 3.0

Teachers can store, retrieve, correct, and print grades and scores with *Gradebook 3.0*. The program is a complete gradebook that holds up to 60 grades in five categories per student, and each disk can store records for 400 students. Grades can be weighted in any combination of the five categories. List price: \$36.95. Requirements: 64K, one disk drive. DEC Computing
5307 Lynnwood Dr.
West Lafayette, IN 47906

Torricelli School, Editor, Scribe

A set of three separate course-authoring systems, *Torricelli School*, *Torricelli Editor*, and *Torricelli Scribe* can be used together for courseware creation and preparation. The programs apply to any subject at any grade level and can also be used for corporate training and tutorials. Users supply original course material and test design. Test scores can be displayed at any time during the *Torricelli Editor* program. *Torricelli Scribe* is a utility with a spelling checker and a line-drawing function. List price: *Torricelli School* \$150, *Torricelli Editor* \$295, *Torricelli Scribe* \$150. Requirements: 64K, one disk drive, DOS 2.00 or later version. The Answer in Computers
6035 University Ave. #7
San Diego, CA 92115
619/287-0795

Eazylearn

A course-authoring system for developing and administering business training or classroom courses, *Eazylearn* lets you create multiple-choice, fill-in-the-blank, essay, and word/phrase recognition tests. Preprogrammed sound, a monochrome monitor, and a color monitor can be used separately or in combination for course development. The program can produce up to 32,000 screens. List price: \$250. Requirements: 128K, two disk drives. Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Teacher Turned Author!

A menu-driven authoring system, *Teacher Turned Author!* makes it possible for non-programmers to create educational programs, tutorials, and tests. The system lets you mix text, color graphics, and questions freely on any page. The built-in drawing system creates full-color pictures with the keyboard or an optional graphics tablet. Word processing functions assist you during page creation and editing. Other features include student record keeping and a playback function for viewing the contents of any existing page. The package includes a system master, a courseware disk, a graphics package, and an instructor's disk. Courseware produced using the system's run-time software can be copied without any licensing fees. List price: single-disk courseware color authoring system \$699, twin-disk courseware color authoring system \$999, monochrome authoring system \$399. Requirements: for authoring station 128K, one disk drive, DOS 2.00 or later version; for student station 64K, one disk drive. Raster Technology, Inc.
283 Hunters Point Trail
P.O. Box 3477
Longwood, FL 33579
305/862-2859

"The perfect teacher utility to develop educationally sound software. It makes developing software an easy task for the teacher." D. Pemberton, Orlando, Florida

Adding With Carrying, Adding Without Carrying, Subtraction I, Subtraction II

This group of programs, designed for students in grades 3 to 5, provides drill in adding and subtracting two-digit numbers. Students get three chances at each question before the computer goes on to the next problem. Questions are randomly generated. List price: each program \$34.95. Requirements: 64K, one disk drive.

Resource Software International
330 New Brunswick Ave.
Fords, NJ 08863
800/526-2396, 201/738-8500

Vocabulary Building I, II, III

Each of the *Vocabulary Building* programs tests and then drills students in selecting the word that best completes a given sentence or pair of sentences. *Vocabulary Building I* and *Vocabulary Building II* are for grades 4 to 7. *Vocabulary Building III* emphasizes words composed of a root and a prefix and is for grades 5 to 7. List price: each program \$34.95. Requirements: 64K, one disk drive.

Resource Software International
330 New Brunswick Ave.
Fords, NJ 08863
800/526-2396, 201/738-8500

Letter Writing

Intended for students in grades 6 to 8, *Letter Writing* first tests students and then drills them in the form and contents of business and personal letters. Multiple-choice questions cover such information as the parts of a letter and correct punctuation and capitalization. List price: \$34.95. Requirements: 64K, one disk drive.

Resource Software International
330 New Brunswick Ave.
Fords, NJ 08863
800/526-2396, 201/738-8500

Exam Program Series

Several types of tests can be created by *Exam Program Series*, including true/false, multiple-choice, and multiple-choice/multiple-answer. The program gives you full editing capabilities as you create exams. List price: \$100. Requirements: 128K, one disk drive.

USD Inc.
251 Round Lake Rd.
Vermontville, MI 49096
517/726-1155

Communicating Safety Awareness

Supervisors in a wide range of industries can use *Communicating Safety Awareness* to help teach safety. The program provides simulations of common workplace hazards. It asks questions and takes you step-by-step through a detailed sequence of safety improvement skills, then gives feedback about the options selected. List price: \$89. Requirements: 128K, one disk drive.

Bureau of Business Practice
24 Rope Ferry Rd.
Waterford, CT 06386
800/243-0876

TestMaster Series

A collection of prewritten tests, *TestMaster Series* lets you call up a test file, edit the test, and print out a finished copy. To use the test files, you must have an appropriate word processing program. The series is sold only to members of a school system. List price: \$19.95. Requirements: 64K, one disk drive, *WordStar* or *EasyWriter*.

DEC Computing
5307 Lynnwood Dr.
West Lafayette, IN 47906

Sentences I—Combining, Sentences II—Classification

Using a multiple-choice format, *Sentences I—Combining* provides practice in combining two short sentences into one longer one. The student is given two short, related sentences and three possible ways of combining them. The program is intended for grades 5 to 8. *Sentences II—Classification* also uses a multiple-choice format to provide drill in classifying sentences. The student is given a sentence without final punctuation and is asked to identify it as an affirmative statement, a question, or a negative statement. The program is intended for grades 6 to 8. List price: each program \$34.95. Requirements: 64K, one disk drive.

Resource Software International
330 New Brunswick Ave.
Fords, NJ 08863
800/526-2396, 201/738-8500

Algebra, Geometry, Trigonometry, Calculus

A series for high school and college students, *Algebra*, *Geometry*, *Trigonometry*, and *Calculus* provide multiple-choice drills. Each program begins with a pretest of material to be covered. The drills have two levels of difficulty. List price: each program \$34.95. Requirements: 64K, one disk drive.

Resource Software International
330 New Brunswick Ave.
Fords, NJ 08863
800/526-2396, 201/738-8500

Spellicopter, Spellakazam, Spellagraph

An educational game for ages 6 through 11, *Spellicopter* improves hand-eye coordination and word skills. The program provides 400 of the most frequently used words and lets you add more words. You maneuver a helicopter around obstacles in the sky to reach a field of letters, beam up the letters into the cargo hold in the correct sequence to spell a word, and return to the base before running out of fuel.

In *Spellakazam* you race through a game board, picking up letters in the cor-

rect sequence to spell a word identified by a context sentence at the bottom of the screen. If you get to a hat with the correctly spelled word before a magician does, you get bonus points, and the magician performs a trick. You can vary the difficulty level of the game and the words and select game options. The program includes 400 words and lets you add more. It can be played by one or two people.

Spellagraph combines spelling with solving challenging picture-word puzzles, which are hidden behind squares. Each time you correctly spell a word identified by a context sentence, a square turns over, revealing a piece of the picture puzzle. The program includes 200 picture puzzles and hundreds of words grouped by level of difficulty. Children can add their own words to tailor the game to specific homework problems. One or two can play, and players can select among multiple skill levels. List price: *Spellicopter* and *Spellagraph* \$39.95 each, *Spellakazam* \$29.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare
185 Berry St.
San Francisco, CA 94107
415/546-1866

Creature Creator

By creating dancing monsters with *Creature Creator*, children develop such learning skills as use of symbols, pattern recognition, and pattern matching. After forming a creature, a child can program it to dance, jump, hop, wave, turn its head, roar, and dance with the computer's creature. The program is designed for ages 4 to adult. List price: \$29.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare
185 Berry St.
San Francisco, CA 94107
415/546-1866

Math Maze

By playing *Math Maze*, children practice addition, subtraction, multiplication, and division. After arriving at a solution to an arithmetic problem posed by the computer, children construct the answer by successfully navigating a fly through a maze to select the proper digits. You can vary the difficulty of the math problems as well as select more challenging game options. In a more advanced game, you must avoid a spider that hovers around the number you wish to select. In the most advanced game, the maze is invisible. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare
185 Berry St.
San Francisco, CA 94107
415/546-1866

Mission: Algebra

Your sister ship has crashed on an asteroid, and to discover its position you must determine and solve the equation of a line. *Mission: Algebra* includes thousands of linear algebra problems of varying difficulty and provides a work space on the screen. If you make a wrong step, the computer gives you a chance to try again or ask for help. List price: \$44.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare
185 Berry St.
San Francisco, CA 94107
415/546-1866

Grammar Examiner

Beginning as a cub reporter with the *Grammar Examiner* newspaper, you learn grammar as you climb the newspaper hierarchy. You gradually move up from reporter to editor-in-chief by correctly editing paragraphs and answering multiple-choice grammar questions. You can vary the skill levels of the grammar problems or the game play. The program includes over 150 multiple-choice ques-

tions and paragraphs with numerous grammatical mistakes. You can also add your own grammar problems. List price: \$44.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare
185 Berry St.
San Francisco, CA 94107
415/546-1866

Polyglot

A tutorial for the study of a foreign language, *Polyglot* can be used to compile and maintain lists of words, verb conjugations, and phrases. The program produces a variety of quizzes based on any list, including flash-card tests in which the correct word appears when you press the <Space> bar, and fill-in-the-blank quizzes in which you type the correct word. List price: \$12.95. Requirements: 64K, one disk drive.

Alchemy Software
P.O. Box 1057
Aptos, CA 95001
408/688-6252

States & Traits

Designed for ages 9 to adult, *States & Traits* lets you move states to their proper location on a United States or regional map. You can use state boundaries or mountains and rivers as guides. The program also includes games in which you locate states based on bordering states and rivers, historical facts, current trivia, or capitals. You can design your own games by using symbols such as trees and factories and by adding your own questions. Geography skills required and the difficulty of the games can be varied independently so that children and adults can play together. List price: \$44.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare, Inc.
185 Berry St.
San Francisco, CA 94107
415/546-1866

Making Key Business Decisions

Each of the *Making Key Business Decisions* programs teaches you how to use one of the popular spreadsheet programs to manage your return on sales and improve your return on equity. Versions of the program are available for 1-2-3, *Multiplan*, *SuperCalc*, *SuperCalc 2*, *VisiCalc*, and *VisiCalc Advanced Version*. The program teaches how to make decisions about product pricing, product mix, make versus buy, and methods improvement. The package includes tutorial disks and a templates disk with ten preformatted worksheets. List price: each version \$69.95. Requirements: 64K (more if required by the spreadsheet), one disk drive, spreadsheet program.

Cdex Corporation
5050 El Camino Real
Los Altos, CA 94022
415/964-7600

The Music Teacher Series: The Notable Phantom

Children ages 5 to 10 can learn to play a keyboard instrument and to read music with the help of ghosts, spiders, and *The Notable Phantom*. The package includes a keyboard overlay with an octave-and-a-half of white and black piano keys. Ghosts plot notes on a musical staff for children to play on the piano keyboard. Spiders that carry in note names are captured in cages when the notes are played correctly. Children win points for playing the same notes as the Phantom. Children can compose, save, play, and display their own music or listen to the songs built into the program. List price: \$49.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare, Inc.
185 Berry St.
San Francisco, CA 94107
415/546-1866

Trap-a-Zoid

In *Trap-a-Zoid*, a game that builds geometry skills, the object is to capture creatures called Zoids inside shapes that you draw with a joystick or the keyboard. Zoids move around the screen to avoid being captured. If a Zoid escapes, it wins points. If you catch it, you win points. You can make the game more challenging by increasing the speed of the Zoids or by adding bonus questions. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

DesignWare, Inc.
185 Berry St.
San Francisco, CA 94107
415/546-1866

Computer Preparation for the SAT, GRE

Designed to increase scores on the Scholastic Aptitude Test, *Computer Preparation for the SAT* diagnoses a student's strengths and weaknesses in all test subject areas, develops a personalized study plan, and outlines specific drills and review exercises. The package includes a 470-page textbook in addition to the manual. *Computer Preparation for the GRE* uses a similar format to prepare students for the Graduate Record Exam. It includes a 517-page textbook in addition to the manual. List price: *Computer Preparation for the SAT* \$79.95, *Computer Preparation for the GRE* \$89.95. Requirements: 64K, one disk drive.

Harcourt Brace Jovanovich, Publishers
1250 Sixth Ave.
San Diego, CA 92101
619/231-6616

Managing Your Business

Each of the *Managing Your Business* programs teaches management techniques using one of the popular spreadsheet programs: *Multiplan*, *VisiCalc*, *SuperCalc*, *Symphony*, or *Framework*. In addition to two disks of training lessons, the program includes a third disk with preformatted worksheets, or templates, for sales history, product margins, expense budgets, and other management concerns. After the

training lessons explain a concept, you enter data, which the program uses to produce graphs. Test questions appear at the end of each lesson. List price: each version \$69.95. Requirements: 64K (more if required by the spreadsheet), one disk drive, spreadsheet program.

Cdex Corporation
5050 El Camino Real
Los Altos, CA 94022
415/964-7600

Analyzing Financial Statements

Each program in the *Analyzing Financial Statements* series teaches you how to use one of the popular spreadsheet programs for financial statement analysis. Versions of the program are available for 1-2-3, *Multiplan*, *SuperCalc*, *SuperCalc 2*, *VisiCalc*, and *VisiCalc Advanced Version*. The program shows you how to use the Commercial Credit Matrix to evaluate the financial condition of existing or potential customers, suppliers, subcontractors, competitors, and acquisition candidates. The package includes a tutorial disk and a templates disk with three preformatted worksheets. List price: each version \$69.95. Requirements: 64K (more if required by the spreadsheet), one disk drive, spreadsheet program.

Cdex Corporation
5050 El Camino Real
Los Altos, CA 94022
415/964-7600

IBM PC Communications

Available in two versions, *IBM PC Communications* teaches how to use the *Crosstalk* program or the *IBM Asynchronous Communications Support* program. The main menu lets you select lessons from the following topics: basic communications concepts, hardware for communications, setting up hardware for communications, networking, using *Crosstalk* or *IBM Asynchronous Communications Support*, and using The Source information service. The package includes a reference guide with a glossary of com-

munications terms and several exercises designed to reinforce the information and skills taught by the program. List price: \$69.95. Requirements: 64K, one disk drive.

Cdex Corporation
5050 El Camino Real
Los Altos, CA 94022
415/964-7600

Advanced Training for Lotus 1-2-3

By emphasizing the development features of 1-2-3, *Advanced Training for Lotus 1-2-3* teaches how to use the advanced capabilities of the integrated spreadsheet. After a quick review of the basics, the program shows how to construct menu-driven applications involving graphing, text, and data processing. List price: \$69.95. Requirements: 128K, one disk drive.

Cdex Corporation
5050 El Camino Real
Los Altos, CA 94022
415/964-7600

MatchMaker Series

All of the *MatchMaker* programs require matching of words and phrases. The series includes *Elementary Science Facts 3-4*, *5-6*, and *7-8*, *Biology Facts*, *U.S. Government Facts*, *U.S. History Facts*, *French Vocabulary Facts*, *World History Facts*, *MatchMaker Vocabulary Word Builder*, *U.S. Geography Facts*, *World Geography Facts*, and *Spanish Vocabulary Skills*. Each program includes 35 lessons and lets you create up to ten lessons of your own. List price: each program \$39.95. Requirements: 64K, one disk drive, color graphics board (Cartridge BASIC for PCjr).

American Educational Computer
2450 Embarcadero Way
Palo Alto, CA 94303
415/494-2021

The Honey Factory

Children learn problem solving, strategic planning, and ecological principles by playing *The Honey Factory*, a game in which players become scout bees for a hive. They fly through the countryside, locate pollen and nectar, and find their way back to the hive. They assign tasks to worker bees, fend off predators, allocate hive space, and manage population size. Success is measured by the amount of honey made, the number of bees, and the ability to swarm and create new hives. List price: \$49.95. Requirements: 128K, one disk drive, DOS 2.00 or later version. CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

T.rex

Players of *T.rex* learn about the day-to-day life of Tyrannosaurus rex during the late Cretaceous period about 70 million years ago. The goal is to discover the dinosaur's needs under different environmental conditions and survive as long as possible. You control the speed at which the dinosaur moves and tries to maintain its levels of food, energy, and water. If the dinosaur dies, the program explains why. List price: \$49.95. Requirements: 128K, one disk drive, DOS 2.00 or later version. CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

Mastering the GRE

A four-disk set, *Mastering the GRE* provides practice with the three aspects—verbal, quantitative, and analytical—of the Graduate Record Examination. The program includes systematic strategies and exercises in reading comprehension, analogies, sentence completion, antonyms, quantitative comparison, data interpretation, and discrete quantitative, analytical, and logical reasoning. List price: \$150. Requirements: 64K, one disk drive. CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

Coach

A set of seven tutorials, *Coach* covers the seven modules in Open Systems' *Accounting Software*. Lessons are self-paced, and their length can be varied according to your accounting or computer experience. Trainers can print and monitor student responses and create original lessons by supplying material and multiple-choice questions. List price: \$525. Requirements: 64K, one disk drive. Open Systems
430 Oak Grove
Minneapolis, MN 55403
612/870-3515

Knoware

Designed for people with no previous computer experience, *Knoware* is an educational game that acquaints you with eight types of application programs by taking you through a business career simulation. Applications include spreadsheets, data base management, word processing, financial decision making, and business graphics. List price: \$95. Requirements: 128K, two disk drives, color graphics board. Knoware, Inc.
301 Vassar St.
Cambridge, MA 02139
800/843-5669

MasterType

Requiring arcade game skills, *MasterType* improves typing speed and accuracy. The 18 lessons increase in difficulty from using the home row keys to typing nine-letter words. Enemy words and letters appear in the corners of the screen and hurl missiles at your command ship. To avoid destruction you type the letters or words before they explode the ship. List price: \$49.95. Requirements: 64K, one disk drive. Scarborough Systems, Inc.
25 N. Broadway
Tarrytown, NY 10591
800/882-8222, 914/332-4545

BASIC Instruction Course

An introduction to BASIC and DOS, *BASIC Instruction Course* consists of 14 self-paced modules on a two-disk set. The program is designed for novices as well as more experienced users. It discusses the DOS commands, string handling, arithmetic commands, file handling, sub-routines, screen formatting, graphics, and other functions. List price: \$49.95. Requirements: 64K, one disk drive, graphics board (for graphics lesson only).

Alphanetics Software
P.O. Box 339
Forestville, CA 95436
800/321-5346, 707/887-7237

Visual Vectors

A collection of programs, *Visual Vectors* graphically demonstrates the concepts of two- and three-dimensional vectors and vector math. The programs explain what vectors are and how they are added, subtracted, and resolved into components. Other topics include unit vectors, scalar (dot) products, vector (cross) products, and applications of vectors. List price: \$65. Requirements: 64K, one disk drive, color graphics board.

Kern Publications
433 Washington St.
P.O. Box 1029
Duxbury, MA 02331
617/934-0445

Hyper Typer

Designed for beginning typists, *Hyper Typer* teaches the typing keyboard and finger placement in a series of increasingly difficult exercises. Drills advance from single letters to sentences and finally to paragraphs. The program maintains a speed and accuracy score. The documentation gives explanations and diagrams for finger placement. List price: \$29.95. Requirements: 64K, one disk drive.

Digital Marketing Corporation
2363 Boulevard Circle #8
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

EasyReader Series

Designed to enrich the traditional school curriculum, the *EasyReader* programs help children improve reading skills at home. Correct answers are rewarded, and wrong answers are corrected, assuring that each new idea or skill is understood before going on. *Learning About Sounds in Reading*, for grades K to 3, introduces phonics and vowel and consonant sounds. *Reading Comprehension Skills 1, 2, and 3* are for grades 1 to 3, 4 to 6, and 7 to 8 respectively. The programs develop concepts such as cause and effect, similarities and differences, prediction of outcomes, and the difference between fact and opinion. *Learning About Words in Reading 1* and *2* are for grades 1 to 3 and 2 to 4.

The programs teach the structure of words, including prefixes, suffixes, contractions, and synonyms. Each program keeps track of users by name, taking them directly to the next lesson without repeating familiar material. List price: each program \$39.95. Requirements: 64K, one disk drive, color graphics board (Cartridge BASIC for PCjr).

American Educational Computer
2450 Embarcadero Way
Palo Alto, CA 94303
415/494-2021

Using the IBM Personal Computer and DOS

A training program for beginners, *Using the IBM Personal Computer and DOS* gives first-time users an opportunity for hands-on contact with the IBM PC. The program provides a graphics tutorial at the keyboard and an introduction to basic PC operations. At the end of the course it prints a certificate of achievement. List price: \$55. Requirements: 64K, one disk drive.

Science Research Associates, Inc.
155 N. Wacker Dr.
Chicago, IL 60606
800/621-0476, 312/984-7000

Introduction to the Operating System (PC Tutor)

A program designed to introduce the Disk Operating System (DOS) to the IBM Personal Computer user, *Introduction to the Operating System (PC Tutor)* covers disks, directories and files, DOS commands for directories and files, and DOS commands that control the system. List price: \$59.95. Requirements: 64K, one disk drive.

Comprehensive Software
2810 Artesia Blvd.
Redondo Beach, CA 90278
213/214-1461

Adventures in Math

A game designed to improve math skills, *Adventures in Math* challenges students to use arithmetic to explore a treasure-filled castle, uncover riches, and safely escape. The level of difficulty is set to match the student's ability, automatically increasing as the student improves. Students can choose addition, subtraction, multiplication, division, or a combination of all four operations. List price: \$35. PC requirements: 64K, one disk drive, DOS 2.00 or later version. PCjr requirements: 128K, Cartridge BASIC.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Monster Math

An arcade-style game, *Monster Math* sharpens arithmetic skills. The program offers six levels of drills in addition, subtraction, multiplication, and division. By solving problems students gradually erase a monster on the screen and score points. List price: \$30. PC requirements: 64K, one disk drive, DOS 2.00 or later version. PCjr requirements: 128K, Cartridge BASIC.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Bumble Games, Bumble Plot

Designed for children ages 4 to 10, *Bumble Games* improves math skills. The package includes six games with sound effects and music to teach how to plot graphs and to introduce such concepts as greater than and less than.

Bumble Plot is a set of five programs that build on the mathematical concepts introduced in *Bumble Games*. It is designed for children ages 8 to 13 and teaches such skills as using positive and negative numbers to name grid points, plotting numbers to build computer charts and graphs, locating places on a map, and designing computer graphics. List price: each program \$40. PC requirements: 64K, one disk drive. PCjr requirements: 128K, Cartridge BASIC.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Juggles' Butterfly

A set of three programs, *Juggles' Butterfly* introduces children ages 3 to 6 to computing and develops spatial concepts. The programs teach directions such as above, below, left, and right as well as letters and geometric shapes. List price: \$35. PC requirements: 64K, one disk drive. PCjr requirements: 128K, Cartridge BASIC.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Keys to Responsible Driving

A menu-driven program, *Keys to Responsible Driving* includes color graphics simulations and explanations of safe driving techniques. You can assess your knowledge of safe driving principles with a pretest. After working through the nine topics in the program, you can study the

information guide and take a posttest. List price: \$79.95. Requirements: 128K, one disk drive, DOS 2.00 or later version. CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

Using the VisiCalc Program

A training program for first-time users of *VisiCalc*, *Using the VisiCalc Program* provides step-by-step instructions to familiarize you with the commands and functions of this popular spreadsheet. The program shows how to develop application models, including sales analysis, salary planning, and inventory. List price: \$70. Requirements: 64K, one disk drive.

Science Research Associates, Inc.
155 N. Wacker Dr.
Chicago, IL 60606
800/621-0476, 312/984-7000

Karel the Robot

In the process of guiding *Karel the Robot* through a grid of streets and avenues, students learn about high-level language programming. The grid contains walls and beepers that Karel senses and manipulates. The robot loads beepers into a beeperbag, puts beepers on a corner, picks up beepers, and maneuvers around the walls. As Karel moves on the screen, students can see the results of their programs, written in a structured language similar to Pascal. List price: \$150. Requirements: 128K, one disk drive, DOS 2.00 or later version.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

BASIC Primer

An on-screen workbook, *BASIC Primer* teaches simple BASIC programming. It has lessons on statements such as BEEP, PRINT, SOUND, LOCATE, and GOTO and provides practice in using data files and saving programs. All directions are

on screen, and no previous computer knowledge is required. List price: \$60. Requirements: 64K, one disk drive. IBM

Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Typing Tutor

A set of typing drills, *Typing Tutor* builds speed and accuracy on the PC keyboard. Step-by-step lessons guide students through the program, and a Time Response Monitor records their progress. The program resumes at the point left off. An optional teaching mode lets the instructor monitor 39 students and prepare typing tests; no tests are included. List price: \$25. Requirements: 48K, one disk drive.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Typing Instructor

Using the PC's and PCjr's graphics capabilities to teach beginners key locations and finger placement, *Typing Instructor* also helps experienced typists increase speed. The program has 18 interactive key-locating lessons, speed and accuracy exercises, tests and skill evaluations, a game of chase to increase speed, and an introduction to word processing. List price: \$49.95. Requirements: 128K, one disk drive.

Individual Software Inc.
1163-I Chess Dr.
Foster City, CA 94404
415/341-6116

Professor Pixel

Using the BASIC programming language, *Professor Pixel* teaches the graphics, sound, and animation capabilities of the PC. The program has lessons on color, resolution, shapes, lines, and painting. It shows how to enhance graphics with animation and sound. *Professor Pixel* also runs on the PCjr. List price: \$59.95. Requirements: 128K, one disk drive, color graphics board.

Individual Software Inc.
1163-I Chess Dr.
Foster City, CA 94404
415/341-6116

Eco-Paradise

The goal of *Eco-Paradise*, a quiz game for science classes, is to reach "eco-paradise" without falling into the dreaded toxic waste dump. The game asks questions about ecology, pollution, and environmental politics. Beginners can get help from Sally the Environmentalist. Once you have reached the goal, you can take an "eco-test" that rates your life-style on a scale of ecological responsibility. List price: \$39.95. Requirements: 64K, one disk drive.

Center for Science in the Public Interest
1501 16th St. NW
Washington, DC 20036
202/332-9110

Delta Drawing

Children can use *Delta Drawing* to create color drawings on the screen using single-key commands to control the cursor. As a child draws, the computer records each keystroke, creating a program for that picture. By nesting drawing programs inside another program, children can build up complex pictures, patterns, and designs from simple parts. List price: \$49.95. PC requirements: 64K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Facemaker

A program that combines three games, *Facemaker* lets children create and animate funny faces on the screen. In the first game the child completes a blank face by choosing from sets of eyes, ears, noses, and other features. The second game lets the child make the completed face do things like wink, smile, and wiggle its ears. Expressions can be linked together to create an animated sequence. The third game asks the child to repeat the sequence of facial expressions shown on the screen, helping to improve concentration and memory and teaching the concept of computer code. List price: \$34.95. PC requirements: 64K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive, external speaker.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Fraction Fever

As you hop along on your pogo stick playing *Fraction Fever*, you search for the picture that matches the fraction at the top of the screen. A correct answer lets you ride the Fraction Elevator up to higher floors. If you eliminate incorrect fractions along the way, you add to your point score. List price: \$34.95. PC requirements: 64K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive, external speaker.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Snooper Troops

Players of the *Snooper Troops* educational mystery games are private detectives trying to solve crimes. Detectives drive around town, question suspects, search houses for clues, and use the Snoopnet computer to get background information. In the first case, *The Granite Point Ghost*, the Kim family has moved into the old Cable Mansion in Granite Point. Strange and ghostly things begin to happen. The job of the Snooper Trooper is to find out

who or what is trying to scare the Kim family and why. In the second case, *The Disappearing Dolphin*, someone has stolen Lily the Dolphin from the Tabasco Aquarium. The assignment of the Snooper Trooper is to find out who did it and why. List price: each case \$44.95. Requirements: 64K, one disk drive, color graphics board.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Story Machine

Children can use the *Story Machine* to write simple sentences, paragraphs, and stories. The computer animates the stories on the screen, adding color graphics and sound effects. List price: \$34.95. Requirements: 64K, one disk drive, color graphics board.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Kids on Keys

A three-part learning game, *Kids on Keys* uses letters, numbers, and pictures to introduce children to the computer keyboard. In the first game, players find and press keys that match letters and numbers scrolling down the screen. As pictures move down the screen in the second game, players try to type in the correct words before the images disappear. In the third game players match the correct picture to a word that flashes on the screen. List price: \$34.95. PC requirements: 64K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive, external speaker.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Magic Math Plus

A collection of recreational mathematics programs in BASIC, *Magic Math Plus* includes Superblackjack, The Base Two Trick, Kaprekar's Constant, Digit Prediction, The Game of N, Gold Coins Mystery, The Eccentric Jailer, and a prime number generator. The programs were written by Dr. Michael Ecker, a recreational mathematics columnist and professor of mathematics. Some programs contain complete explanations or strategy hints. List price: \$29.95. Requirements: 64K, one disk drive.

Recreational Mathematical Software
129 Carol Dr.
Clarks Summit, PA 18411
717/586-2784

Kindercomp

A collection of six exercises, *Kindercomp* helps young children start learning on the computer. The games include matching shapes and letters, filling in missing numbers, drawing pictures, and typing in names. List price: \$29.95. PC requirements: 64K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive, external speaker.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Tink!Tonk! Programs

The four Tink!Tonk! programs were designed by children's author Mercer Mayer for children ages 4 to 8. In *Tink's Adventure* children learn the order of letters in the alphabet and become familiar with the keyboard by helping Tink find and win a treasure. In *Tinka's Mazes* children learn mathematical concepts such as counting and addition by helping Tinka get through a series of mazes. *Tonk in the Land of Buddy-Bots* teaches visual discrimination, concentration, and thinking skills. Children travel through Buddy-Bot land to collect and assemble parts of a Buddy-Bot. *Tink Goes to Town* helps children strengthen prereading and con-

centration skills, learn to spell, and build vocabulary. List price: each program \$39.95. Requirements: 128K, one disk drive, color graphics board.

Mindscape, Inc.
3444 Dundee Rd.
Northbrook, IL 60062
312/480-7667

Jumble Jet

The action of *Jumble Jet* takes place inside a cargo plane that carries words. The cargo gets jumbled, and before the jet can land, the letters must be put in proper order to spell words. You can choose words from categories such as animals, numbers, planets, fairy tales, sports, and foreign countries. You can also create your own files using the Cargo Editor option. List price: \$34.95. Requirements: 128K, one disk drive, color graphics board.

Unicorn Software Co.
1775 E. Tropicana #8
Las Vegas, NV 89109
702/798-2727

DoMore Tutorial Series

Requiring no knowledge of computers, the *DoMore* tutorials include *DoMore With Multiplan*, *DoMore With Lotus 1-2-3*, *DoMore With pfs:file and pfs:report*, and *DoMore With IBM PC*. Each program follows a branched learning path. You can go directly to the topics you want, choosing the depth of information that you need. Optional quizzes test your knowledge as you go. Each tutorial has a bookmarking feature that lets you return to the place you left off. The programs also run on the PCjr. List price: each program \$75. Requirements: 96K, one disk drive.

Houghton Mifflin Co.
1 Beacon St.
Boston, MA 02108
617/725-5000

CSR IBM PC-Primer

In less than 6 hours *CSR IBM PC-Primer* trains beginners to use the IBM PC. The course consists of a student workbook and seven self-paced modules on seven disks. The modules teach basic PC components, computer concepts, keyboard use, diagnostics, BASIC, and DOS. List price: each module \$50, all seven modules \$210. Requirements: 128K, one disk drive.

Computer Systems Research, Inc.
40 Darling Dr.
Avon, CT 06001
800/922-1190, 203/678-1212 Connecticut

Secret Filer

Children can use *Secret Filer* to store information in their personal data bank, from favorite movies to baseball facts. In the process they learn about electronic filing systems. The program includes a Secret Filer Menu that lets the child plan a card, enter information, and search for particular cards. List price: \$29.95. Requirements: 64K, one disk drive.

Scholastic Wizware
Scholastic Inc.
730 Broadway
New York, NY 10003
212/505-3000

Bannercatch

Based on the game of capture the flag, *Bannercatch* is a strategy game that rewards children for working with others as a team. Two players combine wits to capture Chief Robot Max's flag, while his robot raiders scheme to steal theirs. A special "freeze" feature lets players develop strategies together. Players improve their ability to visualize spatial relationships and learn how to decipher binary numbers. List price: \$39.95. Requirements: 64K, one disk drive, two joysticks.

Scholastic Wizware
Scholastic Inc.
730 Broadway
New York, NY 10003
212/505-3000

Spelldiver

Deep beneath the sea the *Spelldiver* must find giant words covered by a strange seaweed called lettermoss. By diving, avoiding sharks and flipper nippers, and removing the lettermoss, you make words appear on the sonar screen. The more quickly you guess a word, the more points you score. List price: \$39.95. Requirements: 64K, one disk drive, joystick. Scholastic Wizware
Scholastic Inc.
730 Broadway
New York, NY 10003
212/505-3000

Logo Robot

By playing *Logo Robot* children are introduced to Logo, a powerful computer language designed for children. Logo-like commands are used to program a robot to draw patterns and pictures or to steer the robot through a variety of mazes. The program teaches children the fundamentals of computer programming as well as basic logic and problem solving. List price: \$29.95. Requirements: 64K, one disk drive. Scholastic Wizware
Scholastic Inc.
730 Broadway
New York, NY 10003
212/505-3000

Turtle Tracks

Players use *Turtle Tracks* to paint outlandish designs and screens. While experimenting with shapes, colors, and sounds, they also program musical accompaniment. A Walk command runs and lists the program one step at a time. List price: \$39.95. Requirements: 64K, one disk drive. Scholastic Wizware
Scholastic Inc.
730 Broadway
New York, NY 10003
212/505-3000

Project Management With the Microcomputer: A Tutorial

Disks 1 and 2 of *Project Management With the Microcomputer: A Tutorial* teach the critical path method (CPM) of project management. The basic techniques and concepts of CPM are explained, including network diagramming, critical path analysis, calendar scheduling, the Gantt chart, optimizing resource allocation, time and cost analysis, and project control with the microcomputer. Disk 3 presents several popular project management programs, including *PertMaster*, *Harvard Project Manager*, *Microsoft Project*, *Project Scheduler*, and *Milestone*. List price: \$79.95. Requirements: 64K, one disk drive. WITECH Corp.
763 Vallejo Way
Sacramento, CA 95818
916/441-7772

SofTech for UCSD Pascal

The package *SofTech for UCSD Pascal* consists of *The UCSD Pascal Handbook*, which explains the Pascal language as implemented on the UCSD p-System, a user manual, and a set of two types of UCSD Pascal quizzes. The first type requires students to answer questions and corrects answers immediately. The second type of quiz requires students to write a program to perform a specific function. List price: \$75. Requirements: 64K, one disk drive, UCSD p-System. SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Writing Is Thinking

Not a word processor, *Writing Is Thinking* is a tutorial that helps you create short presentations while reviewing writing skills and concepts. *Writing Is Thinking* offers methods of writing for speeches, reports, and other short written work. List price: \$165. Requirements: 64K, one disk drive. Kapstrom, Inc.
5952 Royal Ln. #124
Dallas, TX 75230
214/369-1718

Teacher PC

A three-part tutorial, *Teacher PC* instructs beginners in using the PC, DOS commands, and BASIC. The package comes with a workbook of 86 lessons that are keyed to lessons and tests on three disks. The tutorial on BASIC provides assignments, teaches students to write their own programs, explains why certain responses are incorrect, and monitors accuracy. List price: \$99.95. Requirements: 64K, one disk drive. CMA Microcomputer
55722 Santa Fe Trail
Yucca Valley, CA 92284
619/365-9718

Fraction Action

The Mad Professor's motley crew holds players of *Fraction Action* captive in the basement of his mansion. The gatekeepers will unlock the electrified gates only if you answer fraction problems correctly. Incorrect answers are given full-screen explanations and an occasional drop down the basement's chute by the mansion's ghost. List price: \$34.95. Requirements: 128K, one disk drive, color graphics board. Unicorn Software Co.
1775 E. Tropicana #8
Las Vegas, NV 89109
702/798-2727

BASIC JR

Designed for students from 10 years old to adult, *BASIC JR* teaches the fundamental BASIC commands as well as some advanced ones, using color, graphics, and sound. Fundamentals covered by the course include writing and running a program, using numbers, input, loops, branching, TAB, and LOCATE. The *BASIC JR* package includes a graphics program that lets students draw their own screens, which can be saved for later use with their own BASIC games and programs. *BASIC JR* teaches advanced BASIC commands by helping create a game. Areas covered include random number generation, dimensioned arrays, subroutines, techniques for readable code, program structure and design, flowcharting, and animated graphics. List price: \$49.50. PC requirements: 128K, one disk drive, DOS 2.00 or later version, color graphics board. PCjr requirements: same as above plus Cartridge BASIC.

Courseware, Inc.
10075 Carroll Canyon Rd.
San Diego, CA 92131
619/578-1700

SEI History/Government Series

Students and curious nonstudents can review basic history with the *SEI History/Government Series*. The series includes ten disks that cover ancient civilizations, the United States and foreign governments, the United Nations, and American, European, Asian, and African history. Each disk has a data base of approximately 300 multiple-choice questions with hints and in-depth analyses. You can expand or modify the data base with the *SEI Editor*, which comes with each disk. The series is at the high school or first-year college level. List price: each disk \$30, set of ten disks \$255. Requirements: 64K, one disk drive. Sliwa Enterprises, Inc. (SEI)
2360 George Washington Hwy., Ste. J
Yorktown, VA 23692
804/898-8386

The Author, The Author Plus

A computer authoring system, *The Author* is designed for educators and trainers who want to create their own computer lessons. *The Author Plus* combines the features of *The Author* with more extensive graphics, full-screen entry and editing, and other capabilities. List price: *The Author* \$295, *The Author Plus* \$495. Requirements: *The Author* 64K, one disk drive; *The Author Plus* 128K, two disk drives.

Raptor Systems, Inc.
324 S. Main St. #1
Stillwater, MN 55082
612/430-2980

CSR Tri-Basic

A set of three courses, *CSR Tri-Basic* teaches programming in BASIC. The first course covers fundamentals, decision tables, algorithms, and flowcharting. In course two, students are given specific information on commands, statements, and functions. Students participate in the development of program segments. Course three presents advanced statements, commands, and functions. Students construct sequential and random access data files, implement looping techniques, and become familiar with various string, mathematical, and special effects functions. List price: \$575. Requirements: 128K, one disk drive.

Computer Systems Research, Inc.
40 Darling Dr.
Avon, CT 06001
800/922-1190, 203/678-1212 Connecticut

Language Lab

A language training system, *Language Lab* teaches skills necessary for fluency in Spanish, French, Italian, or German. In addition to syntax, usage, and vocabulary, *Language Lab* reviews performance in

the form of listings and progress charts. The package includes pronunciation lessons on tape; an interactive audio cassette adapter starts and stops the tape player in conjunction with the lessons. The basic package covers three semesters of classwork. Optional additions let the student add advanced levels or customize the lessons. List price: \$235, each advanced level \$69. Requirements: 64K, one disk drive, audio cassette player.

LampLighter Software, Inc.
7 Breton Ave.
Melville, NY 11747
516/421-2653

Leonardo's Library

A collection of learning and discovery programs, *Leonardo's Library* is designed to work in conjunction with Chalk Board's input device, PowerPad. The library contains a multilevel graphic designer's tool (*Super Graphics*), a piano keyboard (*MicroMaestro*), a golf game (*Leo's Links*), and a programming kit to create new software for the PowerPad (*PowerPad Programming Kit*). List price: each program \$24.95 to \$79.95. Requirements: 64K, one disk drive.

Chalk Board, Inc.
5470-D Oakbrook Pkwy.
Norcross, GA 30093
800/241-3989, 404/447-6711 Georgia

PC/Pilot

A language for designing tutorial modules, *PC/Pilot* conforms to Common Pilot standards. It is written in the C language for speed and uses small modules for program development. The program includes a graphics image editor. *PC/Pilot* has no royalty plan, minimizing implementation expenses, and requires little programming experience. List price: \$100. Requirements: 128K, one disk drive. Washington Computer Services
3028 Silvern Ln.
Bellingham, WA 98226
206/734-8248

The Registrar

Those who need to organize information on students can use *The Registrar* to enroll students in classes, alter student status at any time, display and print rosters and transcripts, and record course status and grades. A word processing interface lets you integrate class and student files with letters composed on a word processor that uses ASCII files, such as *WordStar* or *VolksWriter*. *The Registrar* saves up to 99 letters, such as letters of confirmation, certification, or billing. You can export files to *dBASE II* or to any word processing program that reads ASCII files.

With a single keystroke you can create an alphabetical or numerical class or student listing, either by quarter or by any date. The program also reminds you of important events and dates.

You can enter up to 30 items of information per class and 30 items per student in numeric, alphanumeric, date, or menu formats. About 100 class and 1500 student records will fit on a 320K floppy disk. List price: \$835. Requirements: 128K, two disk drives.

Silton-Bookman Systems
4966 El Camino Real #101
Los Altos, CA 94022
415/967-2660

"The Registrar system coordinates the logistics of registering participants in our workshops and classes and helps in tracking program participants. The system simplifies the registration procedure for any training and development function." Kim Rosenbaum, Oakland, California

Quiz

A program for writing tests and quizzes, *Quiz* offers true-or-false, multiple-choice, exact-answer, and short-answer questions. Students can take the tests on paper or at the computer, where their responses are stored on disk. *Quiz* can generate different forms for a test and provide an answer key for each. List price: \$139.95. Requirements: 128K, one disk drive.

Diversified Educational Enterprises, Inc.
725 Main St.
Lafayette, IN 47901
317/742-2690

VisiTutor

For first-time users of *VisiCalc*, *VisiTutor* is a computer-aided training package. The programs simulate the *VisiCalc* screen display and functions, helping you get hands-on experience. The manual explains the PC screen and keyboard, provides step-by-step lessons ranging from Getting Started to Extras for Experts, and shows how to construct *VisiCalc* spreadsheets. Instructions include examples of basic and advanced budgets, price quotes, cost comparisons, and inventories. List price: \$79.95. Requirements: 128K, two disk drives.

VisiCorp
2895 Zanker Rd.
San Jose, CA 95134
408/946-9000

PC Master

A self-paced PC, XT, and PCjr tutorial, *PC Master* not only teaches computer use but also provides an overview of typical application software. *PC Master* includes three instruction disks, each with computer graphics. The first disk, Computer Power, provides instructions on the keyboard and the DOS commands needed to run the computer. The second, Practical Applications, allows hands-on experience with and asks practice questions on four widely used applications: word processing, data management, communications, and spreadsheets. The third disk provides an overview of programs available, including networks and micro-to-main-frame software. Also on this disk are guidelines for purchasing software. List price: \$79.50. Requirements: 64K with DOS 1.10, 128K with DOS 2.00, one disk drive.

Courseware, Inc.
10075 Carroll Canyon Rd.
San Diego, CA 92131
619/578-1700

InfoStar Training Programs

Two tutorials on MicroPro's *DataStar* and *ReportStar*, *InfoStar Training Programs* include two disks and a 50-page manual with exercises for each program. The tutorials are designed for beginners, but there are explanations of more difficult procedures, including how to construct logical statements, for more advanced users. The tutorials are self-paced and menu-driven. Sample applications show how *DataStar* and *ReportStar* can be applied to sales analysis, academic research, billing, transaction processing, and recording tax deductions. List price: each tutorial \$39.95, both \$69.95. Requirements: 64K, one disk drive.

Witech Corp.
530 Bercut Dr. #202
Sacramento, CA 95814
916/441-7772

Aptitude/Achievement Test Preparation

Three educational programs, *Aptitude/Achievement Test Preparation* helps high school students prepare for college entrance and scholastic achievement exams. The formats simulate SAT exams, and the programs cover vocabulary, analogies, and mathematics. Students receive immediate feedback and an explanation for every incorrect answer. List price: \$200 each. Requirements: 64K, one disk drive. Microphys Programs
1737 W. Second St.
Brooklyn, NY 11223
212/375-5151

Micro/Learning/Systems

The tutorials in *Micro/Learning/Systems* include programs for the PC, *dBASE II*, *Multiplan*, and DOS 2.00. List price: \$15.95. Requirements: 64K, two disk drives.
Reston Publishing
11480 Sunset Hills Rd.
Reston, VA 22090
703/437-8900

Personal Management

Dollars and Sense

A personal financial management program, *Dollars and Sense* maintains budgets, records income and expenses, and keeps track of the growth of assets and liabilities. You can review financial status with a set of graphs and reports. Drawing from stored information, the program estimates tax liability at any time during the year. It helps you create, test, and compare different tax scenarios side by side. *Dollars and Sense* can also enter split transactions, establish automatic transactions, answer "what if" questions about budgets or cash management, and print checks. List price: \$179.95. Requirements: 128K, one disk drive.

Monogram
8295 S. La Cienega Blvd.
Inglewood, CA 90301
213/215-0529

"Dollars and Sense is an extremely easy-to-use home accounting package and has exceptional performance with a powerful set of features and report-writing functions. It also has excellent graphics with forecasting functions." Sigmund J. Puchacz, Jr., Richardson, Texas

"Dollars and Sense is one of the most sophisticated home accounting packages on the market. It is easy to learn and use, but flexible. Small businesses can use it to keep various ledgers—even the general ledger. It includes comprehensive error checking, reporting, and graphics and is priced right." Anthony Marinelli, Sandwich, Massachusetts

Catman

Catman generates catalogs of books, tapes, and records. Users can prepare listings and perform special sorts by author, subject, or title on 3500 items. List price: \$19.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15028
412/247-5915

Coins

An inventory program, *Coins* is designed for owners of any United States coin collection who want to know its value. The program prepares sorted reports on a collection's current worth, using the latest market retail prices for 1600 common United States coins in eight grades. Updated price data is available every three months for \$25. List price: \$25. Requirements: 64K, two disk drives.

Compu-Quote
6914 Berquist Ave.
Canoga Park, CA 91307
818/348-3662

Family Medical Advisor

A program that analyzes overt symptoms to identify the most probable medical condition, *Family Medical Advisor* diagnoses common ailments, obscure diseases, and childhood illnesses. Yes or no answers to a series of questions generated by the program establish a unique data pattern, which the program analyzes to diagnose the most probable medical condition from a data base of nearly 200 illnesses and 10,000 combinations of symptoms. Related disorders with similar symptoms are also identified and listed in descending order of probability. Medical or computer expertise is not required, and medical terminology, when used, is defined. List price: \$38. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Family Tree, Family Group, Family Reunion

Designed to help automate family genealogy, *Family Tree* lets users enter the results of genealogical research, search files, and produce multigeneration charts and family group sheets. Each file can contain up to ten generations of ancestors. You can set up a family group file for each couple and include information about their children. Four-generation pedigree charts can be formatted, starting with any record in the file. *Family Group* prints worksheets to help you gather information and then reports the data on formatted group sheets. *Family Reunion* includes *Family Tree* and *Family Group* plus additional search capabilities. List price: *Family Tree* \$69.95, *Family Group* \$39.95, *Family Reunion* \$99.95. Requirements: 64K, one disk drive.

Personal Software Company
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

Personal Computer/Personal Finance

A financial package designed for individuals or small businesses, *Personal Computer/Personal Finance* keeps track of income, expenses, and checkbook transactions. The program provides detailed checkbook, income, expense, and cash-flow reports and can handle up to 400 transactions per month. List price: \$95. Requirements: 64K, one disk drive.

Best Programs, Inc.
5134 Leesburg Pike
Alexandria, VA 22302
800/368-2405, 703/931-1300

Home Budget

Designed to help individuals and small businesses create budgets, plan finances, and prepare taxes, *Home Budget* uses standard double-entry bookkeeping procedures. The program generates six reports, including a balance sheet, month-by-month expense records, and a bar graph of the end-of-month account balances. It defines up to 200 accounts and groups several together for reports. There

are 63 codes for grouping categories of transactions, such as tax-deductible expenses. *Home Budget* can automatically post regular payments such as mortgages, reconcile checking account and credit card statements, and print checks. It also includes a calculator. List price: \$139. Requirements: 128K, one disk drive. Dow Jones Information Services
P.O. Box 300
Princeton, NJ 08540
609/452-2000

Coping With Stress, Handling Depressed Feelings, Treating Sexual Problems, Handling Relationship Problems

Each program in this psychological self-help series offers progressive "sessions" to examine problems. In *Coping With Stress* you explore common self-defeating thoughts and travel through a maze of daily crises in order to learn to control stressful reactions. *Handling Depressed Feelings* challenges beliefs that cause depression. You can clarify difficulties and introduce corrective measures with the help of *Treating Sexual Problems*. With *Handling Relationship Problems* you can sort through negative thoughts and actions and construct practical ways to make desired changes. List price: each program \$89.95. Requirements: 64K, one disk drive, DOS 2.00 or later version. Psycomp
P.O. Box 994
Woodland Hills, CA 91367
818/992-4884

Expense Track I, II

Designed for homes or small businesses, *Expense Track I* is a financial management program that tracks and reports expenses. The program's error-trapping routines ensure accurate entry of dates, descriptions, category codes, methods of payment, tax status, and expenses. The program handles 2300 entries on a single-sided disk, and you can view, change, or delete entries. *Expense Track II* adds check-writing capabilities and prints summary reports and bar graphs. The program handles up to 32,766 transactions

on a hard disk. List price: *Expense Track I* \$49.95, *Expense Track II* \$69.95. Requirements: *Expense Track I* 64K, *Expense Track II* 128K, one disk drive. Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

Cash

A personal finance system, *Cash* records all checks written for the year and recapitulates checks by month, payee, or category. With *Cash*, you can print a graph to compare items such as medical expenses, interest, and taxes by category or payee. You can also print a comparison recapitulation or a monthly histogram. The program records charitable contributions and miscellaneous deductions for income tax records and helps track expenses for automobiles, clothing, insurance, and utilities. Expenses can be compared to budgeted amounts. List price: \$100. Requirements: 128K, two disk drives. Omni Software Systems, Inc.
146 N. Broad St.
Griffith, IN 46319
219/924-3522

Shoebox

Time-conscious people can keep track of appointments, reminders, and expenses with *Shoebox*. The program reminds you of appointments up to 120 days in advance; regular appointments need to be entered only once. The program tracks events that occur daily; one or more times per week, month, or year; or even at irregular intervals. *Shoebox* has a history function that lists all appointments or activities that match keywords. Optional passwords ensure privacy. List price: \$125. Requirements: 128K, one disk drive. Techland Systems, Inc.
25 Waterside Plaza
New York, NY 10010
212/684-7788

Master Control Diet and Exercise Program

For individuals who want to begin a serious weight-loss program, *Master Control Diet and Exercise Program* helps set weight-loss goals and monitors progress. Designed by physicians, the program analyzes foods eaten and exercise performed to determine whether caloric goals are met. Graphics reports on caloric intake and expenditure let you adjust diet and exercise patterns. List price: \$69.95. Requirements: 128K, two disk drives. Healthcare
2300 Round Rock Ave. #209
Round Rock, TX 78664
512/863-6910

Your Family Tree

A menu-driven program that stores and organizes genealogies, *Your Family Tree* lets you display ancestral roots in a variety of formats and configurations. Professional genealogists can keep track of multiple family trees. Each record contains an ancestor's name; statistics such as birth year, birthplace, date of marriage, and date of death; a comment about the person; and the position in the family. A United States map on screen can be used for plotting birth states of family members. List price: \$29.95. Requirements: 128K, one disk drive. Acorn Software Products
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

Diary

A record-keeping and scheduling tool for home, school, and office, *Diary* tracks business appointments, lessons, personal remembrances, and important past and future dates. The menu-driven program displays events on a calendar and pinpoints the day and the date of any event. You can search records by people involved, date, location, or keywords. You can customize the search by specifying unique characteristics or similar occurrences. List price: \$29.95. Requirements: 128K, one disk drive. Acorn Software Products
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

Nutri-Calc

A nutrition program designed by health professionals, *Nutri-Calc* helps you analyze and plan diets, menus, and recipes. You can calculate ideal weight and caloric consumption and set up schedules for weight loss or gain. The data base has 900 foods with 18 nutrients per food and can be modified. A Calorie program calculates ideal caloric intake based on personal characteristics such as height, weight, age, and activity level. List price: \$129. Requirements: 64K, one disk drive. PCD Systems, Inc.
163 Main St.
P.O. Box 277
Penn Yan, NY 14527
315/536-7428

Tax Manager

A tax preparation program for taxpayers, educators, and accountants, *Tax Manager* uses tax data to direct you to the proper forms and schedules. The program prints IRS-approved tax form facsimiles and places individual data entries in the correct spaces of all tax schedules. *Tax Manager* lets you enter deductions or other tax data year-round. You can detail deductions, such as medical expenses, instead of listing totals. The program automatically enters new information from any schedule into all other schedules requiring that information. List price: \$250. Requirements: 64K, two disk drives. Micro Lab
2699 Skokie Valley Rd.
Highland Park, IL 60035
312/433-7550

Time-Machine

You can add memos and reminders to the yearly or monthly calendars displayed by *Time-Machine*. Calendars can be saved to disk. The program also provides a full-screen clock that ticks and chimes. Calendar lore and interesting facts about time are included. List price: \$29.95. Requirements: 64K, one disk drive. Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Agenda Calendar and Expense Tracking

An automated calendar and expense-tracking system, *Agenda Calendar and Expense Tracking* lets you enter appointments, planned time, and memos for a specific date or as a monthly or annual item that automatically reappears in your schedule. Each item can include expense codes and two expenses. You can then post actual time and prepare a follow-up diary report that includes all expenses and totals. The program sounds an alarm whenever a scheduled appointment time arrives. Several individuals can keep separate schedules on the same system, and conflicting activities are automatically noted. List price: \$65. Requirements: 128K, one disk drive. TCI Software
6107 W. Mill Rd.
Flourtown, PA 19031
215/836-1406

Nutritionist II

A graphic diet analysis program, *Nutritionist II* displays nutritive analyses of foods and diets. The program tracks both weight and percent of recommended daily allowances for 38 nutritive components, including trace elements and amino acids. It also includes food exchanges and a complete exercise and activity program. *Nutritionist II* is a tool for indicating deficiencies and excesses, identifying their sources, and determining optimum foods for a naturally balanced diet. List price: \$295. Requirements: 64K, one disk drive. N-Squared Computing
5318 Forest Ridge Rd.
Silverton, OR 97381
503/873-5906

Bearings

Designed for amateur radio enthusiasts and navigators, *Bearings* calculates great-circle bearings and distances for over 500 cities worldwide. *Bearings* also includes amateur call sign prefixes. List price: \$19.95. Requirements: 64K, one disk drive. Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Horoscopes

A program that calculates and prints horoscope charts, *Horoscopes* provides an astrological reading for any birth date within 300 years of the present. The large, circular horoscope chart shows conjunctions, oppositions, and ascendants. The astrological reading describes the positions and the influences of the heavenly bodies for any date requested. List price: \$24.95. Requirements: 64K, one disk drive. Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Decision

Designed to facilitate decision making, *Decision* helps you organize, quantify, and sum up subjective judgments. It compares up to 21 alternatives, each having up to 18 attributes of varying importance. *Decision* computes an overall value for each alternative and a unique, subjective value-to-dollar ratio, if appropriate. The program arranges the results and your evaluations in a table. List price: \$20. Requirements: with DOS 1.10 64K, one disk drive; with DOS 2.00 96K, one disk drive. Once Begun Computations
Searsport, ME 04974
207/338-1082

Personal Finance

A menu-driven data base management system, *Personal Finance* helps you enter and manipulate information from your personal checkbook. The program automates multiple accounts and allows up to 99 categories of expenditures, including taxable and nontaxable divisions. Each check-writing year is stored on a separate disk. List price: \$29.95. Requirements: 128K, one disk drive. Acorn Software Products
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

Household-Inventory-Track I

Designed for home inventory management, *Household-Inventory-Track I* tracks and reports on up to 32,767 household items. Each entry can include category, date of purchase, purchase price, current value, and depreciation information. The program sorts on various fields and depreciates or appreciates current values. List price: \$49.95. Requirements: 64K, one disk drive.

Sapana Micro Software
1305 S. Rouse
Pittsburg, KS 66762
316/231-5023

Home Finance Management

To aid in managing the family budget, *Home Finance Management* includes templates that help create a personal budget for the year, a shopping list, a monthly mortgage payment schedule, IRA savings account files, and totals for IRS Schedule A. The program works with *VisiCalc*, *Multiplan*, *SuperCalc*, *PeachCalc*, and 1-2-3. All data files and formulas are automatically keyed into the spreadsheet program. You can overlay files or save them separately. The program can be backed up and modified for specific needs. List price: \$39.95. Requirements: 64K, two disk drives, spreadsheet program.

Software Models
P.O. Box 1029
Crestline, CA 92325
714/338-5075

Wealth Watcher

Designed for home or business use, *Wealth Watcher* is similar to a general ledger program. Up to 120 rows of data may be entered into 13 columns labeled January through December and Year-to-Date. You can record subsidiary or detailed information with a routine that sorts records by sequence code and key. The program recognizes three types of files—planned, actual, and expected—that

help you make projections and revisions of profits and expenses. List price: \$49.95, optional source code \$15. Requirements: 64K, one disk drive. Personal Software Company
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

Tax Shelter

Designed to calculate personal income tax, *Tax Shelter* is based on current federal income tax tables. It accepts entries for each IRS-specified category (such as income, adjustments, deductions, credits, and payment methods) and projects "bottom line" tax liability. The program makes subsidiary calculations for income averaging, alternate taxes, capital gains, and exemptions. It displays a summary of the various categories of income and expense. The net estimated tax payment or refund amount is determined and displayed with the summary. List price: \$45. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Home Accountant

Designed for individuals, small businesses, and charitable organizations, *Home Accountant* manages up to 200 budget categories and five checkbooks; prints checks; reconciles bank statements; and monitors cash, credit card, and checkbook transactions. The program has search and edit functions. Modules for graphing or forecasting are also included. List price: \$150. Requirements: 128K, one disk drive (132-column printer recommended). Arrays, Inc./Continental Software
11223 S. Hindry Ave.
Los Angeles, CA 90045
213/410-3977

Nutriplan

Individuals can plan nutritious meals while counting calories with *Nutriplan*. The program analyzes meals by percentage of recommended daily allowances of key nutrients. Information is presented in both tabular and bar chart format. You can compare the nutritional and caloric contents of more than 400 common foods. List price: \$75. Requirements: 64K, one disk drive.

Micromedex Corp.
187 Gardiners Ave.
Levittown, NY 11756
516/735-8979

Personal Financial Planner, Personal Financial Manager

Designed for financial planning and management, *Personal Financial Planner* helps with worth statements, income and expenditures, investment analyses and strategies, education financing, insurance analyses, and tax, retirement, and estate planning. *Personal Financial Manager* produces cash flow analyses and financial statements, writes checks, and inventories assets and liabilities. List price: each program \$200. Requirements: 128K, two disk drives.

Prentice-Hall, Inc.
Englewood Cliffs, NJ 07632
201/592-3027

Diet Analyzer

Designed to help with menu planning, *Diet Analyzer* records food consumed, exercise, and body weight. You enter foods eaten and amounts in plain English and common measuring units. The program can analyze up to 24 nutrients for foods, meals, days, or selected periods. Favorite foods can be added to the USDA food dictionary provided. List price: \$49.95. Requirements: 128K, one disk drive.

Natural Software Limited
7 Lake St. #7E
White Plains, NY 10603
914/761-9329

CouponOmizer

Shoppers can organize coupons with *CouponOmizer*. The program handles all types of discount coupons and rebates, prepares shopping lists, tracks rebate requirements, purges expired offers, verifies computer records against paper records, and maintains product categories. *CouponOmizer* supports sound and graphics in color or in monochrome. List price: \$49.95. Requirements: 64K, one disk drive.

Natural Software Limited
7 Lake St. #7E
White Plains, NY 10603
914/761-9329

Checks & Balances

Home accountants working out of a checkbook can use *Checks & Balances* to print checks, produce reports, and prepare monthly budgets in 64 categories. The program can handle a full year without having to close out at month's end. The program automatically sorts transactions entered in any order. Searches can be by date, number, or category. Up to seven entries can be displayed at once. List price: \$54.95. Requirements: 128K, two disk drives, DOS 2.00 or later version.

C.D.E. Software
2463 McCreedy Ave.
Los Angeles, CA 90039
213/661-2031

Personal Finance Manager

A program that helps keep financial records, *Personal Finance Manager* handles up to four savings accounts and four checking accounts with the balance in each account automatically displayed in the menu mode. Features include sorting, searching, and merging. The program's three codes are taxable/nontaxable, checking/savings/cash, and deposit/withdrawal. You can define up to 26 additional codes. Each checking account can be balanced separately. List price: \$49.95. Requirements: 48K, two disk drives.

Dynacomp, Inc.
1427 Monroe Ave.
Rochester, NY 14618
716/442-8960, 716/442-8731

The Smart Checkbook II

A program that produces household financial records, *The Smart Checkbook II* creates family budget reports, net worth statements, tax records, custom reports, and summary tables. Money market, checking, savings, credit card, and cash accounts can be tracked individually or in any combination. Income and expenses can be organized with up to 200 budget and 200 tax categories, and any amount can be split among any 15 budget and 15 tax categories. The program lists all tax-deductible expenses and provides for budget setup and revision. You can print checks with the payee's address and a memo added automatically. List price: \$149. Requirements: 64K, one disk drive.

Softquest, Inc.
P.O. Box 3456
McLean, VA 22103
703/281-1621

Home Attorney

A set of programs designed to help people create legal documents without consulting an attorney, *Home Attorney* consists of *Wills*, *Power of Attorney*, *Promissory Notes*, and *Residential Real Estate Lease*. All four programs ask the questions an attorney would ask and then prepare a document based on the answers. *Wills* creates a last will and testament. *Power of Attorney* can produce a General Power of Attorney, a Special Power of Attorney, a Revocation of Power of Attorney, and a Statement of Guardianship. *Promissory Notes* takes into account interest requirements, installments, balloon payments, payments on demand, late charges, prepayments of principal, and discounts on early payment and assignment. *Residential Real Estate Lease* writes leases. List price: all four programs \$249.95, *Wills* \$79.95, *Power of Attorney* \$69.95, *Promissory Notes* \$69.95, *Residential Real Estate Lease* \$99.95. Requirements: 128K, one disk drive.

Lassen Software, Inc.
468 Manzanita Ave. #5
Chico, CA 95926
916/891-6957

dRecipes

People with restricted diets can locate recipes by ingredients with *dRecipes*. The program suggests a four-day rotational diet for sufferers of food allergies. The menu-driven program is written in *dBASE II*, and source code is included to allow for modification. List price: \$52.95. Requirements: 128K, one disk drive, *dBASE II*.

Feller Associates
550 CR PPA, Rt. 3
Ishpeming, MI 49849
906/486-6024

Tax Advantage

You can do year-round tax planning with *Tax Advantage*, a tax preparation package that prints IRS Form 1040 and Schedules A through E, G, W, SE, and 4562. The program works with *The Home Accountant*, a financial management package that tracks income and expenses. List price: \$69.95. Requirements: 128K, one disk drive.

Arrays, Inc./Continental Software
11223 S. Hindry Ave.
Los Angeles, CA 90045
213/410-3977

RDM Personal Inventory Systems

Designed to keep inventory records of personal property, *RDM Personal Inventory Systems* gather, maintain, and sort master files. Modules include *Household Property*; *Coins and Stamps*; *Paintings, Drawings, and Prints*; *Photography*; *Books and Manuscripts*; *Comic Books and Magazines*; *Records, Tapes, and Video*; *Figurines and Plates*; and *General Collectibles*. All modules include the same information fields for each item, with room for data of interest in specific areas. Reports can be sorted by item number, location, description, estimated date, or estimated price. List price: each module \$29. Requirements: 64K, one disk drive. RDM Computer Services Co.

P.O. Box 23
Staten Island, NY 10301
212/273-0663

Tax/Pack II

Prepare your own income tax with *Tax/Pack II*, which prints IRS Forms 1040 (pages 1 and 2) and 1441 and Schedules A, B, D, G, and W. You enter data only once, and it is passed automatically to the appropriate forms and schedules. The program prints on the standard IRS Form 1040. List price: \$79.95. Requirements: 48K, two disk drives.

Alpine Data Services
635 Main St.
Montrose, CO 81401
303/249-1400

Budget Master

You can keep monthly expenses under control with *Budget Master*. The program records daily financial transactions for up to 14 months. *Budget Master* compares actual versus budgeted expenditures and produces a revised budget. It also keeps track of credit card expenses, payments, and bank account transactions. List price: \$125. Requirements: 64K, one disk drive. Micro Masters Software Ltd.

P.O. Box 513
Edmonton, Alberta
T5J 2K1 Canada
403/423-3509

Phi Beta Filer

A data base program for home use, *Phi Beta Filer* uses color and sound and has a Quiz Master mode that can be used for developing games or preparing for exams. The file and list manager sorts alphabetically or numerically and can tally. Forms are included for tracking credit card payments, home inventories, insurance, collections, tax-deductible expenses, and car payments and repair records. List price: \$49.95. Requirements: 48K, one disk drive.

Scarborough Systems, Inc.
25 N. Broadway
Tarrytown, NY 10591
800/882-8222, 914/332-4545

Tax 4-5-6 Individual 5 Year Planner

A five-year tax planning program, *Tax 4-5-6 Individual 5 Year Planner* automatically calculates all carryforwards and carrybacks. Screen forms emulate IRS forms, and data is automatically totaled and posted to other appropriate forms. You can GOTO and CALC all forms. A two-line fixed window always shows current tax totals for "what if" analysis. List price: \$95. Requirements: 320K, two disk drives, 1-2-3.

Austin Scientific Inc.
1259 El Camino Real #260
Menlo Park, CA 94025
415/323-6338

Bio-Data

Given your birth date, *Bio-Data* generates biorhythms for any time period. The program calculates the number of days since your birth, the day of the week you were born, and the Julian day number. It also shows your astrological sign and the celestial longitude of the sun for your birth date. List price: \$19.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Time Manager

To help organize and schedule daily and monthly activities, *Time Manager* offers electronic day, month, and year calendars for detailed agendas. You can cross-reference the calendars to compile records for filing or accounting purposes. Incomplete priority items automatically appear on the screen the next day. Annual events such as birthdays and holidays can be marked to appear on next year's calendar. Neither the program nor its data files can be stored on a hard disk. List price: \$100. Requirements: 64K, one disk drive.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Family Roots

Designed for genealogical research, *Family Roots* consists of six main programs and eight utilities. Edit stores basic family information, including names, addresses, and dates and places of birth and death. The program lets you define additional fields. Charts prints three types of pedigree charts and a chart of descendants. Sheets prints information on one person in single-page format and on a family group sheet. Lists prints alphanumerically and numerically ordered lists of an unlimited number of names. Search looks for basic family information in Edit. Text is a "card file" system for storing notes. Utilities configure the system, generate address lists, reassign identifications, and re-allocate data. List price: \$185. Requirements: 64K, one disk drive.

Quinsept, Inc.
P.O. Box 216
Lexington, MA 02173
617/641-2930

"I have used Family Roots as a genealogical data base system in genetic studies aimed at finding the gene for cystic fibrosis, which affects 1 in every 2000 Caucasian births in this country. The program has proven invaluable as a tool to organize demographic, genealogical, and genetic information on over 1000 people in 23 families descended from one couple. Family Roots has made this gargantuan task relatively easy." Robert H. Schwartz, M.D., Pittsford, New York

"As a founder of W.N.Y. Genealogical Society and an avid computer user, I have access to a number of genealogy programs. Family Roots seems far superior to the rest. The program allows for variation yet is structured enough for ease of entry. It is well designed for long-term use and will grow with you, with your research, and with your computer knowledge. The author is most willing to give advice." June P. Zintz, Hamburg, New York

"Quinsept's Family Roots program is outstanding. I have been working on genealogy records since 1966. Being able to print out sheets or charts makes it easy to send materials to other family members for their use or for corrections and updating." Ethel L. Winter, Edina, Minnesota

Managing Your Money

Seven integrated home financial programs are included in *Managing Your Money*. The programs provide checkbook and budget management, tax planning, net worth assessment, financial calculations, life insurance evaluation, and an electronic calendar that stores memos. You can tally realized and unrealized gains and losses, plan tax strategies, print Schedule D, calculate tax shelter and rental property internal rates of return, and record, code, and analyze investments. List price: \$199.95. Requirements: 128K, one disk drive.

Micro Education Corp. of America
(MECA)

285 Riverside Ave.
Westport, CT 06880
203/222-1000

The Running Program

Designed for runners, *The Running Program* is a personalized running guide. It evaluates fitness, helps set training goals, creates a day-by-day training schedule, records and graphs achievement statistics, predicts probable performance in races, selects equipment for different weather conditions, and evaluates diet for optimum weight and fitness. List price: \$79.95. Requirements: 128K, one disk drive.

Micro Education Corp. of America
(MECA)

285 Riverside Ave.
Westport, CT 06880
203/222-1000

Micro Cookbook

A cookbook and recipe management system, *Micro Cookbook* lets you enter, modify, or remove recipes and create cookbook disks. You can search for recipes by name, ingredient, or classification and prepare shopping lists. Recipes can be scaled up or down by serving size. Up to 880 recipes can be stored per file. List price: \$40. Requirements: 128K, one disk drive.

Virtual Combinatics
5 School St.
P.O. Box 755
Rockport, MA 01966
617/546-6553

Get Rich! Series

The *Get Rich!* series of personal financial planning programs includes *Get Rich: Strategies*, *Get Rich: Real Estate Planning*, *Get Rich: Insurance Planning*, and *Get Rich: Retirement and Estate Planning*. *Get Rich: Strategies* profiles your general finances, teaches money management, and offers financial solutions. *Get Rich: Real Estate Planning* covers investing, including types of properties and methods of buying. It can help you determine, for example, if it's better to buy or rent a property and what type of mortgage is appropriate. By answering "what if" questions, *Get Rich: Insurance Planning* helps you choose the type and amount of life insurance to buy. *Get Rich: Retirement and Estate Planning* helps you plan for retirement with investments such as IRAs and Keoghs. List price: each program \$49.95. Requirements: 128K, two disk drives. Arrays, Inc./Continental Software
11223 S. Hindry Ave.
Los Angeles, CA 90045
213/410-3977

Managing for Success

The *Managing for Success* series consists of three programs that help you manage stress, use time effectively, and plan for the future. Each program tracks up to five users and offers practice through simulations and case studies. *Problem Solving, Stress, and Conflict* helps you resolve stress and conflict creatively. *Delegation, Time, and Tasks* analyzes use of time, assessments, time logs, and to-do lists to help you use time efficiently. *Career Planning* examines work experience to assess job skills and develop a career plan. The program also helps you create effective résumés and cover letters and learn the art of interviewing. List price: each program \$79.95. Requirements: 64K, one disk drive.

Thoughtware
2699 Bayshore Dr.
Coconut Grove, FL 33133
800/848-9273, 305/854-2318 Florida

Card-O-Log

Designed for the card collector or dealer, *Card-O-Log* is a menu-driven set of programs that help with cataloging and inventory. You can search for individual names and list cards alphabetically (by player or card title), by team, by number of duplicates, and by card number. Listings can be mixed and matched. *Card-O-Log* can list missing cards and combine inventory information with prices to find the value of the collection or to create a wish or sell list. List price: \$75. Requirements: 128K, one disk drive.

Cosoft Micro Systems
26458 Mocine Ave.
Hayward, CA 94544
415/886-4887

FedTax84

Beginners at 1-2-3 can make tax-oriented financial decisions with *FedTax84*. The template is a formatted worksheet on which you enter individual tax information. You can use the program to calculate your current tax position and to plan next year's taxes. Complicated calculations are already programmed on the worksheet. List price: \$29.95. Requirements: 192K, one disk drive, 1-2-3. Easy-As . . . , Inc.

36 S. Charles St. #402
Baltimore, MD 21201
301/539-5540

Personal Accounting System

Personal financial information can be maintained and organized with *Personal Accounting System (PAS)*, a template for 1-2-3. You enter checks and deposits into one receipts/disbursements journal, and *PAS* posts the entries to an income and expenditure statement, reconciles book balance to bank balance, and summarizes all checks and deposits by category. A current cash balance is always in view. *PAS* can accommodate over 2000 items. List price: \$29.95. Requirements: 192K, one disk drive, 1-2-3.

Easy-As . . . , Inc.
36 S. Charles St. #402
Baltimore, MD 21201
301/539-5540

Dollars and Sense Forecast

A personal financial management package, *Dollars and Sense Forecast* provides tax estimating and "what if" modeling. The program uses data in a tax model to create and analyze up to five alternative tax situations side by side. You can set up as many as 120 record-keeping categories of five types: assets, liabilities, expenses, income, and checking. The package also produces a variety of reports and graphs. List price: \$179.95. Requirements: 128K, one disk drive, p-System. Tronix Monogram, Inc. 8295 S. La Cienega Blvd. Inglewood, CA 90301 213/215-0529

Financial Counselor

A data base program for personal financial planning, *Financial Counselor* includes income, net worth, and budget statements; investment, insurance, tax, retirement, and estate and gift planning worksheets; personal accounting journals; and financial planning instruction. The program is compatible with Lotus's *Symphony* and Ashton-Tate's *Framework*. List price: \$195. Requirements: 128K, two disk drives.

Financial Counseling Programs, Inc.
2049 Century Park E #3050
Los Angeles, CA 90067
213/556-2053

Managing Risk in Changing Times

Designed to analyze risk situations in business, *Managing Risk in Changing Times* uses case studies and simulations to cover personal styles of risk taking and creativity, organizational approaches to

risk taking, and creating an atmosphere conducive to risk taking. The program is on three disks. List price: \$250. Requirements: 128K, two disk drives, color graphics board.

Concourse Corp.
2626 E. 82nd St. #215
Minneapolis, MN 55420
612/854-8848

Financial Cookbook

You can make personal financial decisions and project costs without complex models and calculations using *Financial Cookbook*. Working like a big "what if" program, it can help you find out how much you need to save to send your kids to college, whether to lease or buy a car, how much life insurance you need, or how to refinance your home. The program covers topics such as taxes, banking, investments and IRAs, insurance, mortgages, and energy-saving devices. Calculations for 11 basic tax shelters are included. List price: \$50. Requirements: 64K, one disk drive.

Electronic Arts
2755 Campus Dr.
San Mateo, CA 94403
415/571-7171

File Clerk* Congress

You can start a political action committee with *File Clerk* Congress*, a data base program that provides information on each member of Congress and 40 congressional committees. The program supplies the name, office address, telephone, home town, committees, party, district, and reelection year for each congressman. *File Clerk* Congress* generates mailing labels, envelopes, and form letters addressed to specified committees or other subsets of Congress. The Congress and committees files can be added to or changed; an annual update of the files is available each March. List price: \$39.95, update \$10. Requirements: 64K, one disk drive.

Landrum Software, Inc.
P.O. Box 842
Palm City, FL 33490
305/286-1324

Personal Financial Manager, Personal Financial Planner

A home accounting system, the *Personal Financial Manager* is based on the money management techniques developed in the *Touche Ross Guide to Personal Financial Management*. The program uses double-entry bookkeeping to provide money management functions for bank and credit card accounts, maintenance of income and expenses, check printing, assets and liabilities, net worth and income and expense statements, budget tracking, tax transactions, and a variety of reports.

Personal Financial Planner is also based on the Touche Ross method. The program investigates tax planning, investment strategies, insurance analysis, education financing, net worth analysis, retirement planning, income and expenditure analysis, estate planning, and personal data. A professional edition of *Personal Financial Planner* produces a 50-page report for each client. The report can be modified and customized using any ASCII word processing system, and data for each client can be stored on separate disks. List price: each program \$200, professional edition \$695. Requirements: 128K, two disk drives, DOS 1.10 or 2.00. Lumen Systems, Inc.

P.O. Box 9893
Englewood, NJ 07631
201/592-1121

Genealogy Research

A menu-driven program, *Genealogy Research* maintains a data base of family information and creates research files for any surname. Family files can be searched using up to ten criteria. *Genealogy Research* works back chronologically, a generation at a time, linking family information found in the file. List price: \$49.95. Requirements: 64K, one disk drive.

USD Incorporated
251 Round Lake Rd.
Vermontville, MI 49096
517/726-1155

Nutri-Bytes

A program that assists in planning a nutritious menu, *Nutri-Bytes* provides information about foods and food additives. The program is divided into three parts. Chef Pennypincher's Eating and Shopping Guide rates your skills as an informed food shopper. It provides personalized advice on how to eat a more nutritious, less costly meal. Eats and Drinks tests your knowledge of nutrition principles. Chemical Cuisine includes a quiz about the preservatives, colorings, and other additives in food. It points out which are dangerous and which are safe. List price: \$39.95. Requirements: 64K, one disk drive. Center for Science in the Public

Interest
1501 16th St. NW
Washington, DC 20036
202/332-9110

Certified Personal Accountant, Certified Personal Investor, Personal Payables

A home accounting package, *Certified Personal Accountant* handles stocks, assets, liabilities, checking, savings, money market funds, and credit card accounts. *Certified Personal Investor* helps you manage your stock portfolio. It has a spreadsheet capability and prints tax reports such as Schedules B and D. *Personal Payables* handles checkbooks, prints checks, and keeps track of bills. List price: *Certified Personal Accountant* and *Certified Personal Investor* \$149.95 each, *Personal Payables* \$49.95. Requirements: 128K, one disk drive.

Sundex Software Corp.
3000 Pearl St.
Boulder, CO 80301
303/440-3600

Nutrient Goal Graph, Nutrient Calculator, Nutrient Tracker

You can track the nutritional benefits of the food you eat with the *Nutrient* programs. Each program has a data base of 800 foods and 15 nutrients, including calories, protein, sugar, fat, cholesterol, sodium, and vitamins. *Nutrient Goal Graph* compares nutrients in the food you eat in one day to goals based on the recommended daily allowances for your sex, age, and weight. You can rank foods for each nutrient and generate a list of nutrients in a particular food. The *Nutrient Calculator* helps you analyze the nutrient content of recipes and meals. You can use information from food labels to calculate nutrients, and you can add new recipes and foods to the data base. If you are tracking a specific nutrient in your diet, *Nutrient Tracker* lets you select foods from the data base and rank them for any nutrient. You can vary the size of the portion and compare three nutrient values. The programs are available together or separately. List price: \$110, *Nutrient Goal Graph* \$60, *Nutrient Calculator* \$40, *Nutrient Tracker* \$40. Requirements: 64K, one disk drive.

Nutritional Data Resources
P.O. Box 540
Willoughby, OH 44094
216/951-6593

The Big Picture

A personal financial planning program for use with 1-2-3, *The Big Picture* produces an integrated balance sheet in addition to taxable income and cash flow statements. The program is useful for planning investments, taxes, and major purchases. Using a special data entry method, you can make five-year projections of finances, with the program automatically calculating all applicable taxes, expenditures, and major purchases. List price: \$195. Requirements: 320K, two disk drives, 1-2-3. Apropos Software, Inc.
64 Hillview Ave.
Los Altos, CA 94022
415/948-7227

Forecast!

A program that functions as a home weather station, *Forecast!* allows you to predict the day's weather. It also lets you chart weather patterns, track hurricanes, and develop an understanding of how atmospheric conditions interact to produce the weather. List price: \$49.95. Requirements: 64K, one disk drive.

CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

Astro*Talk

Developed by professional astrologers, *Astro*Talk* allows you to create a personal horoscope based on birth data and answers to a questionnaire that serves as an astrological reading. The program includes a Student Astroguide that answers specific questions, an introduction to astrology, and an illustrated guide. List price: \$39.95. Requirements: 128K, one disk drive.

Matrix Software
315 Marion Ave.
Big Rapids, MI 49307
616/796-2483

The Home Cataloguer

You can store up to 1500 data entries on a double-sided disk with *The Home Cataloguer*. Field names and field lengths are definable, and the program sorts lists by any field or combination of fields and maintains up to five separate lists. It provides ten default templates for tasks such as home inventory, insurance records, and telephone numbers. The program prints labels and totals for any numeric field on the master list. List price: \$49.95. Requirements: 128K, one disk drive.

Arrays, Inc./Continental Software
11233 S. Hindry
Los Angeles, CA 90045
213/410-3977

A>Cook

A cookbook and recipe organizer, *A>Cook* comes with references to 500 recipes from five cookbooks, including *Joy of Cooking*, *The New James Beard*, and *The New York Times Cookbook*. You can store recipes and 700 additional recipe references, print shopping lists and recipes, and adjust serving sizes. List price: \$40. Requirements: 128K, one disk drive.

East Hampton Industries Inc.
66 Newtown Ln.
East Hampton, NY 11937
800/645-1188, 516/324-2224

Peachtree Home Software Library

A package for home use, *Peachtree Home Software Library* includes programs for personal money management, household organization, word processing, education, and entertainment. Requiring no accounting experience, Home Accountant tracks assets and liabilities, compares actual versus budgeted expenses, automatically records recurring transactions, balances checkbooks, and does amortization calculations. The program includes a search feature that locates transactions meeting specified conditions. It flags items in up to 36 definable tax categories and prints a list of tax amounts for each category. Home Analyst features seven spreadsheets for personal goods inventory, collectibles evaluation, budgeting, cash flow management, automobile expense analysis, stock portfolio tracking, and appointments. It also includes a general-purpose 63-column, 254-row spreadsheet.

Home Writer performs word processing functions and features search and replace, headings, footnotes, page numbers, and block move, copy, and erase. Compu-Read and Compu-Spell provide instruction and practice for children and adults in spelling, reading, and recall. A third instructional module introduces programming in BASIC. Prisoner Adventure is a strategy game in which players seek to es-

cape from a nightmarish island. List price: \$395. PC requirements: 128K, one disk drive, color graphics board. PCjr requirements: 128K, one disk drive. Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
800/554-8900

Record or Tape Inventory

A program written in *dBASE II* source code, *Record or Tape Inventory* organizes your record or tape collection by title, song, and performer. The menu-driven program requires no programming knowledge to enter, update, delete, or retrieve data. Each disk can store information on up to 400 records. The program will run on both the PC and the PCjr. List price: \$27.95. Requirements: 128K, one disk drive, *dBASE II* or *dBASE II RunTime*.

Feller Assoc.
550 CR PPA, Rt. 3
Ishpeming, MI 49849
906/486-6402

Huang's I Ching

You can consult the *I Ching* by computer with *Huang's I Ching*. The traditional yarrow sticks or coins are approximated by the computer's random number generator, which is seeded. In the "contemplative" mode the generator is timed, and in the "business" mode you type in a topic or question, and the generator is seeded by the ASCII text. The lines pop up as the program "throws" the *I Ching*. The text that corresponds to each configuration is a new translation. List price: \$69.95. Requirements: 64K, one disk drive.

Kerson Huang
P.O. Box 1083
Marblehead, MA 01945
617/631-5985

Entertainment

Big Top

With less than the greatest of ease, you guide an acrobat through a series of dangerous circus rings as you try to collect the ringmaster's hats in the arcade-style game *Big Top*. You can use either keyboard or joystick controls to make the acrobat leap, duck, swing from trapeze to trapeze, slide down poles, or climb ladders. You must maneuver the acrobat around, under, and over deadly circus clowns, rolling spheres, knife-throwers, and flying cannonballs to find all the hats. *Big Top* offers nine levels of play and saves the top score at each level. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

Funtastic, Inc.
724 Meadowlark Rd.
Audubon, PA 19403
215/666-0337

Snack Attack II

Your appetite may be whetted by *Snack Attack II*, an arcade-type game similar to *Pac-Man*. You guide a gumbdrop-gobbling character through doorways and corridors in a maze, scoring points for eating gumbdrops and stars scattered along the way. If you clear the maze of edible objects and avoid fatal contact with four gumbdrop guards, you advance to another maze. *Snack Attack II* offers a sound effects toggle, pause control, three different

mazes, and six skill levels. The game can be played on either the PC or the PCjr with keyboard or joystick controls. List price: \$38.95. Requirements: 64K, one disk drive, color graphics board.

Funtastic, Inc.

724 Meadowlark Rd.

Audubon, PA 19403

215/666-0337

Boggel

A computer version of the Parker Brothers word game Boggle, *Boggel* uses a random generator to create a grid of letters from which you make as many words as possible within a preset time limit. The program keeps track of the words you and your opponent find and acts as time-keeper and referee. Since the program doesn't include a dictionary, it cannot compete against you or check the validity of the words you find. *Boggel* can be played by one to four people on either a color or a monochrome monitor. List price: \$10.95. Requirements: 64K, one disk drive.

DEC Computing

5307 Lynnwood Dr.

West Lafayette, IN 47906

The Chrome Ranger

You'll have no trouble telling the good guys from the bad guys in this arcade-style game in which the Chrome Ranger scurries through a maze, collecting gold nuggets and being chased by bandits. The game can be played on a color or a monochrome monitor, with either a joystick or the keyboard. *The Chrome Ranger* offers sound effects appropriate to the action, has 15 levels of difficulty, and keeps track of the high score for each session. List price: \$29.95. Requirements: 64K, one disk drive.

Omniware

8972 Hampden Ave., Box 32

Denver, CO 80231

303/750-9057

Cyborg

Find out what robots really think in *Cyborg*, a prose adventure game in which you become a cyborg, half human and half machine. You have unusual capabilities and extrasensory perception that you must use to find water and food for your human half and energy for your machine half. Your goal is to discover, by searching the environment, what you are, where you are, and why you are there. You must, of course, avoid destruction in the process. List price: \$34.95. Requirements: 64K, one disk drive.

Sentient Software, Inc.

P.O. Box 4929

Aspen, CO 81612

303/925-9293

Cosmic Crusader

If you're eager to give your trigger finger a workout, you might be interested in *Cosmic Crusader*, an arcade-style action game similar to *Galaxian*. Rows of enemy spaceships descend upon your lone craft. You must wipe them out with your laser, or they will destroy the earth. You can choose from nine skill levels, toggle the sound effects on or off, and play with either the keyboard or a joystick. List price: \$38.95. Requirements: 64K, one disk drive, color graphics board.

Funtastic, Inc.

724 Meadowlark Rd.

Audubon, PA 19403

215/666-0337

Deadline

It's your job to find the evidence in *Deadline*, a prose adventure game that recreates the suspenseful atmosphere of a detective novel. You, the renowned inspector, have 12 hours to uncover clues that will lead you to the murderer of millionaire philanthropist Marshall Robner. You can search the house and grounds, question everyone at the Robner estate, and even be murdered yourself if you aren't careful. *Deadline* allows you to en-

ter entire sentences as instructions or to string several commands together in one sentence. List price: \$49.95. Requirements: 48K, one disk drive.

Infocom, Inc.

55 Wheeler St.

Cambridge, MA 02138

617/492-1031

"One of the hardest adventure games I have ever played." Lincoln Bauer, Holland, Michigan

Zork I: The Great Underground Empire

Your worst claustrophobic nightmares seem real in *Zork I: The Great Underground Empire*, the first part of the *Zork* prose adventure game trilogy. The game places you in a vast, ancient, and mostly dead underground empire where you must search for 20 treasures while avoiding death at the hands of ogres, thieves, and other miscreants. List price: \$39.95. Requirements: 48K, one disk drive.

Infocom, Inc.

55 Wheeler St.

Cambridge, MA 02138

617/492-1031

"If you can buy only one game, this should be the one. It stretches your imagination." Mr. and Mrs. James C. Pottkotter, Memphis, Tennessee

Zork II: The Wizard of Frobozz

The action is underfoot and straight ahead in *Zork II: The Wizard of Frobozz*, the second part of the *Zork* trilogy. Players explore every corner of the Great Underground Empire in search of treasure, knowledge, and power. *Zork II's* Wizard of Frobozz is a slightly demented Merlin who appears at inopportune moments to confound and hinder participants. Players type in instructions, and the program re-

sponds with descriptions of places, events, and life-or-death situations. List price: \$39.95. Requirements: 48K, one disk drive.

Infocom, Inc.
55 Wheeler St.
Cambridge, MA 02138
617/492-1031

"Extremely complex and engrossing."
Jeffrey Earl Holmes, Brockville, Ontario, Canada

Zork III: The Dungeon Master

Reality and nightmare collide in *Zork III: The Dungeon Master*, the last game in the *Zork* trilogy. Players search for the ultimate secret of the Great Underground Empire. En route they explore vast expanses of forests, deserts, mountains, and lakes; do battle with adversaries; and solve dozens of mysteries, puzzles, and paradoxes. *Zork III: The Dungeon Master* accepts complete-sentence commands and can handle more than one command at a time. List price: \$39.95. Requirements: 48K, one disk drive.

Infocom, Inc.
55 Wheeler St.
Cambridge, MA 02138
617/492-1031

Stud Poker Parlor

Try your luck in *Stud Poker Parlor*, a gambling game that pits the player against the computer in a simulation of five- or seven-card stud poker. You choose the ante, the pot limit, how much money you and the computer play with, and one of three skill levels. The program will bluff and adjust its play to your style. The game can be played on a color or a monochrome monitor. List price: \$29.95. Requirements: 64K (96K with DOS 2.00 or later version), one disk drive.

QSI Software
P.O. Box 3-231 ECB
Anchorage, AK 99501
907/349-1189

Flight Simulator

Fly through the sky with this three-dimensional, real-time simulation of a Cessna 182-class single-engine plane. You use the keyboard, a joystick, or the optional Microsoft Mouse to operate the throttle, ailerons, and other controls. The screen displays an instrument panel and a constantly updated view from the imaginary windshield. From takeoffs to crash landings, almost any maneuver that can be performed in a real airplane can be duplicated with *Flight Simulator*. List price: \$50. PC requirements: 64K, one disk drive. PCjr requirements: 128K, one disk drive.

Microsoft Corp.
10700 Northup Way
P.O. Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088
Washington and Alaska

"Extremely complex, realistic motion simulation. The similarity to real flight lacks only the airsickness." Tim L. McNinch, Sterling, Illinois

"Fascinating and extremely involving to play. Can be fairly simple or very complicated." Jay Charles Weber, Wheaton, Maryland

TRACON

A real-time simulation of an air traffic control session, *TRACON* is an acronym for Terminal Radar Approach Control. You are in a partnership with the center controller and tower controllers as you assign instrument approaches, guide aircraft to landings, accept "pop-ups" in your airspace, and get updated information on all aircraft from moving leader displays and static preview areas. You may select skill level, approach control area, and a specific or random traffic pattern. Designed by a former air traffic controller, *TRACON* uses color graphics to represent the radarscope, aircraft blips, and information areas. Aircraft may fly at ten altitudes, 24 headings, and four speeds. List price: \$34.95. Requirements: 64K, one disk drive, color graphics board.

CBL Marketing
313 W. 11th
Lawrence, KS 66044
913/843-4210

Desdemona

A game similar to Othello or go, *Desdemona* is simple but demands cunning strategy to play well. You can play against the computer or a friend. You and your opponent take turns placing markers on the 64-square board, one at a time, one marker per square. The object is to enclose your opponent's markers with your own; whoever has enclosed the most markers by the time the board is filled wins. *Desdemona* features automatic scoring and sound effects and can be played on a color or a monochrome monitor. List price: \$19.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Chess-Champ

A tough chess opponent, *Chess-Champ* offers the full range of chess moves, including castling and en passant, and provides on-line help for various play options. At any time you can set up the board so that each square is numbered, change sides with the computer, rearrange the board, or set up a new game or a chess problem. *Chess-Champ* has 24 difficulty levels. The game can be played on either a color or a monochrome monitor, but resolution is best on monochrome. List price: \$24.95. Requirements: 64K, one disk drive.

Zephyr Services
306 S. Homewood Ave.
Pittsburgh, PA 15208
412/247-5915

Fun 10

Ten games for the price of one, *Fun 10* includes Qubic, a three-dimensional tic-tac-toe game; Black Jack; Space Trek, which is similar to Star Trek; Americans & Presidents Quiz; Reversal, a computer version of Othello; Kingdom, in which players manage peasants and knights; Cribbage; Black Box, in which players obtain clues with a ray gun to solve a mystery; and Master Mind, a code-breaking skill game.

Fun 10 is menu-driven and can be played on either a color or a monochrome monitor. List price: \$29.95. Requirements: 48K, one disk drive.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

Treasure Hunt

Action without violence highlights *Treasure Hunt*, a race against the clock to locate ten objects hidden in a maze. All hallways and rooms in the maze are displayed in three-dimensional perspective, and a small overhead view lets you see where you are at any time. *Treasure Hunt* randomly generates a different maze each game, but you can replay a maze if you wish. The program can be played on either a color or a monochrome monitor. List price: \$24.95. Requirements: 64K, one disk drive, color graphics board.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

Coffeebreak

Take five with *Coffeebreak*, an anthology of five computer games designed for the office. The package includes *Bandit*, a gambling game; *Alphablast*, a spelling bee game; *Ricochet*, a *Pong*-like game; *Submarine*, an underwater arcade-style action game; and *Boomer*, in which players attempt to shoot deer with a rifle. The games can be played on a color or a monochrome monitor with either a joystick or the keyboard. List price: \$19.95. Requirements: 64K, one disk drive.

Computoy
P.O. Box 278
Friendsword, TX 77546
713/482-4747

Ken Uston's Professional Blackjack

A gambling program that plays any variation of blackjack, *Ken Uston's Professional Blackjack* also teaches you how to play and provides tips and advice based on the professional gambler's systems for beating the casinos. In either the drill mode or the play mode you choose one of several casinos in Las Vegas, Reno, or Atlantic City. The program operates according to the blackjack rules in effect at whichever casino you select. Several menus guide you through playing options, and up to seven people can play. List price: \$69.95. Requirements: 48K, one disk drive.

Screenplay
P.O. Box 3558
Chapel Hill, NC 27514
919/493-8596

Frogger

Jump for your life in *Frogger*, the official PC version of the popular video arcade game of the same name. You guide a hopping frog across a hazardous five-lane highway and a river filled with hungry otters, snakes, and alligators. If you successfully cross the highway and the river, you advance to the next level and repeat the process with faster and trickier action.

List price: \$34.95. Requirements: 48K, one disk drive, color graphics board.

Sierra On-Line, Inc.
P.O. Box 485
Coarsegold, CA 93614
209/683-6858

"Frogger is still the best arcade game for the PC. It has fantastic graphics and a good level of difficulty." Stephen John Hysick, Grosse Pointe Woods, Michigan

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WORD PROCESSING			
MicroSoft WORD	\$375	\$239	\$ 56
MicroSoft WORD w/mouse	\$475	\$299	\$ 71
Word Plus speller for MicroSoft	\$150	\$109	\$ 23
MultiMate	\$495	\$269	\$ 74
Volkswriter Deluxe	\$285	\$179	\$ 43
Word Perfect	\$495	\$259	\$ 74
WordStar	\$495	\$225	\$ 74
WordStar Propak	\$695	\$329	\$104
Samna Word III	\$550	\$385	\$ 83
DATABASE			
KnowledgeMan	\$500	\$299	\$ 75
Kgraph	\$225	\$149	\$ 34
Kpaint	\$100	\$ 69	\$ 15
R:BASE 4000	\$495	\$279	\$ 74
R:BASE Clout	\$195	\$129	\$ 29
R:BASE Extended Report Writer	\$150	\$ 99	\$ 23
dBASE II	\$495	\$299	\$ 74
dGRAPH	\$295	\$149	\$ 44
Quickcode	\$295	\$149	\$ 44
dBASE III	\$700	\$389	\$105
dBASE III Upgrade	\$200	\$149	
Quickcode III	\$295	\$159	\$ 44
PROJECT MANAGEMENT			
Harvard Proj. Mgr	\$395	\$229	\$ 59
MicroSoft Project	\$250	\$179	\$ 38
UTILITIES			
Crosstalk XVI	\$195	\$109	\$ 29
Norton Utilities	\$ 80	\$ 49	\$ 12
PROKEY 3.0 (NEW)	\$130	\$ 85	\$ 19

	LIST	DISCOUNT PRICE	RESTOCK FEE
INTEGRATED/SPREADSHEETS			
FRAMEWORK	\$700	\$399	\$105
Lotus 1-2-3	\$495	\$309	\$ 74
Open Access	\$595	\$299	\$ 89
Symphony	\$700	\$469	\$105
COMPILERS			
BASIC (MicroSoft)	\$395	\$259	\$ 59
C Compiler (MicroSoft)	\$500	\$319	\$ 75
Lattice C (Lifeboat)	\$500	\$309	\$ 75
FORTRAN (MicroSoft)	\$350	\$239	\$ 52
Macro Assembler	\$100	\$ 69	\$ 15
Pascal	\$350	\$229	\$ 53
BUSINESS ACCOUNTING			
BPI Systems	\$595	\$429	\$ 89
IUS Business Accounting	\$595	\$395	\$ 89
Open Systems	\$695	\$559	\$104
Peachtree Business	\$595	\$439	\$ 89
Real World/MBSI	\$695	\$575	\$104
OTHER SOFTWARE			
Desk Organizer	\$295	\$179	\$ 44
Electric Desk	\$345	\$239	\$ 52
Home Accountant Plus	\$150	\$ 79	\$ 22
Statpac (Walonick)	\$400	\$259	\$ 60
Think-Tank	\$195	\$139	\$ 29
Cdex Training	\$ 70	\$ 45	\$ 10
ATI Training	\$ 75	\$ 49	\$ 11
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AST Megaplus-OK	\$340	\$229	
Hayes 1200	\$699	\$489	
Hayes 1200B	\$599	\$399	

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Crossfire

Spearhead an attack on an alien-controlled city in *Crossfire*, an arcade-style shoot-'em-up game. You control a ship that moves up and down the alien city streets. The object is to shoot as many aliens as possible while avoiding their deadly missiles. Each alien you shoot reincarnates in a different form up to three times before dying for good. You begin with 35 missiles; when 10 missiles remain, you must reload by moving into an energized area that appears at random locations and intervals throughout the game. *Crossfire* can be played with either a joystick or the keyboard. List price: \$29.95. Requirements: 48K, one disk drive, color graphics board.

Sierra On-Line, Inc.

P.O. Box 485

Coarsegold, CA 93614

209/683-6858

"I'm very happy with *Crossfire*." Roger Rice, Des Moines, Iowa

Lost Colony

A complex economic management simulation, *Lost Colony* puts you in charge as the manager of a stranded colony on a distant planet. You must decide who works in different industries, how much each person is paid, how much and where exploration for minerals takes place, how scarce resources are allocated, and what tax rates are charged. The object of the game is to guide the colony safely through its years of growth. If you fail, you lose your job and are sent to work on the farms. *Lost Colony* uses a spreadsheet-like format to keep track of all aspects of the economy. List price: \$29.95. Requirements: 128K, one disk drive.

Acorn Software Products

353 W. Lancaster Ave.

Wayne, PA 19087

215/964-9103

"Gives a good challenge to the user, not merely entertainment. A good value for the money." Richard Marlowe, New Port Richey, Florida

Ulysses and the Golden Fleece

It was Jason, not Ulysses, who searched for the Golden Fleece, but in the adventure game *Ulysses and the Golden Fleece* you play Ulysses in search of the magical treasure. The program combines high-resolution graphics with text to take you on a journey across valleys, into caves, through castles, and into jungles. To attain your goal you must overcome cyclopes, dragons, condors, and skeletons. List price: \$32.95. Requirements: 49K, one disk drive, color graphics board. Sierra On-Line, Inc. P.O. Box 485 Coarsegold, CA 93614 209/683-6858

Las Vegas Blackjack

You might get lucky with *Las Vegas Blackjack*, a gambling game that simulates blackjack as played on the Las Vegas Strip. The game features play with one to ten decks, split betting, double down, and insurance bets. The program teaches players how to count cards and keeps a running count. The playing manual includes tips on how to win. List price: \$39.95. Requirements: 64K, one disk drive. Quala 23026 Frisca Dr. Valencia, CA 91355

Game Pac I

An anthology of ten games, *Game Pac I* includes Dune, an adventure inspired by Frank Herbert's best-selling science fiction novel; Howitzer, an artillery challenge; Tic-Tac-Toe; Amazing, a maze-solving game; Dice, a craps simulation; Ham-murabi, an economics simulation game set in ancient Sumaria; World War II Bomber, an action-oriented bombing simulation; Cord-Couplets, a computer version of Concentration; and Number-Guess, a number-guessing game. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board for Howitzer. Alphanetics Software P.O. Box 339 Forestville, CA 95436 707/887-7237

Everest Explorer

The slightest miscalculation can be fatal in *Everest Explorer*, a simulation of climbing Mt. Everest, the world's highest peak. Players organize the expedition and direct the three phases of the assault: selection of climbers and equipment, establishment and provisioning of a series of camps, and choice of path to the top. The organizer must deal with six major expenses: climbers, Sherpas, tents, oxygen, food, and fuel. The object of the game is to juggle all the resources so that the ascent is made before either funds or supplies run out. The program keeps score and allows players to save games with annotations. List price: \$29.95. Requirements: 128K, one disk drive. Acorn Software Products 353 W. Lancaster Ave. Wayne, PA 19087 215/964-9103

U.S. Motors

Test your business acumen with *U.S. Motors*, an economic manufacturing corporation struggling for survival. The company's stock is falling through the basement, and bankruptcy is imminent. Japanese imports and OPEC oil prices have reduced sales, and the corporation needs billions of dollars to retool and modernize factories. You make decisions that mean the difference between success and failure. List price: \$39.95. Requirements: 64K, one disk drive. Alphanetics Software P.O. Box 339 Forestville, CA 95436 707/887-7237
"U.S. Motors offers action so real you'll swear you read it in a newspaper."
Janet Wilson, Atlanta, Georgia

Perplexor

An educational trivia quiz game for one or two people, *Perplexor* uses a format similar to that of the television quiz show "College Bowl." Questions appear one at a time on the screen, and the first person to press a key gets to answer. If he or she

fails to answer correctly within the time limit, the opponent may try the same question. Categories of questions include history, movies, general knowledge, and sports; there are children's questions on sports, games, and general science. The game features a choice of difficulty levels, sound effects, and color graphics when used with a color graphics board. List price: \$39.95. Requirements: 64K, one disk drive.

Alphanetics Software
P.O. Box 339
Forestville, CA 95436
707/887-7237

Asylum

What is the object of an adventure game that puts you inside an insane asylum full of crazed inmates, sadistic guards, and evil doctors? To escape. *Asylum* uses three-dimensional graphics to create hallways, rooms, beds, desks, and other inmates. You enter commands in complete sentences. The program saves up to ten games per disk and supports printer output so that you can keep track of your progress. List price: \$29.95. Requirements: 64K, one disk drive. Screenplay P.O. Box 3558 Chapel Hill, NC 27514 800/334-5470, 919/493-8596

Microcosm

Watch the rise and fall of entire populations in *Microcosm*, a program that simulates birth, life, migration, and death among populations of single-cell organisms. The populations occupy coordinates on a grid, evolving as new generations appear with each move of the game. Randomly generated populations eventually acquire patterns that undergo kaleidoscopic shifts. *Microcosm* can be played in a solitaire mode, which allows a player to experiment with population patterns, or a competition mode, in which two players design competing populations. The program also has a mutation feature that allows players to alter the genetic rules, producing entirely new games and patterns. A FutureSee option previews the effect of current changes in the patterns. *Microcosm* offers storage and

recall of patterns, and it can be played on either a color or a monochrome monitor. List price: \$39.95. Requirements: 64K, one disk drive.

Aeon Concepts
Computer Products Division
1657 Red Mill
Pittsburgh, PA 15241
412/831-5352

Kaleida

A kaleidoscopic pattern generator, *Kaleida* is designed to provide a relaxing visual experience. Players use the function keys to choose from ten background colors and the keypad to control other colors and patterns. The result is cyclic generation of a multicolored geometric design. List price: \$12. Requirements: 64K, one disk drive, color graphics board. Once Begun Computations
Searsport, ME 04974
207/338-1082

Polycube

A simulation of Rubik's cube, *Polycube* presents a cube with up to seven blocks per side. The program has an unscramble feature that lets you retrace your steps by reversing the twists and turns you took in attempting to solve the cube. List price: \$26.95. Requirements: 64K, one disk drive, color graphics board. Linear Aesthetic Systems
P.O. Box 23
West Cornwall, CT 06796
203/672-6360

Decathlon

Become an Olympic athlete with *Decathlon*, a game that simulates the ten-event track-and-field competition. From one to six people can take turns competing in all ten events. Color graphics put you on the track in the 1500-meter race, in the circle at the shot put, or in the air in the pole vault. You control speed, timing, and direction with rapid and coordinated keystrokes to produce realistic

races, throws, and jumps. Your score for each event is shown along with Olympic decathlon winner Bruce Jenner's scores. The object is to obtain the highest cumulative score and win the gold medal. List price: \$35. Requirements: 64K, one disk drive, color graphics board. Also available from IBM. Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088 Washington and Alaska

Cross Clues

A hybrid word game, *Cross Clues* plays like a combination of Scrabble and Hangman on a crossword puzzle grid. The grid has 49 squares, some blank and some blacked out as in a crossword puzzle. Below the grid is a box containing consonants that you place in squares in the grid. Using the cursor control keys, you mark the beginning and end of the vertical or horizontal row of squares you want to guess. The program awards points for each correct letter and word you find. The object is to guess as many letters and words as you can before time runs out. *Cross Clues* can be played by one person against the computer or by two people. List price: \$40. Requirements: 64K, one disk drive. Science Research Associates, Inc.
155 N. Wacker Dr.
Chicago, IL 60606
800/621-0476, 312/984-7000

Concentration Crosswords

Three separate games with 50 puzzles, *Concentration Crosswords* includes Match Play, in which two players or two teams take turns trying to guess a word; Solitaire, in which one player tries to complete a word puzzle in as few turns as possible; and Key First, in which the first player to guess a word wins. In all three games, words that players have guessed can be kept on screen or replaced with asterisks to make the games more difficult. List price: \$40. Requirements: 64K, one disk drive. Science Research Associates, Inc.
155 N. Wacker Dr.
Chicago, IL 60606
800/621-0476, 312/984-7000

Enterprise

Aspiring business owners can sharpen their competitive instincts in *Free Enterprise*, a business simulation in which up to six players or six teams run companies that make the same type of product. Each company may sell its product in its own geographic home area, in the home areas of its competitors, and in a common market area accessible to all. The measure of success can be stock price, overall profit, or some other agreed-upon criterion. The program offers three levels of difficulty. List price: \$100. Requirements: 64K, one disk drive.

Science Research Associates, Inc.
155 N. Wacker Dr.
Chicago, IL 60606
800/621-0476, 312/984-7000

Beneath Apple Manor

Explore an underground maze of corridors, rooms, and secret passages in *Beneath Apple Manor*, a fantasy adventure game in which you battle dangerous monsters while looking for riches and magical treasures. The game uses text and graphics to portray the situations and monsters you encounter. The dungeon complex has many levels, each more dangerous than the last. Experience points are gained whenever you find gold or defeat a monster. Points can be used to upgrade your four attributes: strength, intelligence, dexterity, and endurance. The object is to become powerful enough to search the deepest dungeon levels and find the golden apple, the source of all power. The game can be played on either a color or a monochrome monitor. List price: \$29.95. Requirements: 64K, one disk drive. Quality Software
21601 Marilla St.
Chatsworth, CA 91311
818/709-1721

Jury Trial II

Your reputation as an attorney is on the line in *Jury Trial II*, a courtroom simulation in which two players try to convince a jury of the guilt or innocence of the accused. The computer randomly selects a case from thousands of possible scenarios. You and your opponent find evidence, select a jury, and try to prove your cases in court. You question the witnesses, object when your opponent tries to get favorable testimony, and attempt to build points with each of the six jurors, some of whom are harder to convince than others. If you lose your case, you can appeal to a higher court. Additional players can participate as witnesses. List price: \$49. Requirements: 64K, one disk drive.

Navic Software
P.O. Box 14727
North Palm Beach, FL 33408
305/627-4132

Astro Dodge

In this space action game, similar to the arcade game *Asteroids*, the player moves a spaceship on the screen, dodging asteroids that float about randomly. Hostile alien ships appear from time to time and fire at the player's ship. The object is to score points by blasting asteroids and alien ships with a laser. *Astro Dodge* has a hyperdrive feature that can transport the player instantaneously from one part of the screen to another. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

Digital Marketing Corp.
2363 Boulevard Circle
Walnut Creek, CA 94595
800/826-2222, 415/947-1000

Galaxy Master

Jump into the thick of interplanetary war in *Galaxy Master*, an arcade-style game in which players try to score at least 600 points within a 2-minute time limit by blasting the dreaded Galaxy Master's ship and assorted space debris. Players lose points when the Galaxy Master hits their ship. The ship comes equipped with lasers, photon torpedoes, and a self-

destruct option in case the battle is lost. List price: \$19.95. Requirements: 64K, one disk drive.

Info-Pros, Inc.
2102 Business Center Dr.
Irvine, CA 92715
714/851-8975

Rollo and the Brush Bros.

In the arcade-style game *Rollo and the Brush Bros.* you direct Rollo to trap the Brush Brothers by painting squares around them. The game has a two-player option, pause control, sound effects, and optional joystick control. List price: \$39.95. Requirements: 64K, one disk drive, graphics board.

Windmill Software, Inc.
P.O. Box 1008
Burlington, Ontario
L7P 3S9 Canada
416/336-3353

Conquest

An arcade-style game, *Conquest* pits you and a flying, feathered steed against prehistoric pterodactyls. The object is to collide with the winged lizards while navigating through hurricane winds and tornadoes. The game lets one or two people play; offers sound effects, pause control, and a choice of joystick or keyboard control; and saves the top ten games to disk. List price: \$39.95. Requirements: 64K, one disk drive, graphics board.

Windmill Software, Inc.
P.O. Box 1008
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L7P 3S9 Canada
416/336-3353

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Styx

Swirling lines bounce about your playing screen in *Styx*, and the object is to isolate them by using either the keyboard controls or a joystick to draw squares that the program fills in. You must completely draw each square before the *Styx* touches it. Hazards include fuses that ignite and twin deadly sparklers that circle the perimeter of the playing area. List price: \$39.95. Requirements: 64K, one disk drive, graphics board.

Windmill Software, Inc.
P.O. Box 1008
Burlington, Ontario
L7P 3S9 Canada
416/336-3353

Digger

Search for buried gold and emeralds in the arcade-style game *Digger*. Your motorized Digger-mobile chomps a maze up, down, left, or right through a series of underground playing fields. You must elude Hobbins and Nobbins while scooping up treasure. *Digger* includes sound effects and toggle, a two-player option, and joystick or keyboard support. It saves the top ten scores to disk. List price: \$39.95. Requirements: 64K, one disk drive, graphics board.

Windmill Software, Inc.
P.O. Box 1008
Burlington, Ontario
L7P 3S9 Canada
416/336-3353

Stellar Defender

You are the only defense of the Titan moon base against a horde of alien invaders in *Stellar Defender*. Your fleet of five Stellar Rangers faces wave after wave of alien ships, each type smarter and deadlier than the last. List price: \$19.95. Requirements: 64K, one disk drive.

Alkazar Assoc.
2638 S. Lynn St.
Arlington, VA 22202

Sargon III

Featuring an opening library of over 68,000 moves, *Sargon III* offers nine skill levels, and unlike most chess programs, it can "think" on your time as well as during its turn. You can change sides with the program during a game, take back moves all the way to the beginning, or ask *Sargon III* to suggest a move. You can offer the program a draw, replay a game, send the current board position to your printer, print out a list of all moves made during a game, and save a game to disk to resume later. An analysis mode lets you manually change a current board or set up chess problems for study. An extra disk in the *Sargon III* package contains "107 Great Games in Chess History" and examples of chess problems, which you can replay and study. The program can operate in either color or monochrome. List price: \$49.95. Requirements: 64K, one disk drive.

Hayden Software, Inc.
600 Suffolk St.
Lowell, MA 01853
800/343-1218, 617/937-0200

"First-rate chess system. Fast, clever programming and a library of classic games—which can be interrupted and played at any point—make Sargon III unique and fascinating." David A. Basskin, Toronto, Ontario, Canada

"Fantastic—it almost thinks." Mike Gamble, Omaha, Nebraska

Sfinks

The chess program *Sfinks* offers an infinite number of competition levels ranging from beginner to expert. The program works with color and monochrome monitors and features a problem set-up mode, a dual chess clock, printer output, and the ability to save and restore up to 100 games. You can take back moves and ask the program to suggest moves. *Sfinks* "thinks" on your time as well as its own. A scrolling scorepad displays the last 20 moves of each side. List price: \$49.95. Requirements: 64K, one disk drive.

William Fink
1105 N. Main #24B
Gainesville, FL 32601
904/377-4847

Multi Maze

A *Pac-Man*-style maze game, *Multi Maze* lets you design your own game. Using menus and function keys, you build mazes and choose the number and speed of your "micromen" and opposing ghosts. You can play *Multi Maze* against the computer or against another person. List price: \$39.95. Requirements: 128K, one disk drive, graphics board.

Micro Mania, Inc.
P.O. Box 415
Acton, MA 01720
617/263-9149

Prisoner 2

Based on the British television show "The Prisoner," *Prisoner 2* challenges you to escape from a bizarre island without divulging information. You encounter mind-bending situations in each of 20 buildings in a town on the island; the town is painted in 32 colors. List price: \$32.95. Requirements: 64K, one disk drive, color graphics board.

Peachtree Software
3445 Peachtree Rd. NE
Atlanta, GA 30326
404/239-3000

Run for the Money

Your goal in *Run for the Money* is to make a fortune on a strange planet and return to Earth. The program challenges your business acumen by presenting you with situations that have an infinite variety of solutions; you master those situations by simulating business strategies drawn from parallels on Earth. List price: \$39.95. Requirements: 64K, one disk drive, DOS 2.00 or later version, graphics board.

Scarborough Systems, Inc.
25 N. Broadway
Tarrytown, NY 10591
800/882-8222, 914/332-4545

Arrow of Death I, II

The kingdom's fate rests in your hands in the prose adventure game *Arrow of Death I*. You make your way through a maze of black forests, deserted paths, and empty chambers while searching for the source of the misfortune that has befallen the land. At each juncture you are challenged to examine your surroundings for clues that will aid you in your quest. Ultimately you must eliminate the evil power that hangs over the kingdom and restore peace to the land.

At the beginning of *Arrow of Death II* you have collected the pieces of a Magic Arrow that you need to destroy the source of the land's great misfortune. You must seek out the only person who can fashion the Magic Arrow from the pieces you possess. List price: each game \$29.95. Requirements: 128K, one disk drive. Acorn Software Products
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

Quad

If you like tic-tac-toe, you may want to get *Quad*, which is played in a cube instead of on a square. The program features color graphics and nine levels of difficulty. The game cube can be rotated to reveal different perspectives. One or two people can play the game, and you can review, stop, back up, and replay entire games to help develop strategy. List price: \$29.95. Requirements: 128K, one disk drive.

Acorn Software Products
353 W. Lancaster Ave.
Wayne, PA 19087
215/964-9103

Bermuda Race

Find out how much of a sailor you are with *Bermuda Race*. The game simulates the blue-water sailboat race from Newport, Rhode Island, to Bermuda. High-resolution graphics help you chart your progress, and on-line tutorials teach you sailing terms. You can race against the

clock or against another person. List price: \$29.95. Requirements: 128K, one disk drive, graphics board. Howard W. Sams & Co., Inc.
4300 W. 62nd St.
Indianapolis, IN 46268
800/428-SAMS (orders only),
317/298-5400

Ram!

You command the Athenian navy against Spartan and Corinthian galleys for control of the seas in the strategy game *Ram!* The game recreates the naval clashes of the Peloponnesian War. You can play out any of four historical scenarios or create a scenario to match your skill. The program also provides a campaign game that links all the battles together. List price: \$30. Requirements: 128K, one disk drive, graphics board. The Avalon-Hill Game Co.
4517 Hartford Rd.
Baltimore, MD 21214
301/254-9200

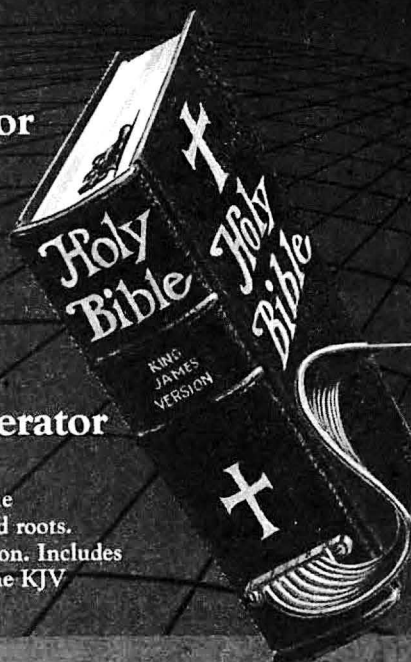
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Quaid Software Limited
45 Charles Street East, Sixth Floor
Toronto, Ontario, Canada M4Y 1S2
Telephone (416) 961-8243

Seastalker

In the prose adventure game *Seastalker* you are captain of a specially equipped submarine, the *Scimitar*. Without having tested your sub, you must leave immediately on a rescue mission to save the Aquadome, the first undersea research station. Not only must you chart the right course and risk destruction at the hands (or tentacles) of a plethora of undersea dangers, the Aquadome may have a traitor in its ranks. You enter natural English commands, and the program responds with a description of your situation. List price: \$39.95. Requirements: 64K, one disk drive.

Infocom, Inc.
55 Wheeler St.
Cambridge, MA 02138
617/492-1031

King's Quest

A three-dimensional, arcade-style adventure game, *King's Quest* sends you on a search for three magical items that will save the Kingdom of Davenport from destruction. You duck, jump, or swim past dangerous creatures as you travel over treacherous terrain. Tasks and problems can be solved in different ways; the more creative your solutions, the more points you receive. List price: \$50. Requirements: 128K, one disk drive, DOS 2.10, graphics board. Also distributed by IBM. Sierra On-Line
P.O. Box 485
Coarsegold, CA 93644
209/683-6858

The Trivia Arcade

Try your luck at answering trivia questions with *The Trivia Arcade*. Categories of questions include sports, music, TV, science, and general knowledge. One to four players race against a clock to choose the subject. Questions are randomly generated from thousands stored in the program. List price: \$34.95. Requirements: 64K, one disk drive, graphics board. Screenplay
P.O. Box 3558
Chapel Hill, NC 27514
919/493-8596

Chess Champ

A chess program, *Chess Champ* matches your chess ability against its own. Six "look ahead" levels let you control how many moves the program can plan ahead. You use the cursor keys to move the chess pieces instead of typing in coordinates. List price: \$34.95. Requirements: 64K, one disk drive, graphics board. Rensin Communications
P.O. Box 414
College Park, MD 20740
202/728-7955

Gato

A World War II submarine on patrol is simulated in *Gato*. The game features three-dimensional perspective with realistic ship movements. Enemy vessels may flee or attack when the sub is detected. There are nine levels of difficulty, day and night missions, and actual Morse code messages. List price: \$39.95. Requirements: 128K, one disk drive, graphics board. Spectrum Holobyte, Inc.
2006 Broadway #301
Boulder, CO 80302
800/621-8385

Bluebush Chess

A chess program, *Bluebush Chess* has eight skill levels, which you can switch among during a game. You can also switch sides. The chess pieces can be arranged in any way. Lists of possible moves and previous moves are provided, and all are automatically checked for legality. You can take back any move and ask the computer to suggest your best move. List price: \$49.95. Requirements: 64K, one disk drive. Bluebush
P.O. Box 3585
Santa Clara, CA 95055
408/244-1631

Planetfall

The prose adventure game *Planetfall* is a humorous interactive science fiction adventure. You are the lowliest ensign aboard the Stellar Patrol Ship *Feinstein*. When the ship explodes, you are jet-tisoned into a mysterious and deserted world plagued by floods, pestilence, and mutant fauna. You meet Floyd, a mischievous multipurpose robot with whom you must find a way to escape the planet. List price: \$39.95. Requirements: 64K, one disk drive. Infocom, Inc.
55 Wheeler St.
Cambridge, MA 02138
617/492-1031
"Funny, challenging, and a masterpiece of 'interactive fiction.' I can't wait for the sequel." David A. Basskin, Toronto, Ontario, Canada

Nomination

Players campaign against major presidential candidates of either party in *Nomination*. Up to five people conduct a primary campaign by issuing statements, answering the press, making endorsements, and deciding whether or not to use dirty tricks. At the outset each player takes a stand on ten issues, from the ERA to defense spending; the positions taken affect fund-raising ability. Players use their resources to collect the most convention delegates. Players can run against Democrats, Republicans, or each other. List price: \$29.95. Requirements: 128K, one disk drive. Brady Co.
Bowie, MD 20715
301/262-6300

Grandma's House

Children choose characters to visit *Grandma's House*. Then they explore special places to get things for Grandma. Children can decorate Grandma's house in any way they like. List price: \$34.95. Requirements: 64K, one disk drive, color graphics board. Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Gramarcy

Players try to find all words that can be made from the letters of a given word in *Gramarcy*. You can take as much time as you need, but you get bonus points for finishing before the clock runs out. *Gramarcy* calculates and reports the number of words it has found. The program selects words from its own data base, to which you can add. You can check a new entry to find out how many words can be made from its letters. List price: with DOS 1.10 \$33.95, with DOS 2.00 or a later version \$29.95. Requirements: 128K, one disk drive, color graphics board. Robert L. Nicolai
4038 N. Ninth St.
St. Louis, MO 63147
314/621-0730

Hangman

Players pick letters of the alphabet as they try to guess a word the computer has chosen in *Hangman*. The game comes in two versions: *Hangman for the Superintelligent* and *Foreign Language Hangman*. *Hangman for the Superintelligent* uses esoteric words, which are briefly defined, or famous sayings and quotations with the author's name provided as a clue. The game includes over 1000 words and has four levels of difficulty. One person can play against the computer, or players can compete with each other. *Foreign Language Hangman* comes with a list of 700 basic vocabulary words in either French or Spanish and a utility program for creating your own word list. Words and phrases can be presented in English or translation with the clues given in the opposite language. List price: \$20. PC requirements: 64K with DOS 1.10, 96K with DOS 2.00 or a later version, one disk drive. PCjr requirements: 128K, one disk drive. Norland Software
1014A W. Badger Rd.
Madison, WI 53713
608/255-0294

Adventure Writer

You can write your own fiction games with *Adventure Writer*. Using menus and submenus, you invent up to 255 objects and situate them in up to 255 rooms or locations. Each room can have up to a full screen of text. You can program your own sounds or use sound effects such as shots and bells. Special effects include highlighting and changing color. List price: \$79. Requirements: 64K, one disk drive.

CodeWriter Corp.
7847 N. Caldwell Ave.
Niles, IL 60648
800/621-4109, 312/470-0700

Vegas Craps

Up to three players bet on a roll of the dice in *Vegas Craps*. The program includes all bets except "don't," including "pass," "come," number bets, and "sucker" bets. Players can take odds on the "pass" line and on the numbers; appropriate odds are paid for each roll. *Vegas Craps* stakes each player with \$500 and tracks winnings and losses. List price: \$29.95. Requirements: 64K, one disk drive.

Pro Systems
6561 Gillis Dr.
San Jose, CA 95120
408/997-1776

Charles Goren: Learning Bridge Made Easy

A tutorial bridge program with 100 practice hands, *Charles Goren: Learning Bridge Made Easy* teaches hand evaluation, opening bids, responses and rebids, and other basics. After players bid, the program provides correct answers and explanations. The tutorial comes on one disk and includes a 144-page book. List price: \$79.95. Requirements: 64K, one disk drive.

CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

Adventure Master

A program that lets you design your own text adventure games, *Adventure Master* has built-in graphics for creating illustrations. You can create as many as 60 rooms for each adventure, describe places, plan events, create secret exits, name magic words, hide objects, and create entire worlds. The game can be saved for others to play. *Adventure Master* includes three adventures: a complete ready-to-play adventure game written by *Adventure Master* designer Christopher Chance and two partially completed adventures written by Jean Craighead George, a writer of books for young adults. List price: \$44.95. Requirements: 128K, one disk drive, DOS 2.00 or later version.

CBS Software
1 Fawcett Pl.
Greenwich, CT 06836
203/622-2525

StarShip Valiant

An outer space battle simulation, *StarShip Valiant* is another version of the strategy game *Star Trek*, one of the first public-domain computer games. As First Officer of the *Valiant*, your duty is to rid your quadrant of all enemy Amdron vessels; otherwise your ship or all the starbases in your quadrant will be destroyed. The game uses charts to show where stars, starbases, the *Valiant*, and the Amdron vessels are in each quadrant and sector. You can call up readouts on the ship's status, including energy levels, damage reports, and number of laser beams and pulse torpedoes. Victory is rewarded with a battlefield promotion to captain and then to admiral. List price: \$44.50. Requirements: 128K, one disk drive. Eagle Computer Consulting, Inc. 3000 N. Wales Rd. Norristown, PA 19403 215/277-7638

In Search of the Most Amazing Thing

Players of *In Search of the Most Amazing Thing* use strategy and learning skills to find what they're looking for. Players learn how to fly the B-Liner, use their jet-pack, trade with Metalican robots, and communicate with the Darksome Mire cultures for clues to the location and identity of the Most Amazing Thing. List price: \$39.95. PC requirements: 128K, one disk drive, DOS 2.00 or later version, color graphics board. PCjr requirements: 128K, one disk drive, Cartridge BASIC. Spinnaker Software Corp. 1 Kendall Square Cambridge, MA 02139 617/494-1200

The Baseball Statbook

Intended for use by high school, college, amateur, and professional baseball or softball teams, *The Baseball Statbook* displays, updates, and prints game, year-to-date, and historical statistics. The menu-driven program maintains virtually any baseball or softball statistic for individuals as well as teams. List price: \$39. Requirements: 128K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

Trains

You play the owner of an American railway empire in *Trains*. You either make the business grow or go bankrupt, using strategy and learning skills to serve various industries located along the rail line. Deliver on time and make enough money to pay workers, purchase coal, and show a profit. List price: \$39.95. Requirements: 64K, one disk drive, color graphics board.

Spinnaker Software Corp.
1 Kendall Square
Cambridge, MA 02139
617/494-1200

Tiao Chi

Designed for people of all ages, *Tiao Chi* is a version of Chinese checkers that has three skill levels, color graphics, and music and sound effects. Up to six players, including the computer, can compete at once. Symbols of each Chinese New Year animal are used as player tokens. List price: \$24.95. Requirements: 64K, one disk drive.

Microclassics

315 W. Grand Ave.

El Segundo, CA 90245

213/322-6888

Sailing

Players sail a small craft to rescue swimmers trapped in the Bermuda Triangle in *Sailing*. The program features keyboard controls, a sound toggle, a pause key, and instructions that are accessible before each game. List price: \$34.95. Requirements: 128K, one disk drive, color graphics board.

Accupipe Corp.

222 W. Lancaster Ave.

Paoli, PA 19301

215/296-7376

Pathwords

A game of word knowledge, speed, and strategy, *Pathwords* lets up to four players race against the clock to connect adjacent letters and create words. The game begins with a randomly generated grid of 109 letters. The challenge is to construct words by connecting letters in all directions. You can choose from four speeds and retain your scores. List price: \$34.95. Requirements: 64K, one disk drive.

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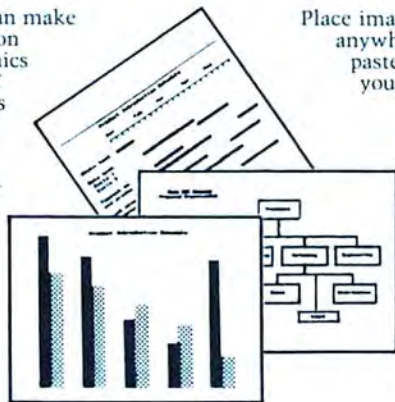
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System Software

Larry Kermel

System software continues to evolve from a highly specialized set of technician's tools into an easily accessible part of everyday computing. While the power of personal computing is most commonly seen in application software, it is the system software—operating systems, utility programs, and programming languages—that makes that power possible.

Operating systems provide the basic means of controlling and accessing a computer's resources, upon which application programs can be built. The operating system is the traffic cop that controls the movement of data among the keyboard, the screen, the printer, the processor, memory, and disk storage. Thus, to display data, an application program simply sends a signal to the operating system, which in turn sends the data to the screen.

Utility programs add functions that fine-tune the operating system's control of those resources, making the computer or other software more efficient or easier to use. A utility is typically dedicated to a single useful function, such as keyboard redefinition, print spooling, or disk emulation.

Languages make communication between humans and computers possible. Computers understand only sequences of electrical impulses. Computer languages were developed to allow program-



mers to use English-like words to manipulate information within the computer. Because languages translate the programmer's instructions into the appropriate electrical impulses, the programmer is freed from the details of the computer's internal processes when creating functions that make up an application. Languages, therefore, provide the building blocks with which an application is constructed.

Operating Systems

Operating systems, the first line of interaction with a computer, were formerly a stumbling block, offering confusing and convoluted command structures. If you couldn't get past the operating system's commands, you couldn't get any work done.

Now, however, operating systems present a better face to the user and offer more intelligible commands. Some application programs, especially integrated packages such as *Symphony* and *Framework*, handle many operating system functions. As a result you don't have to learn new commands or leave the application program to perform an operating system function, such as copying a file.

Some operating systems now include features and functions that were previously found only in application programs, languages, or utilities—such as sorting text files or creating “batch” (automated) functions.

A definite trend in operating systems these days is the support of multiple users working in networks

or in shared processor environments. In both situations, files and records must be protected from simultaneous alterations, and shared disk storage areas must be protected from unauthorized access. The controlling agent for such protection is the operating system. To support single-user, multitasking applications, the operating system must prevent one application's data from destroying another's.

Ironically, as operating systems add functions and grow more sophisticated, they generally become easier to use and more invisible.

Utilities

Utility programs might be characterized as answers to the cry, “If it would only do. . . .” Utilities extend access to the resources or operation of the computer by enhancing the functions of an operating system, a language, or an application program or by filling the gaps left by those programs. For example, the operating system may be useless if you accidentally erase a file or compromise the integrity of the disk's directory, but a file recovery utility can mean the difference between deliverance and disaster.

Utilities perform various functions at the operating system level. Besides recovering files, utilities can manage disk files and transfer files from one disk format to another. Keyboard redefinition and macro

processing programs free you from repetitive typing. RAM disk programs save a great deal of disk access time, as they set aside a portion of the computer's RAM to emulate a floppy disk drive. Print spoolers speed up the printing process by reserving a portion of RAM to hold data that is ready to be printed, thus freeing the computer to do other work while the data is printed. Menu utilities hide an operating system's commands and functions behind a slew of prompts and selections.

Some utilities are designed to work with specific application programs. For example, some create programs for *dBASE II* data management applications; some add screen or print enhancements or new commands to *1-2-3*; and some design data entry screens for other programs. Still other utilities make programmers' lives easier with sophisticated editors, subroutine libraries, sorting or screen-generating routines, and cross-referencing programs.

Programming Languages

When microcomputers first appeared, they recognized only "machine language," a cryptic system in which computer instruction is in a numeric code. Every type of microprocessor has a different set of machine language codes. Because the codes are simply numbers, it is difficult to remember which code represents a particular instruction.

To facilitate programming, mnemonics—short, word-like sequences of three or four characters—were developed to represent machine language codes. This second-generation language is called assembly language. Programmers string together these more easily remembered assembly language instructions and use a special program, called an assembler, to translate the mnemonics into the appropriate machine language code.

Programmers often make repeated use of certain computer processes, such as displaying messages on the screen. While the messages vary, the process of sending them to the screen is the same. In "high-level" languages such as BASIC, a single word such as PRINT takes the place of an entire sequence of machine code instructions. The four most popular high-level languages—BASIC, FORTRAN, Pascal, and COBOL—are each suited to solving different problems.

BASIC is flexible and easy to learn because its commands closely resemble English. FORTRAN's strength lies in its ability to manipulate formulas and other complex numerical calculations. Developed for business applications, COBOL excels in handling large amounts of data and performing repetitive and simple calculations. Pascal promotes a structured approach to programming and allows you to develop extremely large programs by combining smaller, more manageable modules. Other languages, such as FORTH, C, and Ada, are also becoming increasingly popular. Existing computer languages will continue to expand their powers while new languages with new capabilities will appear.

Although a high-level language communicates a series of machine instructions to a computer with a single command, the commands must be organized to perform useful work. The programmer is responsible for creating a structure in which the program will logically and efficiently proceed. The next generation of languages may make that as easy as writing a letter to a friend, with many of the same benefits—and no doubt some of the perilous misunderstandings—that people encounter when they attempt to communicate with one another. But that shouldn't surprise us—computers and their tools work only as well as we do.

The offerings on the following pages are evidence of the trends mentioned here. The operating systems are growing simultaneously more sophisticated and more invisible, while the utilities and the languages are getting easier to use.

Larry Kermel is a computer consultant living and working in Oakland, California.

Operating Systems

DOS 3.00, DOS 3.10

An enhancement to DOS 2.10, DOS 3.00 provides the functions contained in DOS 2.10 for the IBM PC AT. It does not replace DOS 2.10. DOS 3.00 provides file sharing, block locking, and modified versions of DOS 2.10 background print, error reporting, and interrupt functions. DOS 3.00 supports the PC AT's 1.2MB disk drives and 20MB fixed disk, additional screen dump facilities, and a RAM disk. An enhanced BASIC interpreter provides additional access to device drivers and DOS, and a linker program supports up to 1MB. DOS 3.00 uses at least 36K of memory, so some programs for DOS 2.00 and 2.10 may no longer fit, requiring either more memory or smaller program segments. DOS 3.10 contains all DOS 3.00 functions with enhancements to support PC network hardware and software. List price: DOS 3.00 \$65, technical reference \$40, upgrade of DOS 3.00 to DOS 3.10 \$30. Requirements: for the PC 96K,

one disk drive; for the PC XT and PCjr 128K, one disk drive; for the Portable PC and the PC AT 256K, one disk drive.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

NCI p-System

The p-machine emulator, the numeric support processes, and the BIOS have been rewritten in NCI p-System to enhance performance and compatibility. Files can be transferred between DOS and p-System using a file utility. Storage considerations include provision for 640K RAM, support for 80-track floppy drives having up to ten sectors per track, a selectable stepping rate for the drives, and a choice of disk drives. There is an automatic boot to the RAM disk so that it does not have to be configured. I/O features include use of remote terminals, a built-in print buffer, print spooling, asynchronous serial I/O, and automatic disk verification. The package includes the UCSD Pascal compiler, the 8086 Macro Assembler, a linker, an editor, and a file handler. List price: \$595. Requirements: 128K, one disk drive.

Network Consulting Inc. (NCI)

Discovery Park #110

3700 Gilmore Way

Burnaby, British Columbia

V5G 4M1 Canada

NCI Coherent

An improved version of the UNIX-compatible operating system written by Mark Williams, NCI Coherent is a multiuser, multitasking system with real-time capabilities. NCI added the UNIX System V memory routines, a math library in the IEEE format, a screen editor, and custom

device drivers for a variety of peripheral hardware. The kernel was rewritten to improve efficiency, and many of the 165 UNIX Version 7 commands were rewritten in assembly language for faster execution. The system supports 11 simultaneous users and is suitable for networking, process control, and robotic functions. Hardware support includes a choice of hard disks. List price: \$695. Requirements: 320K, hard disk.

Network Consulting Inc.

3700 Gilmore Way #110

Burnaby, British Columbia

V5G 4M1 Canada

604/430-3466

UCSD p-System

IBM's implementation of the menu-driven UCSD p-System is written in UCSD Pascal. I/O support includes file handling utilities, redirected I/O, block I/O service routines, print spooling, and support for asynchronous processes. Programs can use chaining, dynamic overlays, assembly code, and separately compiled modules of object code. A native code generator can convert p-code to native machine code for improved performance. The package includes turtle graphics, a symbolic debugger for UCSD Pascal, a linker, a macro assembler, a screen-oriented editor, a library of program modules and utilities, and a choice of either a FORTRAN or a Pascal compiler. List price: \$625. Requirements: 64K, one disk drive.

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408/649-3896

DOS 2.00 and DOS 2.10

Single-user operating systems that use a tree-structured filing scheme, Microsoft's DOS 2.00 and 2.10, as distributed by IBM, offer additional utilities with both Disk BASIC and Advanced BASIC. DOS 2.10 is an updated version of DOS 2.00 that supports the PCjr as well as the PC and the XT. Hard disk support, redirection features, and SORT filters are also included. DOS 2.00 and 2.10 are compatible with DOS 1.00 and DOS 1.10. Storage capacity has been increased from 160K to 180K for single-sided disks and from 320K to 360K for double-sided disks. List price: DOS 2.00 \$60, DOS 2.10 \$65. Requirements: 128K, one disk drive.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/332-4400 Illinois,
800/447-0890 Alaska and Hawaii

microSHARE

Three users can run DOS and CP/M-86 programs at the same time with microSHARE. The operating system replaces DOS in a small, shared-logic network of an XT (or a PC with a hard disk) and two dumb terminals connected through serial ports. The system includes a print spooler. Security features protect files and can prevent access to the system by modem. List price: \$499. Requirements: 640K, one disk drive.

Digitrol Computers, Inc.
440 Phillip St.
Waterloo, Ontario
N2L 5R9 Canada
519/884-4541

UCSD p-System Version IV.1

Portable programs can be written with the UCSD p-System Version IV.1. The p-System compilers create code for a hypothetical computer called the p-machine. Brief emulator programs translate the p-System code for various microprocessors. The operating system includes tools, such as an editor that indents automatically. Virtual memory addressing permits the system to run programs that are larger than system memory. Disks don't have to be changed to edit, execute, compile, debug, or run programs. Run-time versions, utilities, and languages are available. List price: \$500. Requirements: 64K, one disk drive.

SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Coherent

A multiuser, multitasking operating system, Coherent is modeled after Bell Labs' UNIX Version 7 and contains 145 UNIX Version 7 commands, including a C compiler (cc) and a text formatter (nroff). Coherent's compatibility with UNIX Version 7 permits code developed on other processors running UNIX to be transferred, compiled, and executed on the PC. Coherent reads and writes DOS files and

UCSD p-System files. List price: \$695. Requirements: 256K, one disk drive (5MB hard disk recommended). Network Consulting Inc.
3700 Gilmore Way #110
Burnaby, British Columbia
V5G 4M1 Canada
604/430-3466

PolyFORTH II Level 3, Level 4

An integrated operating system, PolyFORTH II includes the FORTH language, an 8086 assembler, an editor, data base support, an 8087 coprocessor mathematics package, and graphics capabilities. The program is a full multiuser, multitasking operating system. List price: Level 3 \$600, Level 4 including system source code \$3200. Requirements: 64K, two disk drives.

FORTH, Inc.
2309 Pacific Coast Hwy.
Hermosa Beach, CA 90254
213/372-8493

Co-Idris

A UNIX-compatible operating system, Co-Idris (CI) coexists with DOS to provide multiuser and multitasking features without displacing existing application programs. As a resident program, CI allows communication between DOS and Idris as well as allowing programs to be run alternately on each operating system without rebooting. Compilers for C and Pascal together with libraries for Idris, CP/M-86, and DOS facilitate software development for all three systems. Other utilities include a linker, an 8086 assembler, a debugger, a Pascal-to-C translator, and a hexadecimal translator. List price: \$695. Requirements: 128K, hard disk.

Whitesmiths, Ltd.
97 Lowell Rd.
Concord, MA 01742
617/263-9927

PC/iRMX

A multiprogramming system, PC/iRMX is designed to let programmers add to or alter systems by creating new process control blocks or altering existing ones. I/O subsystems can be created that optimize device control of electronic medical instruments or special devices. Real-time applications are supported by the event-driven, priority-oriented scheduler with over 255 priority levels and a sophisticated arrangement of device handlers, interrupts, and process control. Basic utilities can generate custom ones. The system includes a loader for absolute or relocatable code, an editor, a linker, a librarian, and a macro assembler. List price: \$995. Requirements: 128K, two disk drives.

Real-Time Computer Science Corp.
P.O. Box 3000-886
Camarillo, CA 93011
805/482-0333

UNIX-II

Licensed by AT&T, UNIX-II is an implementation of UNIX System III with Berkeley 4.1 enhancements. The system supports multitasking and multiuser applications and provides the UNIX-to-UNIX communication utility, uucp. The package includes the Bourne shell, VI editor, c shell, and a DOS shell that enables the system to be manipulated by DOS commands. List price: \$895. Requirements: 320K, two disk drives.

International Data Systems
2231 Calle de Luna
Santa Clara, CA 95054
408/986-1972

Coherent Operating System

A UNIX-compatible multitasking, multiuser operating system, *Coherent* includes the Mark Williams C compiler and over 150 utility commands. List price: \$495. Requirements: 256K, 5MB hard disk. Mark Williams Co.
1430 W. Wrightwood
Chicago, IL 60614
312/472-6659

XENIX Operating System

Based on Bell Labs' UNIX System III and written by Microsoft, XENIX provides the PC AT with a multiuser, multiprogramming, and multitasking environment that supports the execution of concurrent foreground and background applications. It supports up to 3MB of memory, includes a hierarchical file system, and provides two command interfaces (Bourne and Visual shells), three program editors (VI, ED, SED), file-sharing protection and access control, and Berkeley utilities. XENIX allows the execution of sequential, asynchronous, and background processes, coexists with DOS on a fixed disk, includes utilities for file transfer to and from DOS 2.00 and DOS 3.00 files, and supports an 80287 math coprocessor. List price: \$395. Requirements: PC AT, serial port (for second and third terminals of multiuser system).

IBM

Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

Venix/86

A licensed version of AT&T's UNIX operating system, Venix/86 is a multitasking system that has single-user and multiuser versions. Berkeley utilities, including termcap, the VI editor, and the c shell, are provided. Program development tools include a C compiler, a BASIC compiler, an assembler, and a debugging facility. DOS ASCII files can be transferred to Venix/86 and vice versa. A hard disk can be partitioned so that DOS and its files and programs can reside on the same disk as Venix/86, although only one system operates at a time. Networking utilities and 8087 coprocessor support are provided. List price: Single user \$800, multiuser \$1000. Requirements: single user 192K, hard disk; multiuser 256K, hard disk. Unisource Software Corp.

71 Bent St.
Cambridge, MA 02141
617/491-1264

Thoroughbred/OS

A multiuser, multitasking operating system and BASIC interpreter for the PC XT, Thoroughbred/OS supports up to 16 users and can create up to 30 unique directories. Applications running under the program are portable to UNIX-based systems. The program's dynamic memory allocation allows you to configure memory to fit your needs, and its data compression and decompression functions save file space. Ghost tasking allows a single terminal to initiate more than one program. List price: \$795. Requirements: PC XT with 10MB hard disk, for single user 128K, for multiuser 256K.

SMC Software Systems
1011 Rt. 22
Bridgewater, NJ 08807
800/526-3968, 201/685-9000

Concurrent CP/M-86

A single-user, multitasking operating system, Concurrent CP/M-86 allows you to run several programs at once, with one in the foreground and the rest in the background. Control of and response to the programs are done through "virtual" consoles that can be selected with a single keystroke. The consoles run in either the dynamic mode, which displays the current view, or the buffered mode, which saves all the input to the screen since it was last viewed. Concurrent CP/M-86 includes record and file locking, password protection, automatic disk log-in, date and time stamping, memory partitioning, and a collection of file utilities. Up to 16 logical drives managing 512MB each can be supported. The system can run real-time applications. List price: \$350. Requirements: 256K, two disk drives.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

Concurrent PC-DOS

A multitasking operating system that can run up to four DOS or CP/M-86 programs simultaneously, Concurrent PC-DOS provides windows that allow you to monitor the simultaneous execution of programs. Windows can be positioned anywhere on the screen and scrolled or sized to display different parts of each application. Data can be cut and pasted between applications by placing the window in the appropriate place. A communications capability allows you to work on an application without interruption while the system receives telecommunicated data. Concurrent PC-DOS provides menus that not only explain the program's functions but also allow you to create your own menus or help screens. A print spooler and a sort-and-search program for names and addresses are included. List price: \$295. Requirements: 256K, two disk drives (512K, hard disk recommended). Digital Research
160 Central Ave.
Pacific Grove, CA 93950
408/649-3896

CP/M-86

A general-purpose single-user operating system, CP/M-86 has a modular design, uses little memory, and is easily relocatable. The system's memory management techniques support noncontiguous memory segments and provide addressing for 1MB of memory. These techniques allow several programs to be resident at once, minimize absolute addressing, and permit applications to specify independent program units. All hardware-dependent code is located in one module, the BIOS, and utility programs are provided to customize this module for peripherals. Up to 16 logical drives containing up to 8MB each are supported. The CP/M-86 package includes a file handling program, an editor, an 8086 assembler, a debugging tool with a disassembler, and utilities. List price: \$60. Requirements: 64K, one disk drive. Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

DBX

A Pascal data base application generator, DBX includes both object and source code, a diagnostics program to display all current input and output information, and a demonstration data base to store, retrieve, or delete entries. The demonstration data base can be used to manage bibliographies, glossaries, and catalogs. List price: \$50. Requirements: 64K, one disk drive. Pascal & Assoc.
136 E. Rosemary St.
Chapel Hill, NC 27514
919/942-1411

QNX, Version 1.14

Styled after UNIX, QNX is a multiuser, multitasking system with real-time and instrumentation capabilities. The program has reentrant code, device-independent I/O, a full-screen editor, macros, a C compiler, an assembler, a linker, and a debugger. The 75 utilities cover conversion to and from DOS file formats, file locking, and record locking with mutually exclusive writing of individual records. QNX uses tree-structured files and provides background compilation and print spooling. List price: \$650. Requirements: 128K, two disk drives. Quantum Software Systems Ltd.
215 Stafford Rd. #104
Nepean, Ontario
K2H 9C1 Canada
613/726-1893

Micro Managers of Texas
45 N.E. Loop 410 #530
San Antonio, TX 78216
512/341-9544

HAI*Bus Runtime and Utilities

An operating system interpreter and utility package under which HAI*Microware products run, *HAI*Bus Runtime and Utilities* is portable and runs on many Z80-, 8080-, 8088-, and 6809-based microcomputers. The utilities provide alterable menu fields, disk directories that allow 20-character descriptions of files, and a printer configuration program. They provide English-like commands for functions that allocate copy, reorganize, and

delete files. The product is available in English, Spanish, Dutch, German, and French. List price: \$50. Requirements: 128K, two disk drives. Holland Automation USA, Inc.
3400 MacArthur Blvd., Ste. D
Santa Ana, CA 92704
714/641-2844

RTOS/iRMX-86

A version of Intel's iRMX-86 configured for the PC, RTOS-iRMX is a multiuser, real-time operating system. The system and its device drivers are written using reentrant, interrupt-driven code for a high level of task concurrency. The package includes a locator, a loader, a librarian, a cross-reference generator, a converter from object module to the Intel hexadecimal format, and a linker that provides dynamic and absolute loading of programs and overlays. The Intel assembler ASM-86 is included with support for the 8087 coprocessor either with the chip or through emulation. List price: \$600. Requirements: 512K, one disk drive (two recommended). MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

BOS/5, MBOS/5

The BOS operating systems provide business-oriented utilities and programs, including file maintenance, file conversion, file dump programs, and a text editor. Both operating systems have sign-on messages with password protection, system menus that can be customized, and dynamic allocation of file space on a hard disk. BOS/5 is the single-user version. The multiuser version, MBOS/5, provides all functions of BOS/5 as well as print spooling, record locking, and file sharing with one or two dumb asynchronous terminals serving as additional work stations. List price: single-user \$500, multiuser \$1050. Requirements: single-user 64K, two disk drives; multiuser 128K, hard disk. BOS National, Inc.
2560 Royal Ln. #228
Dallas, TX 75229
214/484-2717

Utilities

BASIC Aids 2.0

A program development tool, *BASIC Aids 2.0* helps you document BASIC programs. You can print program listings, cross-reference maps of branching instructions, list names and line numbers of variables used in a BASIC program, and create a table of contents listing the names of routines and sections of BASIC code. The program has a menu that simplifies loading, listing, renaming, copying, and searching and replacing parts of BASIC programs. It also displays default function key assignments in a menu format and lets you reassign function keys by filling in blanks. List price: \$79 including source code. Requirements: 64K, one disk drive. Tulsa Computer Consortium
P.O. Box 707
Owasso, OK 74055
918/747-0151

BASIC Development System

A set of utilities that help develop BASIC applications, *BASIC Development System* lets you single-step through program operations and renumber and relocate sections of code. The program cross-references and searches BASIC listings. Program lines can be listed one at a time or a full page at a time, forward and backward. You can compress BASIC programs, removing remarks and spaces and

combining single lines to reduce program size by as much as 40 percent. Each editing function is carried out with a single keystroke. The *BASIC Development System* integrates with the BASIC interpreter, and all program functions operate while in the immediate BASIC mode. List price: \$125. Requirements: 64K, one disk drive. BetaTool Systems
8972 E. Hampden Ave. #179
Denver, CO 80231

"This program has excellent manufacturer support." James C. Pottkotter, Memphis, Tennessee

"The expanded renumber capability is worth the price all by itself. The rest is gravy." George L. Hopkins, Greensboro, North Carolina

"BASIC Development System (BDS) filled the gaps that IBM left in Interpretive BASIC. BDS can compress a file for impressive execution gains and uncompress it with indents for analyzing code. It is a BASIC necessity for any serious program development." Laurence Wingerter, Jr., San Antonio, Texas

Trio

A file transfer, extraction, and conversion system for 1-2-3, *Trio* eliminates the need to rekey data when 1-2-3 is used to analyze information from reports produced by mainframes. The file transfer module can be used with many 3270 terminal emulation products and lets you transfer files between an IBM mainframe and a PC. The extraction module eliminates unnecessary information while selectively duplicating key fields. The conversion module converts data into the format required by 1-2-3 and other spreadsheet packages. List price: \$395, with 1-2-3 \$725. Requirements: 256K, two disk drives, 3270 terminal emulator board (for file transfer module). CDI Systems, Inc.
2803 Butterfield
Oak Brook, IL 60521
312/325-2430

Btrieve

A B-tree-based retrieval system, *Btrieve* works with BASIC, Pascal, COBOL, and C. The utility features multikey access to any number of files, duplicate and modifiable keys, an unlimited number of records per file, and efficient memory utilization. It has B-tree file access routines for sequential and random access to data. The utility provides transaction-level control to protect a data base's logical integrity. By bracketing a set of *Btrieve* calls between begin and end transaction calls, you can ensure that none of the operations is applied to the data base unless they all are. The utility features automatic data recovery following system failure. List price: \$245. Requirements: 128K, one disk drive. SoftCraft, Inc.
P.O. Box 9802 #590
Austin, TX 78766
512/346-8380

Cross Reference Program for Lotus 1-2-3

Using the *Cross Reference Program for Lotus 1-2-3*, you can analyze a 1-2-3 spreadsheet and print a list of cell locations that refer to data or formula cells. The program displays the number of formulas, labels, and citations encountered. During printing it displays the percent completed, giving you an estimate of the time needed to print a cross-reference. List price: \$75. Requirements: 256K, DOS 2.00 or later version. Flowsoft
1215 Walnut St.
Philadelphia, PA 19107
215/923-2807

Disk-Edit

A screen-oriented disk editor and debugging tool, *Disk-Edit* gives you access to all data on disk in both hex and ASCII formats. Information on disk can be altered using the program's editing commands. List price: \$100. Requirements: 64K, one disk drive. SuperSoft Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

Animator

A visual programming tool for development and maintenance of ANSI '74 COBOL programs, *Animator* lets you observe the logical path of program execution in source code statements. The program displays source code and moves the cursor to each statement being executed. *Animator* contains a set of interactive debugging features. List price: \$795. Requirements: 128K, two disk drives, COBOL.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
800/772-3545 ext. 400, 800/227-1617
ext. 400 California

Active Trace

You can use *Active Trace*, a debugging and learning tool, to see how a BASIC program works as it runs. The program provides cross-reference mapping of BASIC programs and a window into how a program functions. The utility displays all variables and functions of a BASIC program with their current line numbers and values. You can print this information or save it as a file. Disk files can be used with an editor to find and fix bugs. *Active Trace* eliminates the need to single-step through programs during debugging. List price: \$79.95. Requirements: 64K, one disk drive.

Aware Company
P.O. Box 695
Gualala, CA 95445
707/884-4019

Baby/34

Replicating an RPG II System/34 environment on the PC XT, *Baby/34* lets you run IBM System/34 programs without conversion or modification. The package is made up of seven modules: Conversion Utility, Operating Control Language, RPG II Compiler, Run-time Execution Package, Screen Format Generator, Source Entry Utility, and Sort/Merge Util-

ity. List price: \$2500, optional Data File Utility Module \$500, Run-time Execution Package \$600 if purchased separately. Requirements: 256K, hard disk (run-time version two floppy disk drives), DOS 2.00 or later version.

California Software Products, Inc.
525 N. Cabrillo Park Dr.
Santa Ana, CA 92701
714/973-0440

California 10 Pak

The programs in *California 10 Pak* include utilities for programmers as well as general users. Browse rapidly scans files, Sort sorts files using up to five fields, Cdiff provides line-by-line comparisons of two files and highlights differences, and Cdir provides a display of file names sorted by criteria that you specify. Five utilities for programmers are Ccomp, which provides a byte-by-byte comparison of files; Cdisk, which provides a screen display of hard disk or floppy disk information; Cfile and Cmem, which let you scan alpha and hexadecimal displays of file and memory contents; and Cenv, which displays information about system configuration and a map of installed memory. Also included is a disassembly utility that produces ready-to-assemble source files extracted from any area in main memory. List price: \$100. Requirements: 64K, one disk drive. California Software Products, Inc.
525 N. Cabrillo Park Dr.
Santa Ana, CA 92701
714/973-0440

CodeSmith-86

A full-screen debugger, *CodeSmith-86* lets you create symbolic 8086, 8088, and 80186 machine language disassemblies that you can scroll through, setting breakpoints, passpoints, and path counter fields with single keystrokes. You can type in comments on individual instructions, and the comments will be retained throughout a debugging session. With one keystroke you can single-step, continue execution, or conditionally halt your program when a subroutine or loop is complete. In addition to supporting many Microsoft DEBUG commands, *CodeSmith-86* has com-

mands for setting and releasing multiple breakpoints and formatting disassemblies. Screensave mode saves and restores a program's display image during breakpointing and single-stepping operations, preventing the *CodeSmith-86* display from destroying your program display. The program continuously shows machine register values at the top of the screen. You can use multiple windows to view memory dumps while you single-step or breakpoint through a program whose disassembly is also displayed. List price: \$145. Requirements: 160K, one disk drive.

Visual Age
642 N. Larchmont Blvd.
Los Angeles, CA 90004
213/439-2414

C View Manager

Using *C View Manager*, you can design and save output screens, which along with on-line help facilities can be called back and displayed in the middle of a C program to inform you or to capture information in an accessible form. The utility works with any version of the Microsoft, Lattice, or Computer Innovations C compilers. List price: \$275. Requirements: 192K, one disk drive.

Blaise Computing Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

Cross Reference

With *Cross Reference* you can list all variables and line numbers referenced by statements in a program. The utility can cross-reference by variable name, keyword, and line number and also creates a paginated printout. List price: \$24.95. Requirements: 64K, one disk drive.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

d8087

Designed for data base applications with heavy numerical calculation requirements, *d8087* enables a *dBASE II* program to access the 8087 coprocessor. The utility increases the accuracy of *dBASE II* (version 2.3 or later) from 10 significant figures to 18 and speeds mathematical operations. *d8087* is a set of assembly language programs that can be called directly from within a *dBASE II* program. List price: single-user license \$450, software developer license \$750. Requirements: occupies 4K of RAM.

Midway Software, Inc.
1609 Bancroft Way
Berkeley, CA 94703
415/644-2369

Crossdata

A file conversion utility, *Crossdata* converts data or text file formats back and forth between CP/M and DOS on a variety of computers. The program requires no cables or other hardware. You can also convert between CP/M-80 and CP/M-86 or Concurrent CP/M. Disk format menus cover 30 popular 5¼-inch disk formats. You can modify formats or add new ones with a customizing menu. A split screen provides simultaneous display of source and destination file directories. List price: \$99. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Award Software, Inc.
236 N. Santa Cruz Ave.
Los Gatos, CA 95030
408/395-2773

Copy II PC

Besides making backup copies of protected disks, *Copy II PC* copies disks of different sector sizes, including ten sectors (*JFormat-2*) and nine sectors (DOS 2.00 and later versions). *Copy II PC* provides a disk drive speed check. The program formats, copies, and verifies data in one operation and uses a syntax identical to that of DOS's DISKCOPY command. List

price: \$39.95. Requirements: 64K, one disk drive.

Central Point Software, Inc.
9700 S.W. Capitol Hwy. #100
Portland, OR 97219
503/244-5782

"Copy II PC is very valuable to my business. I don't have to worry anymore that an accidentally erased disk will bring my business to a grinding halt. And it's very easy to use." Henry J. Burmeister, Medford, Oregon

"Copy II PC has excellent documentation." James Portkoter, Memphis, Tennessee

CATalog, CATalog II

A menu-driven disk librarian, *CATalog* helps you maintain a cross-referenced index of all disks and files in a library. The program supports up to 198 disk volume directories and 3900 files on one 320K disk. It provides space for 38-character descriptions of each volume and 40-character comments for each file. Date of creation, size of each file, and volume identification numbers are also included in the library listings. *CATalog II* extends the features of *CATalog*, letting you add, delete, update, edit, display, search, and print entries in the index of disks and files. Its capacity is limited only by the available disk space. The program records date of creation, number of bytes in each file, volume identification labels, dates of changes, amount of free space left on a volume, and updates. Selective searches can be done by file name, category, or range of files. The program prints volume labels to attach to disks. It supports hard disks and DOS 2.00 and 2.10 tree-structured directories. List price: *CATalog* \$34.95, *CATalog II* \$69.95. Requirements: 96K, one disk drive.

MultiPro
P.O. Box 342
Saline, MI 48176
313/429-2344

Autosort/86M

A sorting utility, *Autosort/86M* is designed for large files with fields and records of fixed lengths. Record lengths can be 5000 bytes or more if the specified sort buffer is at least 40K. Nine modes of sorting, merging, and selecting data can be used. The utility supports MBASIC's integer, single-precision, double-precision, and string fields. You can use *Autosort/86M* as a stand-alone utility or as a subroutine in Pascal or BASIC programs. List price: \$150. Requirements: 64K, one disk drive.

Computer Control Systems
298 21st Terrace SE
Largo, FL 33541
813/586-1886

C Utilities Package, FORTRAN Utilities Package, Pascal Utilities Package

Programmers can use the *C*, *FORTRAN*, and *Pascal Utilities Packages* to call functions that provide graphics, animation, screen control, and peripherals control. The *C Utilities Package* also includes trigonometric, logarithmic, exponential, and root functions written in assembly language. Graphics utilities of all three packages draw dots, lines, circles, and ellipses and provide light pen, mouse, and joystick control. Animation utilities provide multiple pattern fill, picture store, and picture animation. Screen control utilities include menu selection, function key selection, inverse video, blinking characters, and various cursor sizes. Peripheral control utilities include a random number generator, a date/time function, serial port control, parallel port control, input and output port control, a background music and sound generator, and a terminal emulator. List price: each package \$119. Requirements: 128K, one disk drive.

Software Labs
1221 Matisse St.
Sunnyvale, CA 94087
408/730-8108

Fast Sort

A machine language sorting routine that can be implemented in BASIC programs, *Fast Sort* arranges any array in ascending or descending order. It can be invoked by the BASIC interpreter or by compiled BASIC programs. The routine sorts 1000 items in 3 seconds or 5000 items in 22 seconds. Only one-dimensional arrays can be sorted, and sorting of string arrays begins with the first character. List price: \$24.95. Requirements: 64K, one disk drive.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

Disk Doctor

Using *Disk Doctor*, you can recover damaged disks and accidentally erased files. The menu-driven program requires no understanding of CP/M-86 file structure. During operation *Disk Doctor* displays a directory of recoverable files. In recovering damaged disks the program skips bad disk sectors and reads the remaining data. The program is not designed for use with double-sided drives or fixed disks. List price: \$100. Requirements: 64K, two disk drives, CP/M-86. SuperSoft Inc.

P.O. Box 1628
Champaign, IL 61820
217/359-2112

Electronic Disk

A disk emulation program, *Electronic Disk* reserves a portion of computer memory for file storage. You can specify the size in increments of 1K up to 320K. The program can emulate in memory two drives of any size and includes a print spooler. All DOS commands work the same with the electronic disk as with a floppy or hard disk. List price: \$49.95. Requirements: 96K, one disk drive.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

ETWSort

A utility that sorts files using fields of varying lengths, *ETWSort* can arrange up to 30 fields in ascending or descending order. The utility can be used with DOS piping and filtering. Files cannot be larger than 64K, and the program does not merge files except by sorting. List price: \$35. Requirements: 64K, one disk drive.

ETW Systems
9419 Seven Locks Rd.
Bethesda, MD 20817
301/469-7823

ETWFiltr

You can use *ETWFiltr* to filter files, convert them to or from compressed format, convert text to uppercase or lowercase, delete unprintable characters, and delete or translate characters listed in a run-time file. All operations can be performed singly or together. Command syntax for initiating the utility is similar to that of DOS's COPY command. You can use *ETWFiltr* with DOS piping and filtering. Characters cannot be added to the file, only deleted or changed. The program compresses files up to 40 percent by reducing strings of identical characters whenever possible and by inserting tabs. List price: \$35. Requirements: 64K, one disk drive.

ETW Systems
9419 Seven Locks Rd.
Bethesda, MD 20817
301/469-7823

EntryPoint

A comprehensive data capture system, *EntryPoint* turns a personal computer into an intelligent work station for host computer applications. You enter data by filling out on-screen forms. The program features "paint the screen" form design to fit each application, supports multilevel forms, and contains built-in logic for complex data checking and calculations. *EntryPoint* saves data in a batch as it is entered, and you can add, modify, and delete individual records. List price: \$545. Requirements: 128K, two disk drives. The Datalex Company

650 Fifth St.
San Francisco, CA 94107
415/541-0780

Data Safe

In addition to encrypting and decrypting data, *Data Safe* also verifies encryptions of data. The program authenticates data and destroys plain text. *Data Safe* implements the federal Data Encryption Standard (DES) and features on-line help, safety checks, and automatic maintenance testing. Files are encrypted and decrypted at 105K to 150K per minute. The program can be used with communications programs for secure electronic telecommunications. All functions can be used in batch processing. List price: \$139. Requirements: 64K, one disk drive.

Trigram Systems
3 Bayard Rd. #66
Pittsburgh, PA 15213
412/682-2192

DOSease

The main menu of *DOSease*, a utility that lets you use DOS commands without referring to manuals, gives you immediate access to any system procedure. When you select a command, *DOSease* displays a secondary menu describing the function and presenting all command variations. After you enter the parameters, the program structures and displays the command as it is executed. A file management utility uses a menu to help you set up sequential execution of file maintenance operations or chain the execution of several of your own programs. List price: \$100. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Software Solutions, Inc.
305 Bic Dr.
Milford, CT 06460
800/243-5123

Datasafe

Using *Datasafe*, you can encrypt records and telecommunications and ensure their confidentiality by creating a hexadecimal key or an ASCII password. The program warns you if a change has been made to protected data. The utility uses the Data Encryption Standard (DES) algorithm, an encryption technique developed by IBM for use on federal computer systems. En-

encrypted data can be transferred between any microcomputers, minicomputers, or mainframes that use the DES algorithm. The program tests data integrity of non-encrypted files and encrypts files of up to 16MB. Encrypted files are increased in size by 40K. The program is written in assembly language and performs self-testing before data is encrypted. List price: \$135. Requirements: 64K, one disk drive. IMSI

633 Fifth Ave.
San Rafael, CA 94901
415/454-7101

Graphics Utility

A programming tool used to create character sets and shapes for BASIC programs, *Graphics Utility* is also a stand-alone graphics generator. You can use the utility to design character sets in different shapes and sizes (up to 39 by 39 pixels). Shapes can be combined and saved as one large picture. Three subroutines (animation, accessing a string binary array, and separating the characters out of the binary array) let you incorporate the character sets and shapes into a program. List price: \$85. Requirements: 64K, one disk drive, color graphics board.

Savant Corporation
P.O. Box 440278
Houston, TX 77244-0278
800/231-9900, 713/556-8363 Texas

GraphiC

Designed for printing the results of scientific calculations on dot matrix printers, *GraphiC* is made up of 40 graphics routines. C programmers can call the routines, which are written in C and assembly language, to plot data or to make text slides. All plots are created and stored in the 4096- by 3120-pixel Tektronics format. Plots can be printed on Epson FX and RX, C. Itoh Prowriter, and Okidata 91 and 93 printers. The plots contain 712 by 720 pixels. Zoom mode can replay, shrink, enlarge, and shift a picture. The program supports linear, logarithmic, and

contour plots. Five line types, eight curve markers, and two fonts are provided, but all default parameters can be overridden. List price: \$150. Requirements: 192K, one disk drive, C compiler. Scientific Endeavors
Rt. 4, Box 79
Kingston, TN 37763
615/376-4146

GPIB Software

Working in conjunction with the GPIB PC interface board, *GPIB Software* converts the PC into an instrumentation controller for engineering, scientific, CAD/CAM, and medical applications. You can program the system either through a set of primitive GPIB commands or through high-level commands that automatically handle addressing, bus management, and handshaking. High-level and primitive commands can also be mixed within a program. Applications can be written in Interpreted BASIC, Compiled BASIC, FORTRAN, SuperSoft FORTRAN, Pascal, C, or assembly language. List price: *GPIB Software* \$75, optional languages \$50. Requirements: 64K, one disk drive. National Instruments
12109 Technology Blvd.
Austin, TX 78727
800/531-5066, 512/250-9119

KeyPrint

A configuration program, *KeyPrint* gives you menu control of the character sets and fonts of Epson MX, RX, and FX dot matrix printers. The program offers 16 options, including choice of character width and font, subscript and superscript, double-strike, emphasized type, and draft and near letter quality. List price: \$59.95. Requirements: 64K, one disk drive. Softkey Software Products, Inc.
2727 Walsh Ave.
Santa Clara, CA 95051
408/986-8148

Diagnostics II

A system maintenance utility, *Diagnostics II* provides routines that check the functioning of memory, disk drives, the central processing unit, the printer, and the monitor. Using a quick test, a walking-bit test, a burn-in test, and a speed test, the program checks all computer memory and gives an error report. During its disk drive test, the program checks the read and write functions and checks accuracy and data integrity after transmission. For its printer tests, the program checks carriage position; uppercase and lowercase printing; forward and reverse printing; interleaved overprinting; horizontal tabbing; and superscript, subscript, and boldface printing. Also provided is a quick-test function that can check the computer's memory, central processing unit, and disk drives in less than 4 minutes. List price: \$125. Requirements: 64K, two disk drives.

SuperSoft Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

The Inside Track

The 61 utilities that make up *The Inside Track* are written in BASIC and assembly language. Program routines display data on the screen faster than the BASIC PRINT statement, reserve a block of memory for use as a program scratchpad, copy the contents of memory from one location to another, control the keyboard from DOS or from another program, schedule up to four programs from within a program, load large .EXE files faster, remove line numbers from a BASIC program, and copy protect a program. About one quarter of the routines require DOS 2.00 or a later version. Source code is also included. List price: \$45. Requirements: with DOS 1.00 or 1.10 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive.

Data Base Decisions
14 Bonnie Ln.
Atlanta, GA 30328
404/256-3860

ISAM Routines

The data file access routines provided by *ISAM Routines* provide BASIC programmers with keyed access to data files for reading, writing, updating, and deleting records within files containing up to 32,767 records. The routines support multiple keys and provide for partial key searches. You can also compile the routines so that users can browse backward and forward in a file. List price: \$69.95. Requirements: 64K, one disk drive.

Ensign Software
7337 Northview Rd.
Boise, ID 83704
208/378-8086

Info-Sort

A file-sorting program, *Info-Sort* can be called from other programs or run as a stand-alone utility. Using up to nine keys, you can sort records in ascending or descending order. Records can be included or omitted based on logical conditions. Using 6-byte key strings, the utility sorts 1000 records, each 64 bytes long, in an average time of 10 seconds. List price: \$95. Requirements: 64K, one disk drive. Info-Pros, Inc.

2102 Business Center Dr.
Irvine, CA 92715
714/851-8975

Jetdrive

A disk emulation utility, *Jetdrive* creates a RAM disk that runs at processor speeds. Its contents are not destroyed by a warm reboot. The RAM disk may be any size (up to 16MB with a Tall Tree Systems JRAM-2 board), and you can change the size from the keyboard. The program includes Jet, a file transfer utility that is faster than the DOS COPY command. You can transfer exactly the files you want by using Jet to compare file names, dates, times, and archive bits. List price: \$60. Requirements: 192K, one disk drive, DOS 2.00 or later version.

Tall Tree Systems
1032 Elwell Ct. #124
Palo Alto, CA 94303
415/964-1980

Halo 2.0

A toolbox of graphics functions, *Halo 2.0* is compatible with a variety of languages, applications, and hardware. Common functions include point, line, arc, pie, circle, and ellipse. Advanced routines cover hatch styles, pattern fills, font selection, clipping, animation, world coordinates, multiple viewports, image compression, image-to-file routines, and printer support. *Halo's* graphics functions can be linked to applications developed in both compiled and interpreted BASIC, FORTRAN, Pascal, C, APL +, and assembly language. List price: first language \$200, each additional language \$100. Requirements: 64K, one disk drive, color graphics board.

Media Cybernetics, Inc.
7042 Carroll Ave.
Takoma Park, MD 20912
301/270-0240

HFTools for the BASIC User

A library of functions, *HFTools for the BASIC User* supports interpreted or compiled BASIC. The BASIC program communicates through a simple Call interface. You can request 22 functions from within a program, including clearing and scrolling windows on the screen, defining graphics character sets, obtaining system configuration, receiving character and scan codes from keystrokes, determining keyboard status, accessing files through the use of wild cards, and direct floppy disk input/output. List price: \$200. Requirements: occupies 5K of RAM.

H-F Computing Services Inc.
224 Old Orchard Grove
Toronto, Ontario
M5M 2E5 Canada
800/268-1121, 416/485-5403

The Label Maker

Designed for use with Okidata printers, *The Label Maker* prints labels and tags from data in files or entered at the keyboard. The program lets you print bar codes (3-of-9, Interleaved 2-of-5, and UPC) and OCR-A machine-readable characters. This allows you to print not only mailing labels but also LOGMARS, NRMA, and AIM labels. You can also

create and store unique label formats. List price: \$395. Requirements: 64K, one disk drive, Okidata Printer Model 92 or 93.

TJ Software, Inc.
P.O. Box 2044
Arlington Heights, IL 60006
312/364-1065

Menu Manager

A hard disk management system, *Menu Manager* lets you control access to a hard disk through definable menus. The program acts as a buffer between you and the operating system and can execute on a hard disk any command or program compatible with DOS 2.00 or a later version. It also provides password protection of selected areas on the hard disk. To eliminate screen image burn-in, *Menu Manager* clears the screen after a few minutes of inactivity and displays the current time in one corner. List price: \$100. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Phoenix Systems, Inc.
668 51st St.
Sacramento, CA 95819
916/731-8224

MenuMaster

A menu control system that insulates you from DOS, *MenuMaster* lets you execute complex command streams using menu selections. The program provides branching to an unlimited number of submenus with no restrictions on the order of branching. To create a menu, you paint the screen, using function keys to select color, draw boxes, show date and time, and create blinking areas in the menu. Then you specify the DOS commands to be executed from the menu and any branches to other menus. You can protect menus with passwords. A prompt facility is also included. List price: \$175. Requirements: 192K, one disk drive.

DecisionWare Corporation
P.O. Box 505
Moorestown, NJ 08057
609/778-0799

JSpool

A print spooler that lets the PC print files and run programs simultaneously, *JSpool* controls up to four serial and four parallel printers. The buffer may be any size. You can use escape codes in the file to control margins, tabs, compressed mode, printer pause, and other parameters. You can also issue commands to the spooler directly from the keyboard. *JSpool* comes with a display utility that shows files one screen at a time and suppresses the formatting characters used by text editors. List price: \$60. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Tall Tree Systems
1032 Elwell Ct. #124
Palo Alto, CA 94303
415/964-1980

JFormat-2

Providing up to 22 formats, *JFormat-2* supports quad-density, 8-inch, and special high-density 5¼-inch floppy disk drives. The program lets you use up to four drives on one machine. Quad-density drives enable one floppy disk to hold over 800K. With high-density drives, one floppy disk can hold 1.25 to 2.7MB. *JFormat-2* also lets you format double-density disks in ten sectors, providing 400K of storage without special hardware. List price: \$60. Requirements: 64K, one disk drive, DOS 2.00 or later version.

Tall Tree Systems
1032 Elwell Ct. #124
Palo Alto, CA 94303
415/964-1980

MatchPoint/86

With *MatchPoint/86* you can run programs written for CP/M-86 and use files stored in CP/M-86 format while the computer runs under DOS. *MatchPoint/86* works for floppy and hard disk drives and requires no hardware alteration or conversion equipment. List price: \$149. Requirements: occupies 9K of RAM.

American CompuSoft
23113 Plaza Pointe Dr.
Laguna Hills, CA 92653
714/472-8186

Media Magician

A disk editing utility, *Media Magician* lets you view, change, and save any byte, string, or sector anywhere on a floppy or hard disk. The program displays clusters allocated to a specific file, a bit map of the file allocation table, the disk structure dynamics, and the file and path names for a specific cluster. *Media Magician* provides volume names, file allocation tables, directories, subdirectories, boot tracks, file areas, and mode bytes. The program can edit sectors in either hexadecimal or ASCII format, copy and move individual sectors, perform sector-to-sector comparisons, scan for a specific hexadecimal/ASCII string match, and perform all functions while under a disk-global or file-relative mode. List price: \$79.95. Requirements: 64K, one disk drive, MS-DOS 1.25 or later version or any version of PC-DOS.

Photon Software
636 120th Ave. NE
Bellevue, WA 98005
206/451-8272

Micro/Versal

With *Micro/Versal* running under DOS, you can read, write, and format floppy disks for other computers and operating systems. The program covers 24 CP/M formats including all popular CP/M machines, Zenith's H-DOS, and Radio Shack's TRS-DOS. The package includes utilities to dump files in hexadecimal or octal, read any disk sector by sector, and reformat files. The program lets you write assembly language routines to read or write floppy disks for various formats not supported directly by *Micro/Versal*. List price: \$79.99. Requirements: 64K, two disk drives.

Advanced Software Technologies
417 Broad St.
Bloomfield, NJ 07003
201/783-7298

HFTools for Diskette Security, HFTools for Disk Security

You can lock up floppy disk data and prevent unauthorized access with *HFTools for Diskette Security*. The lockup requires you to respond to six prompts. To reacquire the data, you supply a 6-character key that can be changed with each usage. The mechanism works with data stored in any format and created by any package. *HFTools for Disk Security* expands the locking capabilities to hard disks. List price: *HFTools for Diskette Security* \$75, *HFTools for Disk Security* \$100. Requirements: 32K, one disk drive, DOS 2.00 or later version.

H-F Computing Services Inc.
224 Old Orchard Grove
Toronto, Ontario
M5M 2E5 Canada
800/268-1121, 416/485-5403

Matrixpak

An ensemble of 30 routines for manipulating dense matrices, *Matrixpak* uses the 8087 as a true coprocessor. The routines can be called from 87BASIC, 87MACRO, RTOS, and Microsoft FORTRAN or Pascal. All matrices are stored in a designated area of memory. Matrix size is limited by the amount of memory available for matrix storage. The package can manipulate matrices containing up to 64K per row. The program supports eight data types, including 80-bit real numbers. It supports the following matrix operations: addition, subtraction, multiplication, division, row swap, row divide, row assign, matrix identity, zero matrix, inverse/Gauss elimination, transposition, matrix listing, matrix scaling operations, row operations, column operations, and determinants. List price: \$150. Requirements: 128K; one disk drive; BASIC, Pascal, or FORTRAN compiler or IBM Assembler; 8087 coprocessor.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

Master Sort

A sort-and-merge utility, *Master Sort* can be run from a DOS batch file or called from BASIC or COBOL. When the utility is used from a batch file, up to eight input files can be specified, and up to 12 ascending or descending sort keys can be assigned. The program lists the sort completion code and the number of records sorted. Written in assembly language, *Master Sort* uses the Hoare Quick Sort technique. The program reads an input file, creates sort keys in memory, sorts, and creates the required output file. List price: BASIC version \$125, COBOL version \$150, both versions \$190. Requirements: 64K, one disk drive.

Micro Masters Software Ltd.

P.O. Box 513

Edmonton, Alberta

T5J 2K1 Canada

403/423-3509

Master Shrink

A data compression utility, *Master Shrink* can be used to back up files. The program compresses most text files as much as 60 percent, allowing you to copy two disks onto a single backup disk. *Master Shrink* can also be called from COBOL or BASIC. List price: \$115. Requirements: 64K, two disk drives.

Micro Masters Software Ltd.

P.O. Box 513

Edmonton, Alberta

T5J 2K1 Canada

403/423-3509

Mxref

A cross-reference utility for IBM's BASIC, BASICA, BASIC Compiler, or Macro Assembler source files, *Mxref* cross-references line numbers, variables, keywords, and all other components except remarks. The program provides output to screen, disk, or printer. List price: \$96, manual alone \$25. Requirements: 64K, one disk drive.

Computer Toolbox, Inc.

1325 E. Main St.

Waterbury, CT 06705

203/754-4197

Master ISAM

An indexed sequential access method for use with COBOL or BASIC programs, *Master ISAM* can open up to 20 files at one time, each containing up to 8 million records. Functions include open, add, find, find next, delete, replace, and close. *Master ISAM* automatically recovers space from deleted records without resorting or reorganizing the file. List price: \$125. Requirements: 96K, one disk drive. Micro Masters Software Ltd.

P.O. Box 513

Edmonton, Alberta

T5J 2K1 Canada

403/423-3509

Memory/Shift

A utility that lets you partition memory and hold up to nine programs in RAM at once, *Memory/Shift* also lets you transfer data between programs. It does not execute the programs concurrently, but you can switch back and forth between applications with a single keystroke. *Memory/Shift* supports two monitors and is also compatible with a color monitor, a hard disk, and a mouse. List price: \$99. Requirements: 128K, one disk drive. North American Business Systems, Inc. 642 Office Pkwy. St. Louis, MO 63141 800/325-1485, 314/432-6106

"An inexpensive but very useful alternative to the concurrent/window approach. You can mark data in a spreadsheet and switch over to a word processing program, and the program will write the data in at 9600 bps. The system is a bit intolerant of user error." Charles Anderson, Northfield, Illinois

Norton Utilities

The 14 programs included in the *Norton Utilities* let you recover files, set screen attributes, modify disks, and control hidden files. Two utilities, Unerase and Filefix, restore accidentally erased files and repair damaged files on disk. Disklook and Setmod display the contents of a disk and let you make patches and disk modifications. Three screen-control utilities set the color attributes of the screen from DOS, produce displays in inverse video, and clear

the screen. Timemark displays the date, the time, and the elapsed time during an operation. Filesort sorts files by date or name, and Diskopt speeds disk access for files. List price: \$80. Requirements: 64K, one disk drive.

Peter Norton

2210 Wilshire Blvd.

Santa Monica, CA 90403

213/399-3948

"The utilities work well and are easy to use." George Roukas, New York, New York

"Superb for file recovery. I couldn't live without it. Essential for every PC user." June Thacker, Everett, Washington

"The package is a complete file recovery system for DOS files as well as mapping and file maintenance of disk space and directories. Limitations—none." Stephen John Hysick, Grosse Pointe Woods, Michigan

IEEE-488 Bus System Analyzer

Designed to assist the IEEE-488 user in diagnosing software and hardware problems, *IEEE-488 Bus System Analyzer (BSA)* acts as a listener, talker, active controller, or system controller to provide complete testing of IEEE-488 systems. *BSA* can send or receive any bus command or data string. Bus commands and functions like serial and parallel polling are supported with simple mnemonics. *BSA* can determine bus interrupt conditions and bus status, detect universal and addressed commands, read secondary commands and secondary addresses, and trap illegal commands. The system's ability to emulate any device function at any device address can be used to design hardware and software functions for IEEE-488 instruments and peripherals. List price: \$59. Requirements: 64K, one disk drive, CEC IEEE-488 interface board.

Capital Equipment Corp.

10 Evergreen Ave.

Burlington, MA 01803

617/273-1818

Insta-Drive 3.00

A program that lets you use part of your computer's main memory as if it were a high-speed disk drive, *Insta-Drive 3.00* activates manually or automatically on start-up. The program supports up to four RAM disks as well as a hard disk environment. It coexists with additional device drivers. The program allows a physical disk drive to be logically replaced with an *Insta-Drive* or to be switched back and forth with its counterpart. List price: \$50. Requirements: 64K, one disk drive.

Persyst

17862 Fitch

Irvine, CA 92714

714/660-1010

LoadCalc

Using *LoadCalc* you can move data into a spreadsheet without rekeying. The program converts text files into Data Interchange Format (DIF), 1-2-3, *Symphony*, *Multiplan*, *SuperCalc*, *VisiCalc*, or *dBASE II* files. Text files can be captured with any communications program and loaded into a spreadsheet or data base. *LoadCalc* handles mixed text and numbers without requiring special delimiters. The program processes any size file and lets you select essential information by row and column. Data sources for *LoadCalc* include mainframe or personal computers and time-sharing systems. List price: \$95. Requirements: 96K, one disk drive.

Micro Decision Systems

P.O. Box 1392

Pittsburgh, PA 15230

412/276-2387

Menupro

A menu processor for use in business applications, *Menupro* runs under RM/COBOL and Micro Focus Level II COBOL, both of which are high-level implementations of ANSI '74 standards. *Menupro* facilitates the design and implementation of multilevel menus with an interactive process, allowing real-time modification to menus with no compilation, security for terminal users, listings of op-

erators and programs, and multiuser capabilities. List price: \$250. Requirements: 64K, one disk drive.

Bytel Corp.

1029 Solano Ave.

Berkeley, CA 94706

415/527-1157

Micro-Track

You can track machine time and software use with *Micro-Track*. A logon procedure associates a system ID, a user ID, and an account code with each computer session. A report facility gives detailed log listings and summary histograms by machine, user, or account. List price: \$295. Requirements: 64K, one disk drive; with DOS 2.00 or later version 96K, one disk drive.

Westford Systems, Inc.

69 Providence Rd.

Westford, MA 01886

617/692-6500

Pmate86

A full-screen program editor, *Pmate86* includes a macro language with 120 standard commands. The program features automatic disk buffering that allows backward and forward paging, ten auxiliary buffers that can be individually edited or used as scratchpads for cut-and-paste operations, horizontal scrolling for editing lines up to 250 characters long, and global commands that can act on the entire file. A last-in, first-out "garbage stack" lets you retrieve text you deleted accidentally or move blocks of text from one file to another. The program also has automatic word wrap, text formatting, global or local setting of margins, and tab stops and indents. List price: \$225. Requirements: 128K, one disk drive.

Phoenix Computer Products Corp.

1416 Providence Hwy. #220

Norwood, MA 02062

800/344-7200, 617/769-7020

Pfix86, Pfix86 Plus

A symbolic debugger for DOS, *Pfix86* can load the map produced by Phoenix Computer Products' *Plink86* linkage editor and uses the symbols and line numbers with the program under test. *Pfix86* allows the data display to be interchanged with the screen of the program under test and provides windows for program data. For making and testing instant fixes, the in-line assembler produces code for both the 8086/88 and 8087 chip sets. A breakpoint/trap feature allows you to set permanent and temporary breakpoints that halt processing when first met or after the iterations. Conditional breakpoints, based on a Boolean test, can also be set. The program supports trace and single-step features. *Pfix86 Plus* includes all the features of *Pfix86* and debugs overlays and accesses the symbol table when used with Phoenix's *Plink86*. List price: *Pfix86* \$245, *Pfix86 Plus* \$395. Requirements: 128K, two disk drives, DOS 2.00 or later version.

Phoenix Computer Products Corp.

1416 Providence Hwy. #220

Norwood, MA 02062

800/344-7200, 617/769-7020

Plink86

A two-pass linkage editor, *Plink86* accepts any object file conforming to the Intel or Microsoft format and outputs executable program files. The two-pass approach makes all information about program modules available before the output file is created, giving you greater flexibility in assigning memory addresses. To reduce program memory management, overlays can be specified with no modifications to the application program. *Plib86*, a library manager included as part of the *Plink86* package, lets you build libraries from scratch and add, delete, and merge existing libraries. List price: \$395. Requirements: 256K, one disk drive. Phoenix Computer Products Corp. 1416 Providence Hwy. #220 Norwood, MA 02062 800/344-7200, 617/769-7020

XenoFile for PC-DOS

Besides providing access to DOS disk files, *XenoFile for PC-DOS* includes a utility program that lets you convert DOS files into p-System files and vice versa. The interface also allows a program to open and close DOS files; create, read, and write DOS files; and access DOS directories. List price: \$50. Requirements: 64K, one disk drive.

SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Serial Printer Program

A utility that lets a PC send files to a serial printer, *Serial Printer Program* supports BASIC formatting, various line widths, paging, and form handling. Files are printed with name, date, and time. A translation table lets you convert any outgoing character string to any other string that you designate. The table also lets you lock in uppercase or lowercase characters and set bps rates and tab space lengths. *Serial Printer Program* supports data transfer rates of 75 to 9600 bps. List price: \$69.95. Requirements: 64K, one disk drive.

Personal Computer Products
1400 Coleman Ave. #C-18
Santa Clara, CA 95050
408/988-0164

Protect

A data security program, *Protect* encrypts files at speeds of up to 150K per minute. Written in assembly language, it can process any file read by DOS, including sequential or random files, ASCII or binary files, and files with or without end-of-file markers. The program supports DOS 2.00 and 2.10 subdirectories. It automatically deletes .BAK files and can be run from batch files. List price: \$39.95. Requirements: 64K, one disk drive.

D.A. Ritari and Associates
P.O. Box 65771
St. Paul, MN 55165

ProportionalStar

A utility that provides proportional spacing direct from *WordStar*'s print menu, *ProportionalStar* can be used with or without right justification. It also lets *WordStar* print proportionally in two or more columns. The program works with most letter quality printers. List price: \$75. Requirements: 64K, one disk drive. Writing Consultants

11 Creek Bend Dr.
Fairport, NY 14450
800/828-6293, 716/377-0130

"Installing and modifying ProportionalStar was a breeze. It is a wonderful utility to toy with." Carlene Char, Honolulu, Hawaii

"The manual contains so much information on printers and print wheels and thimbles that it's almost worth the price of the program itself." Roger Schlobin, Chesterton, Indiana

"The menus take you through the steps very easily, and most of the answers are obvious. No fuss, no muss. And the resulting printouts are just great, too." Donald R. Davis, Modesto, California

Protec

A security package for PC XT's and PCs with hard disks, *Protec* provides four levels of protection. Password entry verification ensures that only authorized users gain access to the system. The segregation of each person's files makes them inaccessible to other users. A subprogram, *Encryptor*, lets you protect files that are external to the hard disk. Boot protection prevents booting from drive A. The program includes a menu-driven file utility that replaces DOS's COPY and ERASE commands. Also included is a utility that makes the entire hard disk menu-driven. List price: \$350. Requirements: 128K, one disk drive, DOS 2.00 or later version. Sophco, Inc.
P.O. Box 7430
Boulder, CO 80306
303/444-1542

PolyMake

An enhanced version of the UNIX *Make* program for use with DOS, *PolyMake* rebuilds all or part of a software system when any module is changed. Working from rules stored in a modifiable text file, *PolyMake* keeps track of which files any given file depends on and can reconstruct them. The program checks the date and time of all relevant files, invokes the compiler, assembler, linker, and librarian, and does whatever is necessary to bring the software system up to date. List price: \$99. Requirements: 128K, one disk drive. Polytron Corp.
P.O. Box 787
Hillsboro, OR 97123
800/547-4000, 503/648-8595

ProKey 3.0

A utility that can assign sequences of commands and characters to any key in any shift state, *ProKey 3.0* offers over 300 special function keys. These super commands, or macros, can be used to input commands and control programs. You can save, edit, load, and print macros from standard ASCII disk files. Macros can contain fill-in-the-blank fields, names of other macros, and time delays. Since macros can be executed from a batch file, *ProKey 3.0* makes it possible to create turnkey systems. List price: \$129.95. Requirements: 64K, one disk drive. RoseSoft, Inc.
4710 University Way NE
Seattle, WA 98105
206/524-2350

"This is my favorite program. Used with batch files, it runs in the background at all times, switching ProKey files depending on the running program." John Julian, Pontiac, Michigan

"ProKey is the indispensable fix for software shortcomings. It turns WordStar into a tiger, makes 1-2-3's macros irrelevant, and acts as a constantly available toolbox. It saves me hundreds of key-strokes a day; I keep on finding ways to use it. Handicapped mode is a valuable option for the dexterously impaired." David A. Basskin, Toronto, Ontario, Canada

Prompt-Look

Since it is not an editor, *Prompt-Look* lets you display files on the screen with protection against inadvertent modification. You can page up or down within files and search for character strings. Files can be displayed in hexadecimal format or text. List price: \$25. Requirements: 64K, one disk drive.

Prompter Software Corporation
P.O. Box 1242
Los Altos, CA 94022
415/948-5321

ReadiScope

A diagnostic program, *ReadiScope* lets you test the operating condition of a disk drive, including rotational speed, without removing the drive from the computer. The program lets you check and adjust head and spindle alignment without special equipment or skills. List price: \$295. Requirements: 48K, one disk drive.

ReadiWare Systems, Inc.
P.O. Box 680
West Redding, CT 06896
203/431-3521

Peeks 'n Pokes for the IBM PC

A set of 58 utilities, *Peeks 'n Pokes for the IBM PC* lets you use DOS BIOS functions in BASIC and Pascal programs. The utilities let you access the system's configuration to read and change the status of the keyboard, the monitor, the printer, the disk, and the communications board. You can also make BIOS function calls perform such tasks as printing the screen, booting the system, changing the default drive, scrolling the screen up or down, and changing the date and time. Other functions clear the screen, swap monitors, generate sound, pass data from one program to another, save current memory to disk, and compare the contents with another "memory map" to identify other PEEK and POKE functions. For Pascal programmers, *Peeks 'n Pokes for the IBM*

PC includes assembly subroutines that perform the same functions as the BASIC PEEK, POKE, INP, and OUT functions. List price: \$30. Requirements: 48K, one disk drive.

Data Base Decisions
4 Bonnie Ln.
Atlanta, GA 30328
404/256-3860

PC-Care

A menu-driven test system, *PC-Care* is designed to check for conditions that could result in catastrophic data loss on single-user or multiuser systems. The program provides continuous visual feedback as tests progress. *PC-Care* reports errors in video and main computer memory, both graphically and by address. If the program finds a bad sector on a hard disk, it moves the data to a good sector. The floppy disk drive check reports on head alignment, read signal amplitude, and other functions. The program also tests printer integrity and keyboard operation. List price: \$99. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Award Software Inc.
236 N. Santa Cruz Ave.
Los Gatos, CA 95030
408/395-2773

PC Accelerator

A print spooler and disk emulation program, *PC Accelerator* lets you use the computer for other tasks while printing. Spooling is limited to use with parallel printers. The program emulates a disk drive by reserving a portion of the computer's memory for file storage. List price: \$49.95. Requirements: 64K, one disk drive.

STB Systems
601 N. Glenville
Richardson, TX 75081
214/234-8750

PC/Format

An interactive screen formatter, *PC/Format* helps define screen displays while controlling and editing keyboard data entry. A format definition language controls screen formats. *PC/Format* works with COBOL, FORTRAN, BASIC, Pascal, and Macro Assembler and supports all 256 color attributes. Fields can be defined as prompt, fixed constant, general alpha, integer, numeric, and signed numeric. *PC/Format* supports concurrent multiple format displays and includes full cursor control. List price: \$125. Requirements: 64K, one disk drive.

Persyst
17862 Fitch
Irvine, CA 92714
714/660-1010

p/DOS

A run-time p-System interface for DOS, *p/DOS* lets software developers run UCSD Pascal applications transparently under DOS. The program lets p-System programs read and write DOS files directly. Requirements: with DOS 1.10 128K, with DOS 2.00 or later version 192K, one disk drive. Advanced Data Institute of America, Inc. 1215 Howe Ave. Sacramento, CA 95825 916/925-2229

PC-Screen Saver

Designed to reduce damage to video monitors caused by continuous display of menus and text, *PC-Screen Saver* disables the display when the system has been idle for a time period of 1 minute to 1 hour. The program becomes an extension of DOS after being run once when the system is loaded and remains active until the system is shut off or DOS is reloaded. *PC-Screen Saver* can be included in an AUTOEXEC batch file for installation at system start-up. List price: \$19.95. Requirements: occupies 4K of RAM. Distributed Software Systems, Inc. P.O. Box 1301 Northbrook, IL 60062 312/634-1511

Omniscreen

A software development tool for managing screens, *Omniscreen* supports all screen attributes, such as inverse video and full color. The menu-driven screen formatter is a stand-alone program that lets you interactively design screens, each of which is a DOS file. Each data entry field can be assigned 1 of 12 edits (such as numeric) and four controls (such as right justification). The memory-resident screen handler controls screen processing through 31 calls and features automatic data entry editing and support for the cursor-control, <Home>, <End>, <PgUp>, <PgDn>, and <Tab> keys as well as 40 function keys. *Omniscreen* supports floppy and hard disk systems and works with Microsoft Assembler, COBOL, Pascal, compiled and interpreted BASIC, FORTRAN, and Lattice C. List price: \$249. Requirements: 128K, one disk drive.

Omnisoft Associates
6917 12th Ave.
Brooklyn, NY 11228
212/680-3259

PC File Utilities

Designed to improve programmer productivity, *PC File Utilities* include a utility that lets programmers display, list, or edit data stored in random access files by typing the file specifications. The data is then displayed with record positions appearing across the top of the screen or the printout, followed by the record number and contents. A compress utility lets you recreate files with undesirable records removed or create subsets of files. Another utility can display 20 characters of a record at a time in character, hexadecimal, ASCII, or bit format. Other utilities display disk contents, switch printer ports, and change character sets. List price: \$50. Requirements: 64K, one disk drive.

Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Print Mate

A memory-resident program, *Print Mate* lets you access the system's printer with a one-key command. You can use the computer and printer as a typewriter without leaving the program you are using. *Print Mate* lets you select typeface styles and specifications depending on the type of printer you are using. The Scrolling Typewriter mode prints text one line at a time. In the Composition mode a letter-size area becomes available on the screen. Text can be typed in directly or retrieved from the original application using a cut-and-paste method. List price: \$99.95. Requirements: occupies 12K of RAM.

Photon Software
636 120th Ave. NE
Bellevue, WA 98005
206/451-8272

PolyLibrarian

For any compiler or assembler that uses IBM or Microsoft linkers, *PolyLibrarian* creates a single library from related object modules. It examines, reorganizes, and compresses existing code libraries and provides mainframe librarian features. Modules can be added to or deleted from a library, and public names within a module can be listed or changed. List price: \$99. Requirements: 128K, one disk drive.

Polytron Corp.
P.O. Box 787
Hillsboro, OR 97123
800/547-4000

Opt-Tech Sort

An assembly language sort-and-merge program, *Opt-Tech Sort* can be run as a DOS command or called as a subroutine from many languages, including BASIC, COBOL, FORTRAN, C, Pascal, *dBASE II*, and assembly language. The program can simultaneously sort up to ten files of any size or record length. Variable- and fixed-length data can be sorted using up to nine key fields. *Opt-Tech Sort* supports all data types, and ascending or descending order can be specified. List price: \$99. Requirements: 64K, one disk drive.

Opt-Tech Data Processing
P.O. Box 2167
Humble, TX 77347
713/454-7428

Qusort

A utility that sorts records in memory, *Qusort* stores the results in memory or on disk. The program can sort 1600 records in 15 seconds on keys up to 255 characters long and handles up to 8 million records. *Qusort* can be incorporated into application programs without a large addition to the code. List price: \$35. Requirements: 64K, one disk drive.

Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

PCDOS Bubble

Using *PCDOS Bubble*, you can run a mix of DOS and UCSD p-System programs under DOS. The programs can read and write standard p-System format disks and share data files. *PCDOS Bubble* lets you tie p-System programs to the large number of DOS software packages and allows p-System programs to communicate with system hardware through DOS to access peripheral devices such as hard disks and serial ports. The program contains the UCSD p-System with a Pascal compiler. List price: \$875. Requirements: 128K, one disk drive.

Datalex Co.
650 Fifth St. #406
San Francisco, CA 94107
415/541-0780

RAM Driver 2.0

A disk emulation program, *RAM Driver 2.0* lets the computer use a portion of RAM as if it were a high-speed disk drive. The emulated disk can range in size from 10K to 360K and can be set up to match any of IBM's four supported formats: single-sided 160K or 180K or double-sided 320K or 360K. More than one drive can be emulated in memory. The program does not require a specific memory board or special switch setting and does not modify DOS. List price: \$39. Requirements: 64K, one disk drive, DOS 2.00 or later version.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

Disk Clean-Up Utility

A program that selectively purges files from disks, *Disk Clean-Up Utility* displays each file name on disk and asks if the file should be erased. The program erases files included in root directories or subdirectories on floppy disks or hard disks. List price: \$19. Requirements: 64K, one disk drive.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

Sort Directory Utility

Designed to facilitate finding file names, *Sort Directory Utility* reads directory information from a disk, sorts the information, and writes it back to the disk. DOS's DIR command will then display the directory in sorted order. The directory can be sorted by file name, file name extension, file creation date and time, or file size. The program moves space from previously deleted entries to the end of the directory. It sorts root directories and subdirectories on either floppy or hard disks. List price: \$29. Requirements: 32K, one disk drive.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

Quikey

A utility that redefines any key on the keyboard, *Quikey* lets you assign up to 500 characters to a single keystroke. It runs as a transparent background program while you use a word processor, a spreadsheet, or another program. Keystroke redefinitions can be saved as disk files, allowing you to store custom keyboard definitions for specific applications. List price: \$79. Requirements: occupies 10K of RAM.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

SPF/editor

Emulating the IBM Mainframe ISPF editor, *SPF/editor* includes full-screen panels to expedite program editing. The utility offers DOS 2.00 path support, making it possible to edit files in any directory as well as execute from any path directory. Also included are EBCDIC and ASCII hex commands, a split-screen function, and sophisticated memory management routines. List price: \$100. Requirements: 192K, one disk drive, DOS 2.00 or later version.

Phaser Systems, Inc.
24 California St.
San Francisco, CA 94111
415/434-3990

SuperPak

The two utilities that make up *SuperPak* can be purchased separately from AST Research's line of hardware products. SuperDrive is a disk emulator that creates up to four disk drives in the computer's memory. You can define the sizes of user memory and emulated disks and restrict drive operation to specific areas of memory. SuperSpool lets you use a printer and run other programs at the same time. A simple command sequence lets you specify printer ports as well as bps rates and line conditions. You can control the size of the spool buffer and its location in memory. List price: \$45. Requirements: 128K, one disk drive.

AST Research Inc.
2121 Alton Ave.
Irvine, CA 92714
714/863-1333

Sign-Plot

A menu-driven plotter program, *Sign-Plot* produces six typeset-quality fonts that include uppercase and lowercase, punctuation, and numbers. Text can be positioned horizontally and vertically in increments of fractions of an inch. *Sign-Plot* works with many pen plotters. List price: \$149. Requirements: 128K, two disk drives. Centerpoint Computer Applications
500 N. Michigan Ave.
Chicago, IL 60611
312/467-0333

Auto-Mac

A utility that helps you create 1-2-3 keyboard macros, *Auto-Mac* saves sequences as you run 1-2-3 and later outputs them as macros. A Quick Write mode speeds up the manual writing of keyboard macros. List price: \$79. Requirements: occupies 2K of RAM.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

On-Line Help Utility

With over 50 help screens, *On-Line Help Utility* displays instructions on and examples of how to use DOS 2.00 and 2.10 commands and features. The program displays a list of help files when you type HELP. When you provide the name of a command, the program displays information on the command. *On-Line Help Utility* is copied onto the DOS disk, where it occupies 80K. List price: \$39. Requirements: 64K, one disk drive, DOS 2.00 or later version.

DataSource Systems
7450 Washington Ave. S
Eden Prairie, MN 55344
800/328-2260, 612/944-5113

RamDisk II

A disk emulator, *RamDisk II* can use up to 180K of RAM as file storage space. The program includes RC Spooler, a multiple-port print buffer that spools copy for up to four printers simultaneously. RC Spooler has a buffer of up to 63K and supports both parallel and serial printers in any combination. The spooling utility allows cancellation of an ongoing print operation. List price: \$59.95. Requirements: 256K, one disk drive, DOS 2.00 or later version.

Rensin Communications
P.O. Box 414
College Park, MD 20740
202/728-7955

Super Screen Editor

A full-screen editor for programs, *Super Screen Editor* uses simple keystroke commands and has a two-line menu at the top of the screen. The menu changes according to the command selected. Functions include insert, exchange, substitute, undo, automatic line numbering, split screens, macros, file encryption, tag and jump to as many as ten locations, four-way scrolling, list or search lines, and help screens. List price: \$99. Requirements: 128K, one disk drive.
Binary Corp.
4091 126th Dr. N
Royal Palm Beach, FL 33411
305/798-3100

ScrollMate

By adding off-screen scrolling memory to DOS, *ScrollMate* saves lines that otherwise would be lost. Ordinarily, when the screen is full, DOS scrolls the display up one line, and the top line disappears. With *ScrollMate* these lines are saved in an internal buffer, available for recall on command. You can scroll the screen up or down, a line or a page at a time, and as many as 14 screens can be kept on line. *ScrollMate* works with DOS commands and programs but not with BASIC. All saved lines can be printed or written to a file. List price: \$69.95. Requirements: 128K, one disk drive.
Inner Loop Software
5456 McConnell Ave. #120
Los Angeles, CA 90066
213/822-2800

Screen Design Aid

Using *Screen Design Aid* you can create screen displays and BASIC code for data input. You type the design, field titles, and pairs of brackets to mark field sizes. The resulting screen displays and BASIC statements are created automatically and saved for incorporation into programs. *Screen Design Aid* also prints a hard copy of each screen showing input-field locations

and sizes. Screen displays can be recalled and changed. You can use existing screens as templates for new screens. List price: \$35. Requirements: 64K, one disk drive.
Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Screen Generator

Designed to help programmers create screens for text and data entry, *Screen Generator* is menu driven and uses simple commands. Screens are recorded as files on disk for incorporation into application programs. You can change screens without altering the program code and can store up to 50 screen formats in a library. List price: \$125. Requirements: 96K, one disk drive.
K & S Systems
P.O. Box 643
Drexel Hills, PA 19026
215/789-0670

Sounds

A collection of programs, *Sounds* simplifies sound reproduction and simulation for incorporation into programs. When used with a color monitor and a light pen, the program plots new sounds by frequency and automatically generates the BASIC program statements needed to reproduce the sounds. List price: \$30. Requirements: 64K, one disk drive, color graphics board, light pen.
Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

Screen Design Program

With a blank screen and *Screen Design Program*, you can design an input/output screen with literals and fields, coding additional attributes for each. Depending on which module you purchase, *Screen Design Program* generates either a BASIC or a COBOL source program. The BASIC module has a field-handling routine that

allows field-to-field movement on the generated screen. The COBOL module generates Microsoft COBOL source code through the screen section. You can make several screens and modify them before incorporating them into a program. List price: \$100. Requirements: 64K, one disk drive.
Delta Software Systems, Inc.
2221 Thornwood Ln.
Memphis, TN 38119
901/755-4063

Talking Computer Programs

A set of utilities that let you incorporate voice recordings into BASIC programs, *Talking Computer Programs* allow 1- to 7-second messages. A cassette recorder puts messages on disk, and the computer's internal speaker reproduces the messages. A cassette interface, an external speaker, and an amplifier increase volume and clarity. The programs require seven Advanced BASIC statements to add voice output to a program. *Talking Computer Programs* run only on the IBM PC. List price: \$32.95. Requirements: 64K, two disk drives, cassette tape recorder interface cable, cassette recorder.
A. L. Cassel Computing Enterprises
P.O. Box 970
Smyrna, GA 30081

TimePiece

A program that converts the PC into a clock, *TimePiece* displays the current date, time, and day of the week. The program lets you find the time at any location by entering its telephone area code. Other features include a choice of analog or digital display, countdown and elapsed time displays, a calendar, and six alarms, each of which can contain a different message. List price: \$34.95. Requirements: 128K, one disk drive.
TechArt
1552 Sacramento St.
Berkeley, CA 94702
415/525-0870

Exec

A change in programming language preference can be accommodated by using *Exec* to chain application programs written in different languages. Any language that uses the DOS loader can be chained. One program at a time is resident to optimize memory use, and a common data area can be specified. The *Exec* package consists of a program chaining monitor and a library of chaining functions. List price: \$95. Requirements: occupies 8K of RAM.

Blaise Computing, Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

Textra Jr.

A full-screen programming editor, *Textra Jr.* offers full cursor movement and commands for insert, overstrike, delete, copy, move, search, and replace. Advanced commands include undelete and a shift command that helps with frequent indentation in high-level languages. *Textra Jr.* reads and writes ASCII and works with all compilers, assemblers, and the IBM BASIC interpreter. List price: \$39.95. Requirements: with DOS 1.00 and 1.10 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive.

Ann Arbor Software
407 N. Main
Ann Arbor, MI 48104
313/769-9088

"Textra Jr. is a terrific little program-oriented text editor. Small enough at 41K to fit on most applications disks, it still manages to provide quite comprehensive editing features. Especially appreciated is a thoughtfully implemented, menu-driven command structure that makes the program a snap to use even after a few weeks absence yet is remarkably unobtrusive in day-to-day use." Michael Thomas, Evanston, Illinois

"It has never bombed on me, unlike others I have used. Conclusion: a sensational value." Jay B. Hann IV, Oakland, California

Softspool

A software spooler program, *Softspool* sends data to the printer while the computer executes another program. You can modify the size of the spool buffer and print up to six different documents with a variable number of copies of each. List price: \$59.95. Requirements: 48K, one disk drive.

Rickerdata, Inc.
P.O. Box 998
Melrose, MA 02176
617/662-0856

Typ/Prt

By sending keyboard input directly to the printer, *Typ/Prt* lets you use the computer and printer as a typewriter. On-screen data can also be captured to disk. The program lets you switch back and forth to other programs and contains a six-function calculator with a three-column limit. List price: \$17.95. Requirements: 64K, one disk drive.

Contract Services Assn.
706 S. Euclid
Anaheim, CA 92802
714/635-4055

Universal Report Facility

Designed to help inexperienced programmers, *Universal Report Facility* generates a universal report writer in BASIC. With the resulting program you can create customized reports on stock paper, labels, or the screen. You can place fields on a report in any order across the page, create reports with variable column widths, sort reports on any field, and exclude records that lie outside upper or lower limits. List price: \$150. Requirements: 128K, one disk drive.

Fogle Computing Corporation
357 E. Blackstock Rd.
P.O. Box 5166
Spartanburg, SC 29304
803/574-4950

UT-86

The four utilities in *UT-86* are Copyfile, D, Patch, and Print. Copyfile duplicates existing files on the same or different disks and lets you change file names. The D utility provides a sorted full or partial directory of files on disk and of file sizes. It also provides a summary of disk space usage, including hidden and system files. Patch lets you examine and modify records from files. You can open, close, type, rename, erase, create, extend, or search files. Print is a general-purpose utility that prints multiple files according to specifications such as page height, lines per page, left margin width, tab expansion width, parity strip, and page headings. List price: \$115. Requirements: 64K, one disk drive. Dynamic Microprocessor Associates
545 Fifth Ave. #1103
New York, NY 10017
212/687-7115

8086 O.S. Converter

A program that lets CP/M-86 programs run under DOS and vice versa, *8086 O.S. Converter* is available in two versions. The CP/M-86-to-DOS version includes a utility that lets DOS read disks formatted under CP/M-86 for direct disk-to-system transfer. The DOS-to-CP/M-86 version requires using a communications program or other method of file transfer to make object files accessible to the CP/M-86 operating system. List price: \$115. Requirements: 48K, one disk drive. Dynamic Microprocessor Associates
545 Fifth Ave. #1103
New York, NY 10017
212/687-7115

SR-Lib

Designed to help create and maintain object library files compatible with the DOS linker, *SR-Lib* can add, delete, and replace object modules. Libraries can be used with those supplied with IBM compiler packages. List price: \$29.95. Requirements: 64K, one disk drive. Software Research
P.O. Box 10004
Austin, TX 78766
512/346-5097

Pascal Tools

Six compiled Pascal units make up *Pascal Tools*. The units provide screen-handling functions, including cursor movement and attribute setting. You can create windows and scroll text within the windows with a single procedure call. An assembly language routine lets you access BIOS functions. The six units are BASIC Intrinsic Functions, which generates random numbers; String Functions, which extracts the left-most character of a string; Screen Handling, which scrolls text within a specified window; Fast Forms Utility, which clears the screen; Graphics Interface; and Application Routines, which display a prompt and accept a yes or no response. Source code is included. List price: \$125. Requirements: 128K, two disk drives, Pascal compiler.

Blaise Computing Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

Pascal Tools 2

A set of utilities that let programmers use the advanced functions of DOS 2.00 and later versions, *Pascal Tools 2* features program chaining, memory management, and extended file-handling capabilities. Utilities that set and read dates, inspect and maintain directories, and report disk space allocation are also included. With *Pascal Tools 2*, a Pascal program can invoke and run other programs, DOS commands, and batch files and return control to the Pascal program upon completion of the task. Directory maintenance routines perform such functions as creating and deleting subdirectories and changing current directories. Source code is included. List price: \$100. Requirements: 128K, two disk drives, DOS 2.00 or later version, Pascal compiler.

Blaise Computing Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

Windrive

A program that provides software support for hard disks, *Windrive* lets you use up to four hard disks, each divided into as many as 16 volumes, on one machine. *Windrive* supports the use of local area networks for sharing one or more hard disks. The program is an installable device driver, so it is compatible with virtually all other software. *Windrive* works with most hard disks. List price: \$60. Requirements: 64K, one disk drive, DOS 2.00 or later version.

Tall Tree Systems
1032 Elwell Ct. #124
Palo Alto, CA 94303
415/964-1980

87Debug

A debugger for the 8087 coprocessor, *87Debug* lets you watch the 8087 as your code executes, display and set 8087 registers, and display and enter real numbers stored in memory. Using the debugger's screen-oriented macro processing language, you can create your own trace commands. During tracing the instructions scroll up on the screen while the values in the registers and stack change places. The program lets you avoid tracing through subroutine calls and interrupts. Breakpoints can be set in code or on guarded addresses in RAM. List price: \$150. Requirements: 128K, one disk drive, 8087 coprocessor.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

87BASIC/IL

A program that generates in-line 8087 code, *87BASIC/IL* transforms the compiler output into an accurate assembly language representation of your program. All calls to floating point library routines in the assembly translation are replaced by in-line 8087 code, which typically runs five times faster than code called from libraries. The code is then assembled and linked. *87BASIC/IL* includes two sets of libraries that allow in-line or library floating-point calls, and it contains all the fea-

tures of 87BASIC. List price: \$200. Requirements: 128K, one disk drive, IBM BASIC Compiler, IBM or Intel Macro Assembler, 8087 coprocessor.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

Virtual Screen Interface

A run-time library of subroutines, *Virtual Screen Interface (VSI)* helps programmers put windows in their application programs without requiring a graphics board. The system supports multiple virtual screens, each of which can have 255 rows or columns, any of several types of borders, and a priority, which determines where the window appears in relation to other windows. *VSI* lets you treat the physical screen as a series of logical screens. Each screen can be written to or read from. Interfaces are available to Microsoft Assembler, Microsoft or Lattice C, Compiled BASIC, FORTRAN, Pascal, Realia COBOL, and the Digital Research family of languages. *VSI* provides internal diagnostics and numerous source code examples. List price: single-user, single-site object code license \$295, object code interfaces \$195 each. Requirements: 128K, one disk drive.

Amber Systems, Inc.
1171 S. Saratoga-Sunnyvale Rd.
San Jose, CA 95129
408/996-1883

Vdisk

A utility that lets the PC format, read, and write information on disks for use by non-IBM microcomputers, *Vdisk* supports most 5¼-inch double-density disk formats. The menu-driven program uses an enhanced version of CP/M-86, which is included. Some formats, such as the DEC format, may require 80-track disk drives. List price: \$850. Requirements: 64K, two disk drives.

CompuView Products, Inc.
1955 Pauline #200
Ann Arbor, MI 48103
313/996-1299

PC Padlock

A utility that protects against unauthorized copying of compiled or interpreted programs, *PC Padlock* installs a "fingerprint" on blank disks. Protected programs can be backed up on disks that lack the fingerprint. The backup copies will not run but can be recopied onto fingerprinted disks, which will run. Programs to be encrypted require one extra line of code. Hard disk applications are also supported. List price: \$99. Requirements: 64K, one disk drive.

Glenco Engineering
3920 Ridge Ave.
Arlington Heights, IL 60004
312/392-2492

Data Padlock

A program that encrypts data files, *Data Padlock* uses the National Bureau of Standards' DES algorithm. An 8-character password is used as the key. The program includes Destroy File, Hex Key, Verify, and Checksum utilities. You can run the program twice with the same password to "double encrypt" a file. List price: \$150. Requirements: 64K, one disk drive.

Glenco Engineering
3920 Ridge Ave.
Arlington Heights, IL 60004
312/392-2492

87BASIC +

A set of callable primitive functions that allow you to operate the 8087 coprocessor directly, *87BASIC +* extends the capabilities of 87BASIC. The program generates in-line 8087 code, taking advantage of the 80-bit precision (19 significant decimal places) of the 8087, and accesses complex 8087 functions that have no counterparts in BASIC. To use the program, you must be familiar with the 8087 instruction set. List price: \$75. Requirements: 64K, one disk drive, 87/88 Guide, 8087 coprocessor, IBM BASIC Compiler, 87BASIC.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

View Manager

A screen management system, *View Manager* reduces development time for Pascal programs. The system automates screen design and controls data capture with simple procedure calls. Screens have up to 255 fields, and an unlimited number of screens can be stored in a data base and displayed. View/Screen lets you create screens interactively and maintain the screen data base. View/Document documents screens that have been created, and View/Library invokes screens and reports on the data entered. List price: \$275, with source code \$425. Requirements: 128K, two disk drives, Pascal compiler.

Blaise Computing Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

"The flexibility this program adds to the ability to design and tailor human-machine interfaces is incredible. The calls provided for Pascal programs let you change the appearance of an application program without changing a line of code. Help-screen support and function-key masking make it possible to create user applications that take full advantage of the block mode of input." Stephen Decatur, Dallas, Texas

V-Utility

A collection of menu-driven utilities, *V-Utility* works with 1-2-3, *Multiplan*, *SuperCalc*, and *VisiCalc*. The utilities include V-sort, V-print, V-stat, V-graph, and V-plot. *V-Utility* sorts columns numerically and alphabetically and lets you select columns to print. It also provides complete statistical analysis and plotting of spreadsheet data. V-graph creates bar charts, line plots, pie charts, and scatter plots on screen. V-plot does not require a graphics printer. List price: \$129.95. Requirements: 64K, one disk drive.

Yucaipa Software
12343 12th St.
Yucaipa, CA 92399
714/797-6331

Wait-Less Printing 3.00

You can print files while using the PC for other tasks with *Wait-Less Printing 3.00*, which starts up manually or automatically without any loss of data. A beep indicates printer readiness. The program controls automatic form feed, and the buffer can hold several print jobs. *Wait-Less Printing 3.00* can be used with parallel and serial printers. List price: \$50. Requirements: 64K, one disk drive.

Persyst
17862 Fitch
Irvine, CA 92714
714/660-1010

Sort/Merge

A utility that sorts fixed- or variable-length records, *Sort/Merge* handles records of up to 510 characters. Its Memory Sort option is for files of less than 1000 records, and Workfile Sort is for larger files. The package includes *Fast Sort/Merge*, a slightly modified version of *Sort/Merge* that runs several times faster but requires more RAM. List price: \$49.95, optional source code \$15. Requirements: *Sort/Merge* 64K, *Fast Sort/Merge* 128K, one disk drive.

Personal Software Company
P.O. Box 776
Salt Lake City, UT 84110
801/943-6908

Systran, Transys

A utility that allows a CP/M-86 system to read and write DOS disks, *Systran* can also transfer multiple and wild-card files. Its commands are analogous to the CP/M commands DIR, ERA, TYPE, and PIP. Similarly, *Transys* lets a DOS system read and write CP/M and CP/M-86 disks. Its commands are analogous to the DOS commands DIR, DEL, TYPE, and COPY. List price: each program \$120. Requirements: 64K, two disk drives, for *Systran* CP/M-86, for *Transys* DOS. CompuView Products, Inc.
1955 Pauline Blvd. #200
Ann Arbor, MI 48103
313/996-1299

Obj-Asm

A multipass object module translator and disassembler, *Obj-Asm* converts object modules into readable form and builds an assembly language listing. The listing contains the same symbolic information as the source object module and includes data and code segments and Assume statements. *Obj-Asm* is based on the Intel 8086 Object Module Format specifications. List price: \$200. Requirements: 64K, one disk drive.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

Menu Design Aid

Providing an unlimited number of menu selections, *Menu Design Aid* displays up to 20 selections per screen. It features a confirmation screen that displays options individually after selection. Menus have highlighted titles and user instructions. You can enter file specifications and run the program by chaining, even if the file is not a menu selection. The program includes a completed sample menu and instructions for modifying it. List price: \$15. Requirements: 16K, one disk drive.

Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

MS-DOS EMACS

A full-function Gosling EMACS, *MS-DOS EMACS* includes full-screen editing and multiple windows, allowing several files to be edited simultaneously. The compiled MLISP programming language is built in. The program also features search and replace commands and programming aids such as automatic indenting and parenthesis checking. List price: \$375, source code \$995. Requirements: 384K, one disk drive.

UniPress Software, Inc.
2025 Lincoln Hwy. #312
Edison, NJ 08817
800/222-0550, 201/985-8000

Keyswap 3.0

Running transparently, *Keyswap 3.0* lets you define macros at any time. The program condenses keystrokes and lets you customize the keyboard. You can specify a macro buffer of up to 364K. Features include a macro editor, an on-line help and status menu, on-line macro listings, and the ability to design help menus and windows. *Keyswap's* 24 command functions include fixed and variable field input and time delay on macro playback. List price: \$119. Requirements: 48K, one disk drive.

Rickerdata, Inc.
P.O. Box 998
Melrose, MA 02176
617/662-0856

Forms-2

A COBOL programming tool, *Forms-2* speeds the creation of programs with interactive screens. The program lets you paint the form on the screen as you want it to appear at run time. *Forms-2* generates the appropriate COBOL source code. List price: \$195. Requirements: 128K, two disk drives, COBOL.

Micro Focus
1860 Embarcadero Rd. #235
Palo Alto, CA 94303
415/856-4161

Forms Shell

By presenting DOS functions in menus, *Forms Shell* lets you use the operating system without typing any commands. The program also provides help screens, file utilities, and definable menus. List price: \$65. Requirements: 128K, one disk drive, DOS 2.00 or later version.

BIT Software, Inc.
1048 Nicklaus Ave.
Milpitas, CA 95035
408/262-1054

FTX

A full-screen editor for program development and documentation, *FTX* is designed for PC text files. The program includes block commands to copy, move, or gather several lines of text for insertion in either the same file or other files. List price: \$65. Requirements: 64K, one disk drive.

Probity, Inc.
2217 Morcambe Bay
New Lenox, IL 60451
815/485-3493

Genu

A menu-driven utility for the PC XT, *Genu* supports both floppy and hard disks. It displays sorted directories, changes volume identifications, displays files or single sectors with an option to change, and searches files and absolute sectors. Other functions include file hide and unhide, file erase and recover, file print, and file rename. List price: \$45. Requirements: 64K, one disk drive.

Probity, Inc.
2217 Morcambe Bay
New Lenox, IL 60451
815/485-3493

FOR-BAS

A library of interface routines, *FOR-BAS* lets Microsoft FORTRAN programs call the IBM BASIC Compiler library and screen primitives. Commands include Circle, Inkey, Line Pset, Preset, Random Number Generator, Sound, and Screen. Other features include scroll screen, shift screen left or right, clear screen in text or graphics mode, locate cursor, and return cursor position. List price: \$150. Requirements: 256K, one disk drive, 8087 coprocessor, IBM BASIC Compiler, Microsoft FORTRAN Compiler.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

Easyscreen/PC, KSAM/PC

Programmers can use *Easyscreen/PC* as an application development tool, and nonprogrammers can use it as a filing and reporting system. The program lets you draw screen layouts for processing data in block mode, allowing free cursor movement and data input. Features include multiple data types, screen attributes, screen overlays, simple windowing, and screen processing interrupts. You can use the screens in BASIC programs or with the data base program to add, delete, inquire, browse forward or backward, and update the data base. Also included is a data reporting and mailing label utility.

Easyscreen/PC includes Prodata's *KSAM/PC* data access program, which provides keyed or indexed file access from Microsoft BASIC. *KSAM/PC* allows partial or generic key lookup, duplicate keys, and multiple key files. The key field can be up to 249 bytes, and data records can be up to 32K. A disk-based key file minimizes memory requirements for large files, such as those on hard disk. List price: *Easyscreen/PC* \$189.95, *KSAM/PC* \$89.95. Requirements: with DOS 1.10 64K, with DOS 2.00 or later version 128K, one disk drive. Prodata Inc. 4477 Emerald #C-100 Boise, ID 83706 203/342-6878

EM80/86

Using *EM80/86* you can run programs written for CP/M-80 on systems with 8086/8088 processors. After transferring 8080 object files to an 8086 system, you invoke the emulator and specify the program object file and any optional parameters used with the 8080 system. Programs that interact primarily with system peripherals run at speeds equivalent to those of the original 8080 system. Programs that perform internal processing run more slowly. List price: \$115. Requirements: 64K, one disk drive. Dynamic Microprocessor Assoc. 545 Fifth Ave. #1103 New York, NY 10017 212/687-7115

BASTOC

Using *BASTOC* you can translate programs from BASIC to C. The conversion helps you maintain and enhance the programs by using software development tools available for most UNIX and UNIX-like operating systems. MBASIC is the default version of BASIC used by *BASTOC*, but you can convert other versions of BASIC by editing a configuration file supplied with the program. In addition to converting programs to C, *BASTOC* also functions as a BASIC compiler when used with a C compiler. The conversion program is implemented in modules with more than 36 options. List price: \$350. Requirements: 128K, one disk drive.

JMI Software Consultants, Inc.
1422 Easton Rd.
Roslyn, PA 19001
215/657-5660

dEnhancer

A series of *dBASE II* programs, *dEnhancer* lets you manipulate *dBASE II* data files without programming. The package is made up of a report generator, a program that provides statistical results from data files, a program that modifies the contents of files according to various selection criteria, and a printer selection menu. *dEnhancer* is menu-driven and includes source code. It can be executed from any *dBASE II* application or as an independent system. List price: \$39.95. Requirements: 128K, one disk drive.

Informative Software
33 Andover Ln.
Hicksville, NY 11801
516/822-2377

DPATH

System-resident *DPATH* makes data files not in the current directory accessible to running programs. It is written in assembly language, functions similarly to the DOS 2.00 PATH command, and includes a path maintenance utility. List price: \$25. Requirements: 64K, one disk drive, DOS 2.00 or later version.

Personal Business Solutions
P.O. Box 757
Frederick, MD 21701
301/865-3376

Backup

A utility for backing up a hard disk onto floppy disks, *Backup* saves only those files that have been modified since the last backup, minimizing the number of floppies required. The program supports quad-density floppy disks. List price: \$75. Requirements: 128K, hard disk, DOS 2.00 or later version.

PCX
21941 Cayuga
Lake Forest, CA 92630
714/951-8320

A.K.A. Alias Utilities

To organize disks *A.K.A. Alias Utilities* provides application programs with invisible access to overlays and files beyond the current default directory. Applications can run from any directory on the system without modification. Path names are not required for programs to find supporting files, which need not be duplicated throughout the system. *A.K.A. Alias Utilities* includes other disk utilities. List price: \$60. Requirements: 64K, one disk drive, DOS 2.00 or later version.

Soft Shell Technology, Inc.
54 Walnut Hill Rd.
Newton, MA 02159
617/332-8186

Convert

Without using modems or other external hardware, *Convert* lets a computer operating under DOS read, write, and format over 30 types of CP/M disks. You can copy files between formats, delete files, display disk directories, format CP/M disks, and define up to ten additional CP/M formats. To use *Convert*, you place a CP/M disk in one drive and a DOS disk in another drive and select a function from a menu. If a problem occurs, *Convert* displays recommended corrections. List price: \$99. Requirements: 64K, two disk drives.

Selfware, Inc.
3545 Chain Bridge Rd.
Fairfax, VA 22030
703/352-2977

CLIB C Function Library

Comprising over 100 routines that extend the capabilities of C, *CLIB C Function Library* is available for the DeSmet C88 compiler, Microsoft C, Lattice C, and other C compilers. Routines in the library handle screen and cursor I/O, keyboard testing, system date and time I/O, string and bit-field manipulation, degree and radian conversions, inverse trigonometric functions, and hyperbolic functions. *CLIB* also includes functions to convert floating-point numbers from Microsoft to 8087 NDP format and vice versa. List price: \$145. Requirements: 128K, two disk drives.

Vance Info Systems
2818 Clay St.
San Francisco, CA 94115
415/922-6539

ABM Personality Pack

A disk emulator and print spooler, *ABM Personality Pack* can create single or multiple electronic disks in RAM. The emulated disks can be configured to match either eight- or nine-sector formats with storage of from 32K to 320K or from 36K to 360K, respectively. The print spooler provides either a 32K or a 64K buffer for queuing documents. List price: \$39. Requirements: 64K, one disk drive.

ABM Computer Systems
3 Whatney
Irvine, CA 92714
714/859-6531

Clist

Designed to print out C language source code, *Clist* gives you pagination and titling control, variable tab expansion, and specialized printer commands. To aid debugging, *Clist* can merge link map information with the listing. A variable cross-reference feature aids maintenance. List price: \$45. Requirements: 64K, one disk drive.

Programming Concepts, Inc.
40 Orville Dr.
Bohemia, NY 11716
516/567-3167

Compiler Assist Program

For programmers developing applications using Pascal compilers or the IBM Macro Assembler, *Compiler Assist Program* (CAP) analyzes the results from PAS1 and PAS2, setting the DOS ERRORLEVEL after each. This allows a .BAT file to check the ERRORLEVEL from one step before continuing to the next. When errors are found, compiler screen output is "locked" on the display until examined. The .BAT file prompts for the desired action in case of a PAS1 or PAS2 failure. List price: \$27.50. Requirements: for IBM Pascal Compiler or Microsoft Pascal Compiler 128K, two disk drives, DOS 2.00 or later version; for IBM Macro Assembler 96K, one disk drive, DOS 2.00 or later version.

Slick Software
P.O. Box 641
Harrisburg, NC 28075
704/455-5927

BASIC Cross Reference Facility

After displaying a program's name and date, *BASIC Cross Reference Facility* formats the program and displays it with the number of bytes in the ASCII file. The utility finds all literal variables in the program, alphabetizes them, and displays a numbered list of variables, the number of lines in the ASCII program, the elapsed run time, and the date the program was run. *BASIC Cross Reference Facility* also displays the program's variables and a line number cross-reference for any single variable or list of variables. List price: \$14.95. Requirements: 64K, one disk drive.

Robert L. Nicolai
4038 N. Ninth St.
St. Louis, MO 63147
314/621-7618

BASIC String Sort

A machine code subroutine, *BASIC String Sort* is called from BASIC to sort all members of a string array in memory using the quicksort algorithm. The utility sorts up to 255 ASCII sort fields of any length at predefined locations within the

string. Each field can be sorted in ascending or descending order. List price: \$24.95. Requirements: 48K, one disk drive.

World Class Software
P.O. Box 2146
Toledo, OH 43603
419/698-8086

Power!

A package of 55 housekeeping utilities for using DOS and CP/M-86, *Power!* restores accidentally erased files, fixes errors on disk, and copies files you select from a numbered menu. The utilities sort and format directories in four ways. For CP/M-86 the utilities create 32 user areas. Memory can be displayed and modified in ASCII, hexadecimal, or binary format. Another feature lets you assign passwords to files to prevent unauthorized access. List price: \$169. Requirements: 64K, one disk drive.

Computing!
2519 Greenwich St.
San Francisco, CA 94123
415/567-1634

Advanced Productivity System

A full-screen program editor, *Advanced Productivity System* (APS/SPF) includes a set of utility programs. It supports primary commands and line commands, allowing you to exclude lines, redisplay them using find commands, and manipulate the excluded blocks. The editor works with ASCII files as well as fixed-length record formats. APS/SPF features a browse capability and lets you select files from a sorted directory. It supports COBOL and BASIC line numbers. List price: \$240. Requirements: 256K, one disk drive.

Arrix Logic Systems, Inc.
P.O. Box 142
Don Mills, Ontario
M3C 2R6 Canada
416/292-6425

Editdisk

With a full-screen program editor, *Editdisk* lets you examine and edit any file on a disk. You can check an entire file, one sector, or a range of sectors in both hexadecimal and ASCII formats. *Editdisk* lets you examine absolute sectors, search a file or a range of sectors for a particular string, and fill a range of sectors with a specified character. List price: \$50. Requirements: 64K, one disk drive.

PCX

21941 Cayuga

Lake Forest, CA 92630

714/951-8320

Edvance

A full-screen program editor, *Edvance* works with the UCSD p-System. By storing updates to another disk, the utility lets you edit a large file that has completely occupied a single disk. The program features nested editing functions, enabling you to edit a file within a file. Tables and graphics can be created and edited, and search and replace functions are improved. *Edvance* lets you define macro commands and redefine keys. List price: \$100. Requirements: 64K, one disk drive, UCSD p-System.

SofTech Microsystems

16885 W. Bernardo Dr.

San Diego, CA 92127

619/451-1230

"A fine editor that I use constantly in my work as a contract programmer." Vim Toutenhoofd, Cottage Grove, Oregon

dB/Compiler

By compiling a *dBASE II* program into independently executable code, *dB/Compiler* encrypts the application, shortens run time, and saves disk space. The utility includes a linker; available cross-linkers allow code developed under one operating system to execute under another. List price: \$750 (no additional licensing fees). Requirements: 256K, one disk drive.

WordTech Systems

P.O. Box 1747

Orinda, CA 94563

415/254-0900

FileCommand

A file directory program, *FileCommand* organizes and accesses files stored on floppy or hard disks. The program lets you sort an on-screen directory of files by size, date, alphabetical order, or directory path. It also lets you issue complex DOS commands or chains of commands with a single keystroke. *FileCommand* can run on PCjr. List price: \$35. Requirements: 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

Fixed Disk Organizer

By compiling program names into menus, *Fixed Disk Organizer* speeds access to programs stored on a hard disk. A built-in command menu lets you implement frequently used DOS commands without dropping out of the program you are using. *Fixed Disk Organizer* lets you define passwords and create batch files and help texts. List price: \$50. Requirements: 128K, hard disk, DOS 2.00 or later version.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

"An indispensable tool in helping your inexperienced associates use your XT. Reasonable documentation, well worth the money." James W. Sutherland, Charleston, West Virginia

"If you can write batch files already, you'll get a lot more out of it. Set up properly, it will turn a large hard disk into the easiest-to-use computer peripheral you could want. A beautifully engineered product."

David Basskin, Toronto, Ontario, Canada

DigiCon Print Package

A trio of utilities to enhance IBM or Epson printers, *DigiCon Print Package* contains a layout utility for print formatting, a setup utility, and a character editor. The package lets you print in any direction, allows up to 35 characters per inch, includes 20 character sets, and lets you create new characters. You can preview the screen before printing. List price: \$39.95. Requirements: 128K, one disk drive, parallel port.

Digital Concepts

P.O. Box 8345

Pittsburgh, PA 15218

412/823-8314

DXFM-File Manager

By displaying a disk directory in a menu format, *DXFM-File Manager* integrates the directory list with a command processor. You select the file with the cursor and the DOS-equivalent command with a single key, such as D to delete. The program dynamically sorts the directory list by any combination of file name, extension, date, attribute, and drive. You can scroll the directory forward and backward or search for a wild-card file name. *DXFM-File Manager* is executable from DOS or BASIC and is similar to the mainframe FILELIST command under VM/CMS. List price: \$39.95. Requirements: 64K, one disk drive.

World Class Software

P.O. Box 2146

Toledo, OH 43603

419/698-8086

dFastest

A sort utility, *dFastest* can be used from within *dBASE II* to sort data on up to 32 fields up to 33 times faster. The program rescues bad data files, copies files onto another disk, and compresses and removes deleted records from a *dBASE II* data file twice as fast as the Pack command. List price: \$89.95. Requirements: 128K, two disk drives.

Software Research Technologies, Inc.

3757 Wilshire Blvd. #211

Los Angeles, CA 90010

213/384-5430

Personal Characters

Characters displayed on screen can be printed on an Epson FX-80 or FX-100 printer with *Personal Characters*. The program also lets you create your own character sets and change printer modes while in DOS. It includes a sample BASIC code listing to download character sets from BASIC programs. List price: \$49.50. Requirements: 128K, one disk drive, DOS 2.00 or later version, BASICA.

Grofar Systems
P.O. Box 653
Camarillo, CA 93010

Ultimenu for DOS

A full-screen menu system, *Ultimenu for DOS* lets you run any program, command, or batch file from its primary or secondary menus. The program displays up to 36 entries while displaying the time and date. Each menu entry can include a 34-character phrase describing the program. A single keystroke activates any entry on the current menu. List price: \$24.95. Requirements: 48K, one disk drive.

DB/DC Software Assoc.
P.O. Box 4695
Manchester, NH 03103
617/927-2252

Scroll & Recall

A screen and keyboard utility, *Scroll & Recall* lets you scroll back through data that has gone off the top of the screen. It also lets you recall and edit previously entered DOS commands and other input lines. You can specify the amount of memory to be used for saving screens and data lines. List price: \$69. Requirements: 64K, one disk drive.

Opt-Tech Data Processing
P.O. Box 2167
Humble, TX 77347
713/454-7428

Diskette Librarian

A computerized catalog of file and floppy disk names, *Diskette Librarian* helps you organize and find disks. The program lets you display an alphabetical list of file names, indicating each file's disk, date, and size. It also displays an alphabetical list of disk names indicating each disk's last update, number of files, and space remaining. List price: \$45. PC requirements: 64K, one disk drive; with DOS 2.00 or later version 128K, one disk drive. PCjr requirements: 128K, one disk drive, Cartridge BASIC.

IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

TenKey

Designed to emulate an accounting-style desktop calculator, *TenKey* can run while another program is in use. When you activate the utility, a small window opens in a lower corner of the display screen, letting you use the calculator without losing the display from the other program. One keystroke transports the final total into the program in use. *TenKey*'s functions include 12-digit or floating-point precision, dollar mode, and a percentage key. Advanced features include memory keys and a simulated tape display of calculations performed. List price: \$49.95. Requirements: occupies 8K of RAM.

Photon Software
636 120th Ave. NE
Bellevue, WA 98005
206/451-8272

Winboot

By writing new initialization code on your data disks, *Winboot* lets you boot up a PC from its hard disk even though the floppy disk drive is ready. The new floppy disk boot information redirects the startup to the hard disk. The utility requires no file space on data disks. List

price: \$19.95. Requirements: 64K, bootable hard disk system, DOS 2.00 or later version.

Larson Computing
1556 Halford Ave. #142B
Santa Clara, CA 95051
408/737-0627

PC Speak, PC Speak Jr.

Coupled with a text-to-speech synthesizer, *PC Speak* gives visually handicapped people access to the PC. The utility resides in memory and has two modes. In echoing mode the synthesizer pronounces words typed on the keyboard. In screen-scanning mode you can stop an application program, and the synthesizer will spell out or pronounce words as you move a special cursor around the screen. You can resume the program where you left off. *PC Speak Jr.* provides the same functions for the PCjr. List price: *PC Speak* \$475, *PC Speak Jr.* \$179. Requirements: 64K, one disk drive, text-to-speech synthesizer.

Solutions by Example, Inc.
375 Concord Ave.
Belmont, MA 02178
617/489-4740

Coed

A full-screen text editor for programmers, *Coed* has one-key editing functions. Features include full-function stack arithmetic; search, replace, and copy commands; macros; conditional branching; sub-routine nesting; and commands to load function keys with command strings for one-keystroke execution. Files can be as large as disk space allows. List price: \$34.99. Requirements: 64K, one disk drive.

Advanced Software Technologies
417 Broad St.
Bloomfield, NJ 07003
201/783-7298

Crossave

Designed to run on the PC XT, *Crossave* backs data stored on hard disks. The utility handles volume management so that files that exceed the capacity of a single floppy disk can be saved from your hard disk. It also saves space on floppy disks by compressing data. List price: \$99. Requirements: 128K, one disk drive, CP/M-86 or Concurrent CP/M.

Award Software Inc.
236 N. Santa Cruz Ave.
Los Gatos, CA 95030
408/395-2773

XenoFile for CP/M-80

A program that translates CP/M-80 files to p-System files, *XenoFile for CP/M-80* lets Pascal programs use output from CP/M programs and vice versa. The utility includes a CP/M filer program that lets you display a CP/M directory, transfer a text file from a CP/M disk to a Pascal disk and vice versa, and display all entries (including deleted entries) on a CP/M directory. List price: \$50. Requirements: 64K, one disk drive, UCSD p-System.

SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Kedit

A full-screen program editor, *Kedit* features multiple-file editing in multiple windows, prefix area commands, targets, column commands, and over 60 commands and SET operands. Up to 15 files can be active at once. Other features include path and subdirectory support, word wrap, paragraph reformatting, block operations, a Sort command, string search and change functions, and a reprogrammable keyboard. *Kedit* is compatible with *Xedit*, IBM's mainframe text editor. List price: \$125. Requirements: 160K (192K recommended), one disk drive, DOS 2.00 or later version.

Mansfield Software Group
P.O. Box 532
Storrs, CT 06268
203/429-8402

BackRest

A hard disk backup program, *BackRest* can run on local area networks. It creates management reports to show what it has done and provides statistics of hard disk use. *BackRest* handles sparse files and splits files that are too large for a single disk. It can be used with Concurrent CP/M, CP/M-86, MP/M-86, DOS, and local area networks such as PCnet and Omnet. When used with Concurrent CP/M 3.1, the program can back up files in one window while other applications run in other windows. *BackRest* is not intended for use with tape backup. List price: \$180. Requirements: 64K, hard disk.

Stok Software, Inc.
17 W. 17th St.
New York, NY 10011
212/243-1444

Star-Edit

A screen-oriented text editor for programming and word processing, *Star-Edit* resembles the EMACS text editor. Features include virtual memory, windows, and multiple-file editing. Over 100 text manipulation commands are available. List price: \$225. Requirements: 32K, one disk drive.

SuperSoft Inc.
P.O. Box 1628
Champaign, IL 61820
217/359-2112

D2Form

A screen-forms generator, *D2Form* records the location coordinates and length of each field on screen and stores them in a file. *D2Form* allows data fields to be created anywhere on the screen and supports the entire IBM character set. You can move about the screen using either the cursor control or tab keys. The program prints out the coordinates and length of each field and the screen image itself. *D2Form* lets programmers use these CRT masks with application programs. List price: \$45. Requirements: 64K, one disk drive.

Information Access Corp.
P.O. Box 871
Shalimar, FL 32579
904/862-5262

BASIC Librarian Concept One

A program editor and library system with full-screen word processing features, *BASIC Librarian Concept One* builds libraries of routines that can be converted to executable code. The program offers on-line documentation and three levels of password security. List price: \$595. Requirements: 128K (256K recommended for multiusers), 10MB hard disk, Business BASIC.

Concept Omega Corp.
P.O. Box 6701
Bridgewater, NJ 08807
201/722-7790

PQfEDIT

An alternative to the EDLIN line editor, the full-screen editor *PQfEDIT* lets you edit ASCII text files by the page rather than line by line. Editing functions include cursor positioning, insert and delete, character replace, horizontal and vertical page scrolling, and commands to move lines and to locate and replace text strings. The program also lets you merge data between files. List price: \$35. Requirements: 96K, one disk drive.

Adam Systems Corp.
5919 Munson Ct.
Falls Church, VA 22041
703/671-7272

"A good program—fast, thorough, easy to use, and a bargain. It does conflict with ProKey, since both use <Alt>- = . I would recommend it without hesitation."
Cutler Umbach, Lake Forest, Illinois

Datatest Text Editor

A programmer's text editor, *Datatest Text Editor* is controlled by function keys. The editor has an on-line help menu and works with any ASCII file. List price: \$175. Requirements: 128K, two disk drives.

Datatek, Inc.
280 Railroad Ave.
Greenwich, CT 06830
203/625-0098

Editor

A full-screen program editor with cursor control, *Editor* lets you define function keys. The program offers vertical and horizontal scrolling and a help function. Features include search and replace, line numbering, and line number removal. List price: \$50. Requirements: 128K, one disk drive.

Sunshine Computer Software Co.
1101 Post Oak Blvd. #9-493
Houston, TX 77056
713/552-0949

Edit Tool

Designed for programmers and data processing professionals, *Edit Tool* can edit more than 20 files at once (up to 1MB total) in multiple windows. With the macro facility, you can build new commands and redefine the keyboard. The program also features a string search with wild cards and ten scratchpad buffers. *Edit Tool* can edit any file in text or hexadecimal display formats and ASCII or EBCDIC data formats. List price: \$225. Requirements: with DOS 1.10 256K, with DOS 2.00 or later version 288K, one disk drive.

Amerisoft
345 S. McDowell Blvd. #410
Petaluma, CA 94952
707/762-0640, 707/778-8594

Professional Editor

A full-screen line editor for programmers, *Professional Editor* lets you tailor various parameters to different types of files or choose from a series of common defaults. Although the program doesn't display the line numbers of a continuous column line, it does let you delete, move, and copy large amounts of text. List price: \$130. Requirements: 64K, one disk drive.

IBM
Systems Products Division
P.O. Box 1328-C
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

VEdit

A full-screen program editor, *VEdit* performs word processing tasks on its own or with any popular word processor. The program splits and merges unlimited files, has ten scratchpad buffers for macro strings, and provides flexibility in redefining the keyboard. Other features include vertical and horizontal scrolling, pattern matching, numerical capabilities, and line and column status displays. A print formatter is supplied as a command macro. List price: \$150. Requirements: 64K, one disk drive.

CompuView Products, Inc.
1955 Pauline #200
Ann Arbor, MI 48103
313/996-1299

Wordflex

A memory-resident program editor, *Wordflex* edits up to five files at once. Printer commands include underlining, boldface, and others that can be entered as escape sequences. The program runs in color or monochrome. List price: \$40, user-supported version provided on formatted disk in a prepaid mailer \$8. Requirements: 128K, one disk drive.

NEMCO
9 Walnut St.
Rutherford, NJ 07070
201/933-4933

FORTTRAN Addendum

Consisting of two sets of utilities, *FORTTRAN Addendum* is intended to open up the capabilities of the PC to FORTRAN programmers. *ASMUTIL* includes 18 assembly language routines that access color graphics, full keyboard and toggles, light pens, multiple screens, scrolling, cursor location and size, pixel operations, time, date, and other functions. These routines, which mimic most color graphics capabilities of Advanced BASIC, can be called from FORTRAN programs as subroutines. *BUTILE* includes nine FORTRAN subroutines for interactive applications. The set includes string operations, buffered keyboard and screen I/O, and variable formatting of output, rather than rigid decimal place criteria, to

avoid overflow. List price: *ASMUTIL* \$70, *BUTILE* \$95. Requirements: 116K, one disk drive.
IMPULSE Engineering
P.O. Box 3540
San Francisco, CA 94119-3540
415/788-4611

Prowriter Utilities

Three assembly language procedures are packaged in *Prowriter Utilities*. *Print_Screen* provides screen dumps of any graphics screen by using the <Shift>-<PrtSc> keystrokes. *Print_Characters* allows the printing of the Extended ASCII Set provided by IBM and adds an italic character set to the printer's capabilities. *Printer_Set* is a menu-driven program that lets you set the most useful of the printer's parameters with a minimum of keystrokes. Distributed by the UserWare method, the package is available for a \$45 registration fee or by sending one formatted double-sided disk and a self-addressed, postage-paid mailer to the manufacturer. Requirements: 64K, one disk drive.
Soft & Friendly
Rt. 2, Box 65
Solsberry, IN 47459
812/825-7384

MetaWindow

The advanced graphics routines in the *MetaWindow* tool kit perform bit-map screen operations combining graphics and text. The tool kit provides programmers with graphics capabilities similar to those available on the Xerox Star and Apple Lisa or Macintosh computers. *MetaWindow* lets you create and delete pop-up menus, windows, and icons; generate fixed or proportionally spaced text from customized bit-map fonts; and fill rectangular regions with any of 32 patterns. It provides access to mouse position and button status information. Event-queue procedures provide a program interface for all keyboard and mouse inputs. You

can preset up to eight cursor styles corresponding to mouse button selections. List price: \$150. Requirements: 128K; one disk drive; graphics board; IBM or Microsoft Pascal Compiler, Microsoft or Lattice C Compiler, or IBM Macro Assembler; Mouse Systems, VisiCorp, or Microsoft mouse.

Metagraphics Software Corp.
444 Castro St. #400
Mountain View, CA 94041
415/964-1334

KSAM

A file management system intended for applications that require fast access to information, *KSAM* provides sequential and keyed retrieval of data. Records can be accessed by primary, alternate, and partial keys. The units in the system can be added to a library or used in a program. File-handling functions include add, close, create, delete, erase, load, and open. *KSAM* also includes a program, *KASAMUT*, that checks the print file status, verifies that all records are in sequence, copies a file in compacted or reorganized form, merges two files, and creates a *KSAM* data base or alternate file. List price: \$100. Requirements: 64K, one disk drive, UCSD p-System.

SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Insight Window Designer

A programming productivity tool written in UCSD Pascal, *Insight Window Designer* includes windowing capabilities and enhancements for multiapplication integration. The Virtual Library includes machine-dependent kernel, keyboard, screen, and other I/O software modules. The Natural Library includes a user interface with a text-based window editor, a hierarchical main menu, pop-up windows, data exchange procedures, and an on-line help facility. List price: \$150. Requirements: 64K; one disk drive; UCSD p-System, version IV.1; UCSD Pascal Compiler.

SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

Read-CPM, Read-DOS

A file transfer utility, *Read-CPM* enables a PC running DOS to display the directory of a disk created under the CP/M-86 operating system. You can transfer any or all files onto the DOS disk directly from the CP/M-86 disk. *Read-DOS* provides the same directory display and file transfer capabilities for computers running CP/M-86. List price: each program \$50. Requirements: 64K, one disk drive.

PCX
21941 Cayuga
Lake Forest, CA 92630
714/951-8320

Disk Mechanic

A floppy disk backup and repair utility, *Disk Mechanic* backs up protected disks and lets you use hidden files and restore deleted files. The location of any sector or file can be examined or changed. The program checks the rotation speed of floppy disk drives. List price: \$70. Requirements: 128K with DOS 1.10, 196K with DOS 2.00, one disk drive.

MLI Microsystems
P.O. Box 825
Framingham, MA 01701
617/926-2055

Quickcode

A program that writes *dBASE II* command files, *Quickcode* requires no programming knowledge. *Quickcode* writes programs to add, retrieve, display, edit, print, and delete records. It creates programs to validate data entry, set default values, send data to *WordStar*, and print mailing labels or forms. *Quickcode* allows you to work with dollars, dates, telephone numbers, and social security numbers. List price: \$295. Requirements: 128K; two disk drives; *dBASE II*, version 2.02 or 2.03.

Fox & Geller, Inc.
604 Market St.
Elmwood Park, NJ 07407
201/794-8883

PC Screens & Menus

The screen utility in *PC Screens & Menus* provides a method for generating screen designs and BASIC code for data input. After you key in a design, the screen and BASIC statements are automatically saved for use in a program. The menu utility helps create BASIC menus. It features an unlimited number of selections with 20 choices per screen, a confirmation screen that displays the selection made from a menu, and the ability to chain directly to a program that is not on the menu. List price: \$50. Requirements: 64K, one disk drive.

Data*Easy Software
Data Consulting Group
12 Skylark Dr. #18
Larkspur, CA 94939
415/927-0990

Set-FX +

A utility that enhances printing on the IBM Graphics printer, the Okidata Microline 92 and 93, and all Epson printers, *Set-FX +* provides 15 fonts and allows you to print sideways and create your own characters and custom fonts. List price: \$59.95. Requirements: 128K, one disk drive.

SoftStyle, Inc.
7192 Kalaniana'ole Hwy. #205
Honolulu, HI 96825
808/396-6368

1 Dir

A shell for DOS that integrates a file management system with definable menus and macros, *1 Dir* replaces the DOS prompt with interactive commands that eliminate the need to type file names and commands on the command line. List price: \$95. Requirements: 128K, one disk drive, DOS 2.00 or later version.

Bourbaki Inc.
431 Main St.
Boise, ID 83702
208/342-5849

"The need to memorize DOS commands and syntax is virtually eliminated."
Patrick Gebhardt, Shelton, Washington

4-1-1

A utility for hard disks, *4-1-1* locates documents by content. The program provides a spreadsheet-style "locate form" and a document archiving system. *4-1-1* includes a security system to prevent unauthorized access to files. The program works with *WordStar*, *Select*, and other software that generates ASCII files. List price: \$149. Requirements: 256K, hard disk. Select Information Systems, Inc. 919 Sir Francis Drake Blvd. Kentfield, CA 94904 415/459-4003

SPF/Editor

A text editor that emulates the IBM mainframe ISPF editor, *SPF/Editor* offers EBCDIC and ASCII hexadecimal commands and full- and split-screen functions. The program supports DOS paths, letting you edit files in any directory and execute from any path directory. List price: \$100. Requirements: 320K, one disk drive. Phaser Systems, Inc. 353 Sacramento St. San Francisco, CA 94111 415/434-3990

SPF/PC

A full-screen text editor that emulates the IBM mainframe SPF editor, *SPF/PC* includes DOS functions such as subdirectory support. A command processor interface allows you to use the operating system while editing. *SPF/PC* supports split-screen operations, programmable function keys, and four-way scrolling with cursor control. Utilities are provided for file copy, rename, delete, and print functions. Other features include efficient memory utilization, color support, and communications with synchronous and asynchronous support. List price: \$195. Requirements: 192K, one disk drive. Command Technology Corp. 19090 Mountain Blvd. Oakland, CA 94611 415/339-3530

Trace86

A debugging tool that displays disassembled object code, *Trace86* runs programs at slow speed while displaying an assembly language version of the program, the machine registers, flags, the stack, address calculation, and data in memory. The program displays 16 to 22 lines of unassembled code, with the next line to be executed shown in inverse video. *Trace86* offers general utility and memory manipulation functions including changes, moves, pattern search, and block comparison. List price: \$125. Requirements: 128K, one disk drive. Morgan Computing Co., Inc. 10400 N. Central Expwy. #210 Dallas, TX 75231 214/739-5895

Magic Menu

A menu system that allows the selection and execution of more than 1000 programs without exiting to DOS, *Magic Menu* can reside in memory. The program's screens allow the execution of a series of menu entries. *Magic Menu* provides automatic screen blanking, dynamic variables for customized entries, and password security. List price: \$99. Requirements: 128K, one disk drive, DOS 2.00 or later version. DeereSoft, Inc. P.O. Box 1360 Melbourne, FL 32901 305/768-2477

DOSshell

You can organize hard disks into directories and subdirectories, each with a menu and help screen, with *DOSshell*. Function keys perform many DOS commands, movement between directories, and optional assignments. Logon and password procedures control multiuser access. *DOSshell* includes utilities to archive disks, write memos, manage appointments, and control printer type styles. List price: \$70. Requirements: 96K, one disk drive, DOS 2.00 or later version. XTC Handcrafted Software P.O. Box 902 Santa Barbara, CA 93102 805/967-7837

dB>MENU!

For those with little knowledge of the *dBASE II* language, *dB>MENU!* provides menus for *dBASE II* to structure data base tasks. The menus provide access to commands such as EDIT, FIND, SORT, BROWSE, APPEND, INDEX, and LOCATE. An information menu includes the currently used file name, the contents of the key field, the date, the total number of records, and the current record number. Features include multiple-key sorting and access to *dBASE II*'s dot prompt. *dB>MENU!* keeps seven indexes and can select a master index. The program expands to support custom applications. List price: \$34.95. Requirements: occupies 20K of RAM. JNZ, Inc. 729 Windward Dr. Rodeo, CA 94572 415/799-1446

Key II

A template for 1-2-3, *Key II* aids analysis and graphing of data in a worksheet by providing programmed keyboard macros. Five menu-driven routines simplify *Key II*'s commands. The analysis routine offers one- or two-keystroke calculations and sorts for the entire data base or a subset. A distribution routine produces cross-tabulations. One or two keystrokes control graphs or printouts. *Key II* can process a maximum of 24 fields simultaneously from a data base with up to 30 fields. List price: \$189. Requirements: 256K, two disk drives. Lighthouse Software Corp. P.O. Box 15 Hilton Head Island, SC 29938 803/785-4949

Mouse Menu

A program for use with the Microsoft Mouse, *Mouse Menu* supplies menus for *Multiplan*, 1-2-3, *WordStar*, and *VisiCalc*. With this utility the mouse governs all program commands, reserving the keyboard for text and data entry. The package includes source code to permit creation of menus for programs without mouse support or alteration of standard menus. List price: \$25, with Microsoft Mouse \$195. Requirements: occupies 6K of RAM.

Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8080

Professional Programming Environment

Designed for those who program in MBASIC, the *Professional Programming Environment (PPE)* is a set of tools that provide C-like sophistication. During programming, the *Structured Language Processor (SLP)* eliminates the need for line numbers in the source code and offers an English-like syntax. Source functions can be organized in a library by the Macro Library Processor (MLP) and passed to arguments with macros. List price: *PPE* (includes *SLP* and *MLP*) \$55, *SLP* \$35. Requirements: 128K, one disk drive, DOS 2.00 or later version.
Bendorf Assoc.
P.O. Box 5910
Roswell, NM 88201
505/347-5358

BasicWindow

BASIC programmers can use *BasicWindow* to design screens and incorporate them into programs. The utility consists of a screen editor, a driver, and a macro processor that translates a screen into BASIC statements. The screen editor supports color, inverse video, highlighting, and all BASIC graphics characters. The screen driver merges into a program without external libraries. List price: \$99.95. Requirements: 96K, one disk drive, BASICA or a BASIC compiler.
G. Freeman & Co., Inc.
15 Albin Rd.
Stamford, CT 06902
203/327-9868

ES/P

A third-generation program editor, *ES/P (Entry System for Programs)* simplifies the writing, debugging, modification, and maintenance of Pascal and C programs. *ES/P* combines text-editing features with automatic syntax checking, automatic for-

matting, and automatic creation of program structures. You can enter text as usual and view the appropriate language structure at any point, or build an entire structure with one keystroke. *ES/P* warns of an unbalanced pair of quotes, parentheses, or brackets. Versions for UNIX and Ada are available. List price: Pascal \$249, C \$349, Pascal and C \$399. Requirements: 192K, one disk drive, compiler.

Bellsoft, Inc.
2820 Northup Way #150
Bellevue, WA 98004
206/828-7282

DataBurst

A program generator with full-screen control, *DataBurst* lets users manipulate up to 16 screen formats. Programmers can design a picture of the desired screen with an on-line editor and generate source code that describes the contents and functions of various fields on the screen. Display attributes, including underlining, inverse video, and blinking, can be assigned to

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individual fields. Other attributes include input, output, or constant field types and alphabetic or numeric data types. The program allows source code generated in ASCII file format to be modified with any text editor. Optional support for BASIC and C compilers and interpreters is available. List price: \$225, with language support \$265. Requirements: 64K, one disk drive.

Key Solutions, Inc.
111-G Shelley Ave.
Campbell, CA 95008
408/559-6226

Disk Dump and Restore Utilities

Two programs similar in operation to DOS's COPY command, *Disk Dump and Restore Utilities* back up and restore files between hard and floppy disks. The utilities allow users to split files too large for one disk onto two or more disks. During the hard-disk-to-floppy file restore mode, a 'Wrong Disk' message warns of a disk inserted out of a file's proper order. *Disk Dump and Restore Utilities* support the use of wild-card characters and date specifications during file copying. List price: \$50. Requirements: 64K, one disk drive. Micro Systems Software
2905-B Homestead Rd.
Santa Clara, CA 95051
408/984-0660

Workload

A conversion program, *Workload* translates ASCII files for use with programs such as 1-2-3, *VisiCalc*, and *SuperCalc*. It automatically converts any ASCII report file into formats such as WKS, DIF, SDI, and CSV. The program loads the heading and numbers of each column from a report into columns of the spreadsheet. You can select and rearrange particular items or pick sections of the report and have *Workload* convert them automatically. List price: \$125. Requirements: 128K, one disk drive, spreadsheet program. Management Science Assoc., Inc.
Shadyside Centre
5100 Centre Ave.
Pittsburgh, PA 15232
412/683-9533

Windows for C

A program and library of subroutines, *Windows for C* allows the screen to be divided into any number of windows. Library functions let you control the attributes of each window independently, overlay and restore screens, change attributes of text, and save window contents. Subroutines provide rapid screen changes without flicker or snow. *Windows for C* includes C source modules for viewing ASCII files in multiple windows, menu display and selection, cursor control, and text-mode bar graphs. List price: \$150. Requirements: 128K, two disk drives, C compiler (C86, Lattice C, Microsoft C, DeSmet C, or Aztec C). Creative Solutions
21 Elm Ave.
Richford, VT 05476
802/848-7738

Window Panes, Video Screen Editor

You can create presentations, slide shows, help windows, tutorials, and quizzes on screen with *Window Panes*. The program edits in up to five windows simultaneously. It offers control of color and monochrome attributes, a graphics symbol palette, block moves, and macros. Each window can be linked to others; definable keystrokes bring up connecting windows. *Window Panes* offers menus and context-sensitive help.

Using the same window-oriented editor as *Window Panes*, *Video Screen Editor* uses the color capability of the computer to design windows of information. On a monochrome monitor boldface, underlining, and inverse and blinking video are available. List price: *Window Panes* \$160, *Video Screen Editor* \$40. Requirements: 128K, one disk drive, DOS 2.00 or later version. SoftRight
12710 S. W. Pacer
Beaverton, OR 97005
503/641-4072

Boss/1-2-3

A supplement to the *Boss Financial Accounting System*, *Boss/1-2-3* allows financial data to be inserted directly into 1-2-3 spreadsheets. Users select financial reports, such as income statements, balance sheets, or trial balances, from a menu, and *Boss/1-2-3* creates a file that is read into a 1-2-3 worksheet. The program supports 1-2-3 graphics and includes worksheet templates. List price: \$195. Requirements: 128K, two disk drives. Balcones Computer Corp.
5910 Courtyard
Austin, TX 78731
800/531-5483, 800/252-8184 Texas,
512/346-1771

micro/SPF

A programming tool, *micro/SPF* brings the SPF mainframe program editing environment to the PC. The program emulates the SPF environment, including full-screen editing functions, split-screen formats, and full scrolling and search commands. It also features programmable function keys, access to the *micro/SPF* master catalog, an on-line tutorial, and full edit line commands. List price: \$450. Requirements: 320K, two disk drives. Phaser Systems, Inc.
353 Sacramento St., 23rd Floor
San Francisco, CA 94111
415/434-3990

Prolok

A software copy-protection system that resides on disk, *Prolok* runs on computers using DOS or CP/M-86 and on some CP/M-80 systems. It works by placing a customized "fingerprint" on each *Prolok* disk onto which you copy programs. The fingerprint uses 8K in the protected file. The security system allows both protected and unprotected programs to reside on the same disk and prevents the use of mass bypass copying systems. List price: three-pack \$24.95. Requirements: occupies 3K of RAM. Vault Corp.
2649 Townsgate Rd. #500
Westlake, CA 91361
800/445-0193, 800/821-8638 California,
805/496-6602

Expandson

A printer enhancement program for *WordStar*, *Expandson* offers expanded headers and titles, italics, compressed print, subscripts and superscripts, line graphics, and foreign characters. Printing effects vary, depending on the capabilities of the printer. List price: for Epson \$39, for IBM Graphics printer \$49, for Okidata Microline \$59. Requirements: 64K, one disk drive, *WordStar*, printer. Blue Water Systems
P.O. Box 1877-D
Oceanside, CA 92054
619/722-0059

Fancy Font

A print enhancer for dot matrix printers, *Fancy Font* lets you print with different fonts. At very high resolution (52,000 dots per square inch), the program includes science, math, chemistry, and foreign language characters. *Fancy Font* can print characters of from 8 to 40 points and generate graphs for overhead projections. You can embed codes in text with any PC-compatible word processing program and use *Fancy Font* to print the document. List price: \$180. Requirements: 128K, one disk drive. SoftCraft, Inc.
222 State St.
Madison, WI 53703
800/351-0500

"This is a very flexible printing program that offers many text style and formatting capabilities. It presents moderate difficulty for the newcomer to understand its power. This is quickly overcome, however, and it becomes very easy." Bruce L. Noren, Beavercreek, Ohio

Kwicindex

An index generator designed for writers and researchers, *Kwicindex* produces indexes sorted by keywords in context. The program's "stop-word" table facility keeps selected words from appearing in text. A sample stop-word file is included that removes short, inessential words

from indexed material. The program reads ASCII files. List price: \$30. Requirements: 64K, one disk drive. Miracle Computing
313 Clayton Ct.
Lawrence, KS 66044
913/843-5863

RID

Designed to help prevent software damage and loss of data due to faulty disk drives, *RID (Recording Interchange Diagnostic)* analyzes drive speed, noise tolerance, write and read capabilities, track alignment, positioner backlash, disk clamping, and erase cross talk. List price: \$34.95. Requirements: 64K, one disk drive. Dymek Corp.
1851 Zanker Rd.
San Jose, CA 95112
408/947-8700

Sideways

A printing utility that allows you to print spreadsheets, PERT charts, and other wide-format files sideways, *Sideways* offers control of margins and spacing, a choice of character fonts, and a double-strike option for added print density. List price: \$60. Requirements: 64K, one disk drive. Funk Software
P.O. Box 1290
Cambridge, MA 02238
617/497-6339

Grafplus

A general purpose screen dump utility, *Grafplus* enables you to reproduce the screen image from either an IBM or a Hercules graphics card onto any one of 30 dot matrix printers currently supported. The image may be scaled up or down as it is printed and may be printed either horizontally or vertically on the page. Utilities included allow *Grafplus* to

be called from BASIC, FORTRAN, or Pascal programs in addition to the <PrtSc> key. Printers supported include those from Epson, Hewlett-Packard, Gemini, Datasouth, Anadex, Okidata, IDS, Toshiba, and C. Itoh. List price: \$49.95. Requirements: occupies 3.5K of RAM.

Jewell Technologies, Inc.
4451 53rd Ave. SW
Seattle, WA 98116
206/937-1081

Keytools

A package of four programs, *Keytools* helps develop application programs. It includes Picasso, a multifaceted screen generator; Emerson, a formatted data entry subroutine; Socrates, a program that builds on-line help facilities; and Youngman, a collection of one-line subroutines. The utilities are provided as commented BASIC code, Compiled BASIC, merge file subroutines, and structured listings. List price: \$75. Requirements: 64K, one disk drive. Key-1 Computer Systems
178 Spring St.
Newport, RI 02840
401/849-4562

Smart Cache

A disk emulation program, *Smart Cache* provides caches for two double-sided disk drives and an emulator for one double-sided disk in RAM. The program lets users store data in RAM and automatically write it onto floppy disks concurrently with processing. The program uses an adaptive rewrite algorithm to make disk writes well sequenced and less frequent. The amount of memory used by *Smart Cache* can vary in 1K increments from 100K to all available memory not being used by DOS. The program includes a display of storage status information and a print spooler. List price: \$39.95. Requirements: 192K, one disk drive. EKC Inc.
6100 Shenandoah Ave.
Los Angeles, CA 90056
213/641-3390

Diskette Manager, Diskette Manager II

A library program for disk management, *Diskette Manager* keeps a record of disks and prints disk labels with disk name, file names, up to eight lines of comments, and the storage status of each disk. The program maintains a catalog file that lists label information, file size, and storage dates. One catalog can contain as many as 6000 file or comment entries on 200 disks. Up to 64 file names can be printed on one standard 4- by 1 1/16-inch label. If more than 64 files reside on a disk or if comments exceed available label space, a second label is automatically printed.

With further data base abilities, *Diskette Manager II* can list cross-references between files and disks, perform selective searches, and generate an ASCII file of the catalog for processing. The program searches by any combination of criteria, such as file creation date and time, file size, and file type, or on partial informa-

tion using wild-card search conventions.

List price: *Diskette Manager* \$59.95, *Diskette Manager II* \$99.95. Requirements: 128K, two disk drives.

Lassen Software, Inc.
468 Manzanita Ave. #5
Chico, CA 95926
916/891-6957

Personal Mailing System

The *Personal Mailing System (PMS)* template facilitates mailing operations for 1-2-3. *PMS* allows for simplified data entry, preselected sorting of data, programmed extraction of data, and a variety of print functions, including labels and personalized form letters. A special feature of *PMS* is the ability to automatically process the data based on individualized groupings identified by the program. List price: \$29.95. Requirements: 192K, one disk drive, 1-2-3.

Easy-As ... , Inc.
36 S. Charles St. #402
Baltimore, MD 21201
301/539-5540

Math/PC

You can solve equations with *Math/PC* while using a word processor. Equations can be vertical or horizontal and contain addition, subtraction, multiplication, and division. You can format the result in various ways, specifying the number of digits to the right of the decimal point or using parentheses to indicate negative numbers. *Math/PC* can be loaded in the background from the AUTOEXEC.BAT file at power-up. Then whenever you type an equation and press the appropriate key for calculation, the answer is displayed and can be inserted in the current document. List price: \$75. Requirements: 64K, one disk drive.

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1939 Belmont Ridge Ct.
Reston, VA 22091
703/476-5291

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P.O. Box 79
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The Disk Calculator

A program that transforms the PC into a desktop calculator, *The Disk Calculator* provides up to 18-digit precision, decimal selection, accumulation of a series of results, and chaining of calculations. It can recall results, number items, print comments, give running totals and subtotals, and calculate present and future values of an amount or periodic amount. List price: \$29. Requirements: 128K, one disk drive.

RJL Systems
106 New Haven Ave.
Milford, CT 06460
203/878-0376

Fontastic

A word processing text customizer and print enhancer, *Fontastic* uses dot matrix printers with bit-mapped graphics features. You can print diagrams, drawings, foreign language characters, and other special symbols. It offers over 20 fonts and lets you create your own. The program supports subscripts and superscripts, italics, and emphasized, double-width, double-strike, underscored, and compressed type. *Fontastic* commands can be inserted into any DOS text file in place of control codes. List price: \$125. Requirements: 128K, one disk drive, dot matrix printer with bit graphics.

IHS Systems
4718 Meridian Ave. #211
San Jose, CA 95118
408/265-5503

Pop-Up NotePad

A notepad appears whenever you need one with *Pop-Up NotePad*. You can jot down ideas while you're working with another application. You can write messages or take notes on the program you're using, create permanent files, or copy information between applications. List price: \$39.95. Requirements: 64K, one disk drive.

Bellsoft, Inc.
2820 Northup Way
Bellevue, WA 98004
206/828-7282

Forms Designer

IBM Pascal or FORTRAN developers can design data entry screens for data base management programs with *Forms Designer*, which features validation of social security number, date, data type, and range. Field entries can be designated as required, and screens can be designed to be displayed only during a specified entry job. You can draw lines and boxes within and around screens. Help screens can be designed to call up information during entry. Fields can be displayed in color, with default values, and in blinking or inverse video. List price: \$275. Requirements: 128K, two disk drives.

BIT Software, Inc.
1048 Nicklaus Ave.
Milpitas, CA 95035
408/262-1054

Link Module

A program that loads data files into a *MicroPlan* spreadsheet, *Link Module* converts information from time-sharing services, mainframe files, and application packages such as accounts receivable or data base management software. *Link Module* includes commands for posting data to individual or multiple rows or columns. In addition to reading files from other applications, *Link Module* also allows *MicroPlan* tables to be read by applications such as data base and word processing packages. List price: \$295. Requirements: 64K, two disk drives, *MicroPlan*.

Chang Labs
5300 Stevens Creek Blvd. #200
San Jose, CA 95129
408/246-8020

DoubleDos

Two programs can be run concurrently with *DoubleDos*, a multiplexer for DOS 2.00 and 2.10. Each program runs with its own screen image. By switching between images you can monitor or use either program. The effect is that of two PCs, one of which can print while the other does word processing or spreadsheet calculations. All DOS commands and functions are the same, and most programs that run under DOS, such as *1-2-3*, *dBASE II*, and *WordStar*, will run

with *DoubleDos*. List price: \$229. Requirements: 128K, one disk drive.

SoftLogic Solutions
530 Chestnut St.
Manchester, NH 03101
800/272-9900

Calc Aid

A calculator program, *Calc Aid* divides the screen into two sections. The top part displays the status of current tape total, memory, last entry, current page number, and current options. The bottom part, in tape mode, lists all entries and their operators. When the program is not in tape mode, entries are displayed in the total. *Calc Aid* produces subtotals and multiple tapes, and tapes can be labeled alpha-numerically. Output and load functions let you save tape on disk. You can delete, correct, or insert entries; select different formats such as number of decimal places or dollars and cents; and create a profile by setting format, auto-decimal, and tape or line mode. *Calc Aid* uses algebraic logic, including levels of parentheses, and maintains up to 680 entries. All pages can be selectively displayed, and you can label and access up to 26 memories. List price: \$50. Requirements: 128K, one disk drive.

Soft Lab, Inc.
P.O. Box 879
St. George, UT 84770
801/628-4969

C Tools 2

A collection of C functions, *C Tools 2* uses features of DOS 2.00. A general DOS gate allows access to any operating system service. One group of functions manages memory, supports external program execution, and provides advanced DOS file handling. Another group lets you write and invoke interrupt service routines. Other functions manage buffers, maintain directories, and report disk space utilization. Source code is included. List price: \$100. Requirements: 128K; one disk drive; Lattice, SuperSoft, or Computer Innovations C compiler.

Blaise Computing, Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

P-Edit

Labeled function keys help beginning data entry personnel use the *P-Edit* program editor. Text can be inserted from the keyboard or from another file and can be erased by character, line, page, or block. Other features include programmable macro keys, global search and replace, and block move or copy. List price: \$95. Requirements: 64K, one disk drive. Satellite Software International
288 W. Center St.
Orem, UT 84057
801/224-8554

87FORBAS.LIB

FORTTRAN programs compiled with Microsoft's FORTRAN compiler can use *87FORBAS.LIB* to access BASIC routines compiled with IBM's BASIC compiler. The interface makes available commands such as Line, PSET, Preset, Wait, Screen, Date, Time, Clear Screen, Inkey, Locate,

Cursor Line, Scroll Up, and Scroll Down. If the 8087 coprocessor and MicroWay's *87BASCOM.LIB* are used, you can call Circle and RND functions as well. List price: \$150. Requirements: 96K, one disk drive.

MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

C Tools

The library of a C compiler can be augmented with *C Tools*, a collection of C functions. The tools offer advanced string handling, screen support, graphics interfacing, data handling, and random number generation. The package comes with complete source code. List price: \$125. Requirements: 128K; one disk drive; Lattice, Microsoft, or Computer Innovations C compiler. Blaise Computing, Inc.
2034 Blake St.
Berkeley, CA 94704
415/540-5441

Pick PC-XT

Designed for businesses, *Pick PC-XT* is an implementation of the Pick operating system for the PC XT. It offers complete application software compatibility with all Pick-equipped systems. The program includes a virtual memory manager that supports up to 640K; full data base management with on-line or batch inquiry and report generation; an English-like inquiry language; and a BASIC compiler that supports extended Pick/BASIC. The system supports up to three terminals and a print spooler and has communications facilities for trading file-level information between XTs and other Pick machines. List price: \$495. Requirements: 256K. Pick Systems
17851 F Skypark Circle
Irvine, CA 92714
714/261-7425

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Languages

PC Logo

With a LISP-based design for language extension, PC Logo is coded in assembly language. It is designed to expand to 192K for the PC and supports programmable function keys. Input can come from such peripheral devices as a mouse or a mechanical turtle. List price: \$149.95. Requirements: 64K, one disk drive.

Harvard Assoc., Inc.
260 Beacon St.
Somerville, MA 02143
617/492-0660

Microsoft BASIC Compiler

Optimized machine code is produced by the Microsoft BASIC Compiler. It supports the commercial language features of Microsoft's BASIC interpreter. The compiler supports double-precision transcendental functions as well as Include, Chain, and FORTRAN-like Common. It adds source code program security to BASIC programs, since only compiled code needs to be distributed to the end user. The single-pass compiler provides either a stand-alone .EXE file or a compact .EXE file that can be run with the BASRUN run-time module. List price:

\$395. Requirements: 64K, one disk drive. Also distributed by IBM.

Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088 Alaska and Washington

Microsoft FORTRAN Compiler

Based on the ANSI '77 standard, the Microsoft FORTRAN Compiler is compatible with Microsoft Pascal, using the same global optimizer, code generator, and linking loader. It provides a simple overlay linking multiple modules and allows access to available memory, up to 1MB. Compiler directives are added to provide source text Include features and FORTRAN-66 Do loops. The Microsoft FORTRAN Compiler supports data arrays and common blocks greater than 64K. The language features double-precision arithmetic and long (32-bit) and short (16-bit) integers with selectable default integer lengths. Interactive I/O and 8087 coprocessor support are included. List price: \$350. Requirements: 160K, two disk drives. Also distributed by IBM. Microsoft Corp.

10700 Northup Way, Box 97200
Bellevue, WA 98009
800/426-9400, 206/828-8088 Alaska and Washington

"This compiler produces fast, compact code and supports most of the features of the ANSI standard FORTRAN. It also has some nice ANSI standard FORTRAN extensions such as the metacommands."

Mark Sinton, Aurora, Colorado

"This is a good, solid product. You can even do screen control by sending escape sequences to the ANSI.SYS device driver. It really zips with the 8087, which is very easy to invoke. However, it lacks string manipulation functions for substrings and concatenation. Also, the error messages are not very good, but that's generally true of FORTRAN compilers." Gordon A. Bang, Alameda, California

muLISP-83

Designed for LISP programmers and software developers, muLISP-83 contains upwardly compatible extensions of LISP 1.5. The program is a LISP interpreter, a development system, and a pseudocode compiler. It contains a resident screen-oriented editor, a debugging system, and on-line lessons that teach LISP interactively. List price: \$250. Requirements: 128K, one disk drive. Also distributed by Microsoft.

The Soft Warehouse
P.O. Box 11174
Honolulu, HI 96828-0174
808/734-5801

DMA."C"

A C compiler, DMA."C" generates either Z80 or 8086 assembly language code. It features an optimization routine based on a functional p-code model. List price: \$295. Requirements: 64K, one disk drive, CP/M-86.

Dynamic Microprocessor Assoc.
545 Fifth Ave. #1103
New York, NY 10017
212/687-7115

MMSFORTH

A structured, modular language, MMSFORTH operates in its own environment without DOS and provides more tracks of data space per disk than most DOS disks. The language provides a complete assembler, full-screen editing, string handling, and arrays. It includes '79-standard FORTH words. Programmers can precompile modified versions of MMSFORTH for specific applications. List price: \$249.95. Requirements: 32K, one disk drive.

Miller Microcomputer Services
61 Lakeshore Rd.
Natick, MA 01760
617/653-6136

COBOL Compiler

With simplified screen definition the COBOL Compiler provides nine Level II function modules. The program includes segmentation and CALL and CHAIN to other programs. It combines object modules with those from the Macro Assembler. Extensions support color and screen formatting. List price: \$700. Requirements: 64K, two disk drives. Also distributed by Microsoft.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

APL* Plus/PC

A general-purpose programming language processor, APL* Plus/PC comes with an application development system. The implementation is a complete APL language processor with a shared file system, report forms, screen control, and command capability. It provides built-in communications and 8087 coprocessor support. Over 200 primitive functions for developing applications are included. List price: \$595. Requirements: 192K, one disk drive.

STSC, Inc.

2115 E. Jefferson St.

Rockville, MD 20852

301/984-5123

Macro Assembler

Designed for 8088 or 8086 machine-language assembly, the Macro Assembler features assembler directives, compilation of source code assembler programs, and macro command capabilities. The product supports pseudo-operations, cross-reference indexing, and listing and assembly pass controls with the ability to include code from external files in the assembly of a module. High-level language programs in Pascal, COBOL, or FORTRAN as well as other assembler-produced programs

can be called from BASIC programs. List price: \$100. Requirements: 96K, one disk drive.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

UCSD FORTRAN Compiler

You can develop programs in both UCSD Pascal and UCSD FORTRAN with the UCSD FORTRAN Compiler. The program is the version IV.0 FORTRAN-77 Compiler for the UCSD p-System and features a subset of the ANSI x 3.9, 1978 (FORTRAN-77) standard with several extensions. List price: \$175. Requirements: 64K, two disk drives.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

Pascal Compiler

The Pascal Compiler IV.0, for the UCSD p-System, can be used to learn a structured programming language as well as to develop programs. List price: \$300. Requirements: 128K, two disk drives.

IBM

Systems Products Division

P.O. Box 1328

Boca Raton, FL 33432

800/447-4700, 800/322-4400 Illinois,

800/447-0890 Alaska and Hawaii

BASIC Compiler

Expanding the syntax of standard, line-by-line Interpreted BASIC, the BASIC Compiler lets users write programs that have indented, unnumbered statements and statements not in line-number order. Subroutines can be compiled separately and introduced into a host program without recompiling the entire program. The compiler supports files and virtual arrays. The BASIC Compiler is compatible with UCSD Pascal and FORTRAN-77 and includes the IF... THEN... ELSE construction. The program allows statements

with a maximum usable memory of 128K. List price: \$225. Requirements: 64K, one disk drive.

SofTech Microsystems

16885 W. Bernardo Dr.

San Diego, CA 92127

619/451-1230

HAI* BAS BASIC Compiler

The HAI* BAS BASIC Compiler comes with utilities for cross-referencing. The included run-time system provides general system utilities and a pseudocode interpreter. The program has an Accept statement for conversation procedures and an extended Dim statement for data definition. A Chain statement provides module and display menu chaining so that large programs can operate in small memories. Program exchange during execution does not require reclosing and reopening files. The language offers automatic retention of program data, data manipulation statements, foreground and background display handling, and interpreters for both source and compiled codes. List price: \$345. Requirements: 64K, two disk drives.

Holland Automation USA, Inc.

3400 W. MacArthur Blvd., Ste. D

Santa Ana, CA 92704

714/641-2844

UCSD Pascal Compiler

Features of the UCSD Pascal Compiler include extensions for systems development and commercial application programming. UCSD Pascal comes with the key features of Pascal and structured programming constructs. Because it is portable, all programs written with the compiler will run on most micros. List price: \$375. Requirements: 128K, two disk drives, UCSD p-System.

SofTech Microsystems

16885 W. Bernardo Dr.

San Diego, CA 92127

619/451-1230

MegaBASIC 4.0

With the ability to address 1 megabyte, MegaBASIC 4.0 is a structured language with an editor, a compaction program, a semicompiler, and a cross-reference generator. Library modules offer matrix multiplication, inversion, and quick sorting for numbers and strings. MegaBASIC 4.0 allows the creation of modules and procedures and the ability to go to line labels instead of line numbers. The language merges common routines without requiring field statements, and programmers can modify source code during debugging. You can use variable names as long as 255 characters. Features include automatic program arrangement, buffer space reclamation, and multiple-line functions. Recursive programming and independent variables are supported. Program lines are scrambled to guard against unauthorized decoding. List price: \$400. Requirements: 128K, one disk drive. American Planning Corp.
4600 Duke St. #425
Alexandria, VA 22304
800/368-2248, 703/751-2574

LISP Educator

A LISP interpreter with an editor, the LISP Educator includes demonstrations and tutorials. You can do most applications without writing support routines. Features include memory management to recover space not being used; automatic allocation of memory into FREE, FULL, and STACK space; changeable memory partitions; debugging facilities using TRACE and UNTRACE functions; and error recovery. List price: \$100. Requirements: 64K, one disk drive, UCSD p-System.
PCD Systems, Inc.
163 Main St.
P.O. Box 277
Penn Yan, NY 14527
315/536-7428

WYLBUR/pc

A version of the mainframe language, WYLBUR/pc is a high-level language with tools for text editing, file and task management, and communications. EXEC features include monochrome and color formatting commands to build screens and menus, and communications commands to automate file transfers. Up to 400 function key definitions and 256 definable commands can be stored. Sequential DOS files and indexed random files are supported, and files can be sorted on up to 20 fields. A full-screen text editor includes help features. A run-time version is available. List price: \$550. Requirements: 128K (192K recommended), one disk drive.
On-Line Business Systems, Inc.
115 Sansome St.
San Francisco, CA 94104
415/391-9555

"WYLBUR/pc is a high-level conversational language. The software is great."
Peter Glenister, Kanata, Ontario, Canada

"A powerful combination of full-screen text editor and procedure language, running within DOS. Of particular interest to mainframe WYLBUR users." D. W. Ormerod, Victoria, British Columbia, Canada

IBM Logo

An interactive programming language, IBM Logo helps familiarize you with programming concepts and logical, mathematical, and geometric relationships. It can be used to develop tutorials and demonstrations. You can create applications using graphics, mathematics, text handling, file manipulation, and assembly subroutines. The colors of text or graphics screens can be changed, and text can be placed anywhere on the screen. Logo supports two monitors. List price: \$275. Requirements: 128K, one disk drive.
IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

PC/FORTH

A full-screen editor, an assembler, and utilities are included with PC/FORTH, which complies with the FORTH-83 standard. Optional programming tools include a native code debugger, cross-compilers, Intel 8087 support, modem support, and advanced graphics support. PC/FORTH is compatible with DOS. List price: \$100. Requirements: 64K, one disk drive.
Laboratory Microsystems, Inc.
P.O. Box 10403
Marina del Rey, CA 90295
213/306-7412

BYSO LISP 1.10

Programmers can develop algorithms in LISP and write them in assembly language with BYSO LISP 1.10. The language includes a full-screen editor and access to BIOS, memory, and ports. List price: \$195. Requirements: 128K, one disk drive.
Levien Instrument Co.
P.O. Box 31
McDowell, VA 22458
703/396-3345

FUN

Designed for education, FUN is a structured tutorial programming language. Documentation begins at an elementary level and progresses to explanations of procedures, local variables, functions, arguments, and arrays. Programs that create turtle graphics and math are also documented. FUN can be extended with new functions and microworlds. Included are an editor, an error-reporting system, a trace mode, graphics, sound, and screen-dump facilities. List price: \$149.95. Requirements: 128K, one disk drive, graphics board.
Levien Instrument Co.
P.O. Box 31
McDowell, VA 22458
703/396-3345

87Pascal/RTOS

An extended ISO-standard Pascal, 87Pascal/RTOS lets you use all 8087 data types directly. The compiler handles interrupts and ports. List price: \$1350. Requirements: 128K, hard disk, 8087 coprocessor.
MicroWay
P.O. Box 79
Kingston, MA 02364
617/746-7341

87 MACRO

A preprocessor that converts the complete set of 8087 codes into codes syntactically compatible with the assembler, 87 MACRO permits full use of the 8087 processor. An object module library includes subroutines for floating point tasks, and a macro library implements higher level constructs such as FOR loops, data declarations, and IF ... THEN ... ELSE logic. A patch to the assembler eliminates format conversions of floating point numbers. A help facility aids in debugging. List price: \$150. Requirements: 128K, one disk drive, 8087 coprocessor, IBM Macro Assembler.
MicroWay
P.O. Box 79
Kingston, MA 02364
617/746-7341

87FORTRAN/RTOS

An ANSI-FORTRAN '77 subset with 8087 coprocessor capabilities, 87FORTRAN/RTOS generates in-line 8087 code that accommodates all data types. The Intel large-memory model allows data and code structures to use 1MB of memory each. The program provides direct access to 8088 ports and support of logical operations on 8- and 16-bit operands that would normally be handled with assembly language. The language is suited to applications that use numbers frequently or that control hardware operations. List price: \$1350. Requirements: 128K, hard disk, 8087 coprocessor.
MicroWay, Inc.
P.O. Box 79
Kingston, MA 02364
617/746-7341

UCSD Pascal Compiler

The UCSD Pascal Compiler as developed by SofTech Microsystems lets users create Pascal or assembly language programs. The modular nature of the UCSD p-System lets you add IBM's FORTRAN-77 or BASIC Compiler and use modules written in one language in programs written in another. You can also use separately compiled Pascal modules existing in program libraries. List price: \$375. Requirements: 64K, one disk drive, UCSD p-System. IBM
Systems Products Division
P.O. Box 1328
Boca Raton, FL 33432
800/447-4700, 800/322-4400 Illinois,
800/447-0890 Alaska and Hawaii

87 BASIC

A transparent adaptation of the 8087 coprocessor to the IBM BASIC compiler, 87 BASIC performs all numeric operations, including trigonometrics, transcendental, addition, subtraction, multiplication, and division. Patches to the IBM BASIC compiler eliminate real number format conversions between the two processors. Single- and double-precision numbers and all 8087 floating point features are provided. List price: \$150. Requirements: 128K, one disk drive, 8087 coprocessor, IBM BASIC compiler.
MicroWay
P.O. Box 79
Kingston, MA 02364
617/746-7341

RM/Fortran

GSA certified, RM/Fortran meets the FORTRAN '77 standard. Extensions include 31-character symbolic names, hexadecimal editing, Hollerith and hexadecimal constants, and unlimited continuation lines. Object code is optimized with features developed for mainframes. Debugging aids include cross-referencing, error diagnostics, and a tracking feature to identify CALL statements. List price: \$1000. Requirements: 192K, one disk drive.
Ryan-McFarland Corp.
609 Deep Valley Dr.
Rolling Hills Estates, CA 90274
213/541-4828

FORTRAN-77 Compiler

An ANSI '77 subset, the FORTRAN-77 Compiler features support for structured programming and improved character types. Since this subset of FORTRAN has most of the features of the full language, programs written in earlier versions require few changes. The compiler offers IF ... THEN ... ELSE constructs, built-in character data types, numeric functions, standardized random access files to facilitate portability, interactive input and output, and support for program overlays. The FORTRAN-77 Compiler is compatible with UCSD Pascal and BASIC compilers. List price: \$375. Requirements: 128K, two disk drives, UCSD p-System. SofTech Microsystems
16885 W. Bernardo Dr.
San Diego, CA 92127
619/451-1230

CC86

A C compiler for CP/M-86, MP/M-86, and DOS, CC86 implements the entire UNIX Version 7 C language. The program includes the standard I/O library (stdio), a linker, a simple assembler, and a library editor. CC86 produces relocatable modules and reentrant ROMable code necessary for multiuser programs. Relocatable functions written with the assembler and stored in libraries can be linked to C programs for program development. Programs may be written for UNIX Version 7 or can include CP/M-dependent directives. List price: \$500. Requirements: 128K; one disk drive; CP/M-86, MP/M-86, or DOS.
Control-C Software, Inc.
6441 S.W. Canyon Ct.
Portland, OR 97221
503/297-7153

C Compiler

Generating either assembly source form or executable object code, C Compiler provides a transparent interface to DOS that makes the program look like UNIX Version 7 (including System III). The interface lets you compile programs and ex-

ecute them under DOS. Generated code is reentrant and allows the intermixing of assembly and C through pseudo-operations. A complete implementation of the C language, the C Compiler does not address a bit field within a structure or process double-word data types. It is designed to run as either a native or a cross compiler. List price: \$200, with software floating point support \$350, source code \$2500. Requirements: 96K, one disk drive.

Telecon Systems
1155 Meridian Ave. #218
San Jose, CA 95125
408/275-1695

micro-PROLOG

A descriptive, predicate-based language, PROLOG can be run on the PC using the micro-PROLOG interpreter. This micro version is designed for those involved with data base design, artificial intelligence, and natural language processing. Program modules and overlays permit programs to be larger than memory size. A relational editor, utility modules, and a line editor are included. List price: \$250. Requirements: 128K, one disk drive.

PROLOG Systems
31 Crescent Dr.
Milford, CT 06460
203/877-7988

WATCOM BASIC, Version 2.0

Emphasizing algorithms and program development, the WATCOM BASIC interpreter encourages logical programming. Variables and other program entities can have up to 31 characters, and parameters can be passed to both procedures and functions. WATCOM BASIC provides full-screen editing and built-in functions for string and numeric computations. Interactive debugging facilities are extended with statement trace and single step. Matrix functions include multiplication and inverse. List price: \$250. Requirements: 192K, one disk drive.

WATCOM Products, Inc.
415 Phillip St.
Waterloo, Ontario
N2L 3X2 Canada
519/886-3700

BI-286

An interactive BASIC interpreter running under CP/M-86, MP/M-86, and DOS, BI-286 is written for Business BASIC II. It has a built-in ISAM manager for keyed access of files, with screen management that may be configured for any terminal. The interpreter comes as either a single-user or a multiuser system. List price: CP/M-86 or DOS version \$500, MP/M-86 version \$600. Requirements: 128K, one disk drive.

Control-C Software, Inc.
6441 S.W. Canyon Ct.
Portland, OR 97221
503/297-7153

NGS FORTH

You can develop programs with NGS FORTH's language improvements, memory management, and debugging aids. A variety of FORTH words useful for programming have been added to the FORTH '79 standard, and a FIG compatibility mode assures portability from previous FORTH applications. The program can address 1MB of RAM. Features include on-line reconfiguration of all memory areas, and separate segments for code, data, and stack partitions. FORTH colon definitions can be decompiled, and a locator finds the loading screen for a FORTH word. Other features include line and screen editors, graphics and sound words, and an 8088 assembler. List price: \$70. Requirements: 48K, one disk drive.

Next Generation Systems
P.O. Box 2987
Santa Clara, CA 95055
408/241-5909

M68000 Macro Cross Assembler

Programs written with standard M68000 mnemonics on an 8086 or 8088 computer can be assembled by the M68000 Macro Cross Assembler to run on an M68000 processor. If you buy the optional M68000 Single Board Computer (SBC), the on-board monitor will download the program through a serial port to the SBC, where it can be executed and debugged. The corrected program can be

uploaded for saving. List price: \$199, SBC \$695. Requirements: 64K, one disk drive, serial port.

Educational Microcomputer Systems
1 Clear Spring
Irvine, CA 92715
714/553-0133

Basic Business/Micro

Designed to simplify program development and facilitate debugging, Basic Business/Micro (BB/M) is a superset of BASIC for business applications. Programming aids include an indexed file structure, direct writing to SORT files, and 14-digit precision on arithmetic operations. An interactive debugger can stop program execution at any point so that variables can be examined and changes made to BASIC statements. Run-time efficiency is increased by the use of "metacode," which represents each statement in an internal format that is executed rapidly by the interpreter. List price: \$395. Requirements: 128K, one disk drive.

MAI/Basic Four Business Products Corp.
601 San Pedro NE
Albuquerque, NM 87108
505/266-5811

HS/FORTH

A system of FORTH words separated into memory segments by machine code, lists, and vocabulary, HS/FORTH allows megabyte-size programs. The assembler implements the complete 8087 and 8088 instruction set and can create machine code primitives or stand-alone files. Flow control is complemented with a jump table. AUTO-OPT helps novices write assembly programs. HS/FORTH supports screens mapped onto random access files, segment management, sound effects and music, graphics, floating point decimals, and utility files to read, write, and load DOS files. List price: \$220. Requirements: 64K, one disk drive.

Harvard Softworks
P.O. Box 339
Harvard, MA 01451
617/456-3021

Microsoft C Compiler, Version 1

A complete implementation of the C language with native code compilation, Microsoft C Compiler, version 1, produces relocatable machine code. Most of the functions described in *The C Programming Language* by Kernigan and Ritchie are contained in a library to provide UNIX-compatible I/O operations, memory allocation, and utilities such as string manipulations. Compile time options are available as well as a linker, an object module disassembler, and a library manager. An extraction utility allows specific functions in a source program to be extracted and compiled as individual object modules. The compiler optimizes object code. List price: \$500. Requirements: 128K, one disk drive. Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8088

Microsoft Pascal Compiler, Version 3.2

Implementing the proposed ISO and ANSI standards, the Microsoft Pascal Compiler, version 3.2, produces native, relocatable code. Programs can include subroutines written in Microsoft's FORTRAN and assembly language. The compiler offers a "super array" type and direct access to assembler routines and memory location through a low-level feature. The super array is dynamically allocated, can be used as a formal reference parameter, and has two predeclared subtypes to handle fixed- and variable-length strings. Features for memory use include routines for addressing data beyond the 64K data segment, support for overlays, and use of 1MB for programs of separately compiled and linked modules. In-line 8087 instructions, an 8087 emulator, a math package, and BCD format are included. List price: \$300. Requirements: 192K, two disk drives. Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8088

Plain English

Using a building block concept, Plain English aids program development by eliminating many definitions necessary in other languages. The language consists of "nouns" (variables) and "verbs" (programs). Programmers build a vocabulary (up to 2MB in size) by combining existing verbs. Files are automatically opened and closed, can be up to 512MB in size, and are part of an ISAM-based system that uses B-trees for the index. You can work with ASCII files and use color, sound, and graphics. List price: \$595. Requirements: 128K, one disk drive. Common Language Systems, Inc.
100 E. Sybelia Ave. #375
Maitland, FL 32751
305/628-5973

c-systems C Compiler

Producing ROMable code, c-systems C Compiler offers in-line assembly language coding, can make use of a full megabyte of RAM, and supports the 8087 coprocessor either in-line or by emulation. Libraries contain functions for transcendental and program chaining as well as DOS 2.00 functions with automatic selection of DOS 1.10 and 2.00 calls. A symbolic debugger called c-window displays source code and offers variable checking and alteration, automatic command execution, and multiple breakpoints. The compiler includes a nonmacro assembler with Intel mnemonics and a DOS linker. List price: \$199. Requirements: 192K, two disk drives. c-systems
5985 Calle Principia
Anaheim, CA 92807
714/637-5362

SNOBOL4 +

Based on SNOBOL4, SNOBOL4 + encompasses all of the mainframe language except FORTRAN output formats. The language uses recursion, pattern matching, and dynamic allocation for string, algebraic, and list processing. SNOBOL4 + 's primitives deal with string manipulation and can be extended by defined data types and functions. Capabilities include extra string and real number manipulations and random file access. A

special function saves the entire state of the executing system and the SNOBOL4 + system for later restoration. Other extensions allow opening 16 files at once, redirected I/O, case folding, the real values INFINITY and NAN, and representation of real numbers in E, F, or G format with specification of significant digits. List price: \$90. Requirements: 128K, one disk drive. Catspaw, Inc.
P.O. Box 1123
Salida, CO 81201
303/539-3884

Asyst

Designed for scientists, engineers, and researchers, Asyst supports the 8087 coprocessor. Three modules offer data acquisition, data analysis, scientific graphics, and a two-way interface with laboratory instruments. Features include an array editor, Fast Fourier Transforms (FFTs) and inverse FFTs, Eigensystems, and polynomial manipulation. You can design applications using definable commands. Documentation and an on-line help system are included. List price: \$1680. Requirements: 320K, one disk drive, 8087 coprocessor. Macmillan Software Co.
866 Third Ave.
New York, NY 10022
212/702-3241

PCD LISP Interpreter

Written in UCSD Pascal for portability, the PCD LISP Interpreter is an interactive LISP interpreter developed along the guidelines of University of Texas LISP. It includes over 80 basic LISP functions to reduce writing support routines. Memory is partitioned into FREE, FULL, and STACK segments to accommodate different program needs. For debugging, two functions trace a LISP function by listing its arguments each time it is called. List price: \$100. Requirements: 64K, one disk drive. PCD Systems, Inc.
P.O. Box 143
Penn Yan, NY 14527
315/536-7428

Janus/Ada

Most structures of Ada, a Pascal-like language, are in Janus/Ada. String handling, I/O, and math routines come in a run-time library. Software development features include a disassembler, a syntax checker, access to symbol table information, and Profiler, which shows a bar graph of the number of calls and the run time of routines. The assembler writes inline code and subroutines. The compiler produces relocatable code, has run-time options such as error message control and range checking, and signals when Janus/Ada code is incompatible with Ada. Debugging services protect individual lines from compilation, and a run-time walk-back feature traces procedure calls. Program size is limited to 64K of code and 64K of data; separate modules can be compiled and linked at run time. List price: \$700. Requirements: 192K, two disk drives.

RR Software, Inc.
2718 Dryden Dr.
Madison, WI 53704
608/244-6436

Nova* GKS

Application programs with standard calling sequences can use Nova*GKS, a language tool for graphics, to achieve device independence and portability. Written in C, Nova*GKS is a complete implementation of the International Graphical Kernel System (GKS). Software routines work with any number of graphics output and input devices, standardizing the creation of graphics with various computer languages. Four levels of organization improve memory and program efficiency, allowing only the necessary GKS level to be invoked. List price: \$500. Requirements: 128K, one disk drive.

Nova Graphics International Corp.
1015 Bee Cave Woods
Austin, TX 78746
512/327-9300

TeleSoft PSE

A collection of programming tools for the Ada language, TeleSoft PSE includes an operating system, a compiler, native code translators, interpreters, run-time support, and utilities. TeleSoft PSE supports applications, command line interpreting, file handling, terminal control, and text processing. The package also has a macro assembler, a system generator, and a code translator. List price: \$3030. Requirements: 576K, two disk drives.

TeleSoft
10639 Roselle St.
San Diego, CA 92121
619/457-2700

Request II

Data access and programming aids are included with Request II, a program generator for reporting, inquiry, and maintenance. An interactive command language lets you create ad hoc reports and inquiries. Commands can be saved in strings or incorporated into a COBOL program. Request II supports sequential, relative, and indexed files; serial or parallel links can be defined between them. Other features include a data dictionary and a screen management system. The program handles sorting, sampling, statistics, and calculating of minimums, maximums, and averages. It generates data entry screens and extraction COBOL programs, eliminating much manual coding. List price: \$495. Requirements: 256K, two disk drives, RM/COBOL.

Zycor Corp.
P.O. Box 792
Cedarville, OH 45314
513/766-5000

mbp COBOL Compiler

Adhering to ANSI '74 Level II standards, the mbp COBOL Compiler generates relocatable object code written in native machine language. Compiler options include run-time debugging, error limit setting, and listing selections. A symbolic debugger sets breakpoints, performs single-step traces, displays and modifies variables, and can transfer control to other programs. Chaining abilities and a stand-alone or callable sort are provided. Data entry and verification are aided by a screen management system that creates screens with up to 18 combinations of video attributes. GSA certified, the mbp COBOL Compiler supports programs with unlimited subroutine segments (each up to 64K in size) for one 64K data segment. List price: \$750. Requirements: 128K, two disk drives.

mbp Software and Systems
Technologies, Inc.
7700 Edgewater Dr. #360
Oakland, CA 94621
415/632-1555

Digital Research C

Conforming with the UNIX Version 7 C Standard, Digital Research C provides a compiler, a linkage editor, a UNIX-compatible library, and a relocatable assembler. The language supports overlays and addresses 1MB with the BIG memory model. The library contains routines for file access, string manipulation, memory management, and transcendental functions. Digital Research C supports the 8087 coprocessor, includes compiler command line options, and lets you specify I/O redirection at compile time. Debugging aids include an interlisting of C source code with corresponding assembly code. List price: \$350. Requirements: occupies 110K of RAM.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

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BetterBASIC

Modeled on Microsoft's BASIC, BetterBASIC offers structured programming features for implementation and coding. Its syntax includes ten block structures that are automatically indented. You can define new keywords with their own local variables, line numbers, and data statements. The system is divided into separately compiled, relocatable modules of procedures or functions. New modules can be retained in a library. BetterBASIC offers record and pointer variables, character manipulation in strings, and the ability to use 640K of memory. Code is incrementally compiled into pseudocode for speed and portability. Assembly language calls are supported. List price: BetterBASIC module \$199, Advanced Programming module \$139. Requirements: 192K, one disk drive. Summit Software Technology, Inc. 40 Grove St. Wellesley, MA 02181 617/235-0729

Golden Common LISP

A microcomputer version of LISP, the programming language of artificial intelligence, Golden Common LISP (GCLISP) manipulates symbols as well as numbers. A subset of Common LISP, the language accepts data types such as infinite precision integers, arrays, character strings, lists, and symbols. The language supports an 8087 coprocessor, a full-screen editor, multitasking, macros, memory allocation, and garbage collection. GCLISP has on-line documentation and help facilities. The package includes a reference manual, a book on the language, and an optional tutorial. List price: \$375, with tutorial \$495. Requirements: 256K, one disk drive. Gold Hill Computers, Inc. 163 Harvard St. Cambridge, MA 02139 617/492-2071

Professional BASIC

Compatible with IBM's BASIC, Professional BASIC emphasizes improved error detection and program analysis. Individual or complete variable cross-referencing can be listed or shown on a split screen with present code. The program can be single-stepped or investigated with conditional breakpoints. It checks syntax upon entry, analyzes structure upon program completion, and lets you evaluate any expression each time it is executed. For structured programming, subroutine calls use line labels and automatically code indents. Programs can use the full memory and are semicompiled into pseudocode. List price: \$345. Requirements: 256K, two disk drives. Morgan Computing Co., Inc. 10400 N. Central Expy. #210 Dallas, TX 75231 214/739-5895

DeltaBASIC

Providing both file and record locking, DeltaBASIC is a business language for single- and multiple-user systems. The program features keyed data files, decimal arithmetic, and formatted data entry screens. A substring function permits access to any part of a string and insertion or deletion of characters within strings. Binary-tree data management speeds program execution. DeltaBASIC supports program chaining, long variable names, function and arrow keys, and screen features such as blinking and inverse video. Utilities let you design data entry screens, sort data files by predefined keys, generate help messages for your programs, and convert ASCII files to and from DeltaBASIC format. A run-time module and source code in 8088/8086 assembly language are available. List price: \$350. Requirements: 128K, one disk drive. DeltaSoft, Inc. 7524 S. Broadway #119 P.O. Box 7082 Tyler, TX 75711 214/581-1425

Modula-2/86

A development system for programming in Modula-2, Modula-2/86 consists of a compiler, a linker, a symbolic debugger, and a module library. The package comes with Niklaus Wirth's *Programming in Modula-2*. The compiler converts Modula-2 source code to ROMable native machine code. List price: \$495. Requirements: 256K, hard disk. Logitech U.S.A. 805 Veterans Blvd. Redwood City, CA 94063 415/365-9852

RM/COBOL

With its full Level II sequential, relative, and indexed I/O capabilities, RM/COBOL is GSA-certified at the low intermediate level. A single-pass compiler, it requires less memory for compilation. Multikeyed, indexed files are supported, providing flexible record selection. An interactive debugger is included, and segmentation permits overlays and large programs. Interactive screen displays are created using the ACCEPT and DISPLAY statements with multiple operand fields. List price: \$950. Requirements: 128K, two disk drives. Ryan-McFarland Corp. 9057 Soquel Dr. Aptos, CA 95003 408/662-2522

BOS/MicroCOBOL

Incorporating a symbolic debugger, a pre-compiled library of system routines, program development utilities, and a compiler, BOS/MicroCOBOL supports single- or multiuser COBOL applications running under BOS/5 or MBOS/5 operating

systems. A text editor, a linkage editor, a librarian, a cross-referencer, and a JCL builder are included. The program offers record and file locking, a screen manager, and overlays. The library includes a multi-key sort, data management, and file conversion. Programs are portable to other BOS/5 and MBOS/5 operating system environments. List price: single user \$550, multiuser \$900. Requirements: 64K, two disk drives, BOS/5 or MBOS/5. BOS National, Inc.
2560 Royal Ln.
Dallas, TX 75229
214/484-2717

C_to_dBASE

You can write programs for *dBASE II* with C_to_dBASE. Written in C and intended to help programmers learn the C language, the package contains over 70 functions, includes all source code, and works with any full C compiler. A library of low-level functions lets you write code to access *dBASE II* data and index files without using *dBASE II*. Multiple-field index key processing and creation of files are not supported. List price: \$125. Requirements: 128K, one disk drive. Computer Innovations, Inc.
980 Shrewsbury Ave.
Tinton Falls, NJ 07724
201/542-5920

FORTH +

Based on a 32-bit virtual machine, FORTH + includes an '83-standard FORTH interpreter/compiler with background multitasking and hash/cache dictionary lookup, a full-screen editor, an assembler with local labels and forward referencing capabilities, a reverse translator, a file and record interface, and debugging aids. Programs and data coexist on the disk with other languages, applications, and data files, and both can be manipulated by system utilities. All disk and console I/O is performed using standard operating system function calls, making the system hardware portable. List price: \$250. Requirements: 64K, one disk drive. Laboratory Microsystems Inc.
P.O. Box 10430
Marina del Rey, CA 90295
213/306-7412

Pascal/MT + 86

Implementing the ISO Version 5.6.1 standard, Pascal/MT + 86 directly generates relocatable, ROMable native code. The package includes a compiler, an assembler, a linker, a symbolic debugger, a disassembler, and a utility library. One megabyte of memory is allocated into four sections, allowing multitasking programs. Program chaining and overlays, assembly language procedures and functions, and routines to manipulate bits or bytes of data are included. Modular programming is supported. List price: \$600. Requirements: occupies 108K of RAM, two disk drives. Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

Personal COBOL, High Performance Level II COBOL, Compact Level II COBOL

You can develop programs with Personal COBOL, a front-end tool that uses menus and help screens. The system includes a text editor, a syntax checker, a forms feature that generates screen source code, and an interpreter called Animation. Intermediate code formed by the syntax checker is executed by Animation for debugging and application purposes. When debugging you can display code at one of nine execution speeds, set breakpoints, change data values, and reset the program counter.

Certified at the Federal High Level ANSI '74 COBOL standard, the High Performance Level II COBOL compiler implements all ANSI COBOL modules except the Report Writer. The compiler supports screen handling extensions, tables up to 49 dimensions, multiple modules of 64K code and 60K data, and runtime allocation of file names. The Compact Level II COBOL compiler, written in COBOL for portability, generates intermediate code, whereas the High Performance Level II COBOL compiler, written

in native code for speed, first generates intermediate code, any portion of which it will further compile to native code. List price: Personal COBOL \$395, High Performance Level II COBOL \$1995, Compact Level II COBOL \$1595. Requirements: 256K, two disk drives. Personal COBOL and Compact Level II COBOL also distributed by Digital Research. Micro Focus
2465 E. Bayshore Rd. #400
Palo Alto, CA 94303
415/856-4161

Modula-2

Supporting Modula-2, a language structured around separately compiled definition and implementation modules, Volition Systems' Modula-2 package includes Pascal and Modula-2 compilers, a screen editor, a file manager, and a library of system and utility modules. Language features include low-level programming and concurrency, while other modules support overlays, string manipulation, arithmetic and picture formatting, and accessing I/O ports and screen display modes. The package interacts with DOS and supports the 8087 coprocessor. Utilities include UNIX-like p-shell supporting pipes, wild cards, and I/O redirection. The compiler produces intermediate code and locates execution errors with a detailed trace listing. List price: \$150. Requirements: 64K, two disk drives. Volition Systems
P.O. Box 1236
Del Mar, CA 92014
619/481-2286

CBASIC Compiler

The relocatable native code generated by the CBASIC Compiler enables separate modules and assembler routines to be individually created and linked together to form a complete program. Structured programming is aided by the Multiple Line Function feature, which creates functions that have local variables and can be called with parameter passing. Fixed record length files, stream files, and binary files are supported. Execution errors can be trapped for handling, data can be passed between programs, and 20 files can be open at once with dynamic buffer allocation. Utilities include 12 string func-

tions, 1 of which is a pattern matcher. List price: \$600. Requirements: 128K, two disk drives.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

Personal BASIC

Beginners will find a less complex set of commands, statements, functions, and capabilities in Personal BASIC, a language appropriate for noncommercial programs. Single, full-view line editing, CP/M-like commands, single line functions, and syntax checking of each line as it is entered simplify use. Debugging aids include single-step breakpoint setting to monitor and modify the flow of execution, statement-number tracing to show the output of each line, and variable tracing to display variable values. List price: \$150. Requirements: occupies 76K of RAM, two disk drives, CP/M-86.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

CBASIC-86

A commercial dialect of the BASIC language, CBASIC-86 compiles source code to pseudocode, which it then interprets. This method, coupled with a small run-time monitor (CBASIC-86 has no editor), increases the memory available to applications. Real numbers are maintained in binary coded decimals for precision, and integer arithmetic is supported for speed. Other features include an assembly code interface, debugging with tracing and a cross-referencer, sequential and random access of fixed and stream files, and a set of string functions. CBASIC-86 is upwardly compatible with Digital Research's 8-bit version. List price: \$200. Requirements: 48K, one disk drive.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

FORTTRAN-77

A full implementation of the ANSI '77 standard, FORTRAN-77 compiles source code to native object code. Programs can have up to 1MB of combined code and data. Smaller programs of less than 64K of code or data can be compiled with an option that produces shorter memory addresses for fast execution. The package includes a linkage editor that combines relocatable object modules, provides overlay support, and produces load modules. The compiler accepts source code using either the character data type or Hollerith data specifications. FORTRAN-77 has 80 intrinsic functions, allows variable names of 40 characters, and handles I/O to auxiliary ports through Read and Write statements. List price: \$500. Requirements: occupies 96K of RAM, two disk drives.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

PL/I

Programs coded with Digital Research's PL/I, which is based on the general-purpose Subset G of PL/I, are upwardly compatible with full PL/I. The package includes a linkage editor, an assembler, a librarian, cross-reference utilities, and a run-time library. Five levels of overlays are supported, and modules in object file format, whether in PL/I or other languages, can be linked. There is file access control for multiuser applications, and extended I/O capabilities are provided. The language itself has multiple data types, dynamic memory allocation, block structuring, string-handling abilities, and a set of FORTRAN-like numeric functions. List price: \$750. Requirements: 128K, two disk drives.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

MicroFCS

A command-driven language, MicroFCS generates financial plans, analyses, and reports. The package includes a file manager, an editor, color graphics, and a report generator. Screen-handling functions help design menus that control applications and validate data entry. Over 60 precoded functions can be used to write financial models or create new functions. Applications developed with MicroFCS will run on mainframes using FCS. List price: \$2000. Requirements: 256K, two disk drives.

Evaluation and Planning Systems
1 Industrial Dr.
Windham, NH 03087
603/898-1800

Dr. Logo

An advanced version of the Logo programming language, Dr. Logo is an interactive, educational programming language. It includes editing and debugging features and work-space management tools. The language uses turtle graphics, the turtle being a triangular pointer that you move with keyboard commands to outline a graphics image. Dr. Logo has built-in help commands and a full-screen editor that explains editing commands. List price: \$150. Requirements: 192K, one disk drive, color graphics board.

Digital Research
160 Central Ave.
Pacific Grove, CA 93950
408/649-3896

SuperSoft FORTRAN/ RATFOR

An ANSI '66 standard compiler with extensions, SuperSoft FORTRAN produces either object files or intermediate code files. It supports variable-length strings, string comparisons, .XOR, character literals with embedded control characters, dynamic memory allocation, video access, and multiple statement lines. Programs can use free-format input and can search a disk either randomly or sequentially. RATFOR, the preprocessor that compiles to FORTRAN, allows loop control and

structured programming techniques. List price: \$425. Requirements: 128K, one disk drive.

SuperSoft
P.O. Box 1628
Champaign, IL 61820
217/359-2112

SuperSoft C Compiler

Written in SuperSoft C, SuperSoft C Compiler contains most features of UNIX Version 7 C. It is a multipass compiler that optimizes intermediate code and outputs assembly code to a disk. SuperSoft C Compiler supports overlays, ROMable object code, dynamic memory allocation, arbitrary record size, direct BIOS/BDOS calls, and 39 compiler options. All library functions are in source form. List price: \$500. Requirements: 128K, two disk drives.

SuperSoft
P.O. Box 1628
Champaign, IL 61820
217/359-2112

SuperSoft BASIC

A two-pass compiler, SuperSoft BASIC is compatible with the Microsoft BASIC interpreter. It produces relocatable object code that is linked with run-time support routines to produce a machine-executable program. SuperSoft BASIC supports BCD math routines, four variable types, full formatted output, long variable names, error trapping, matrices with up to 32 dimensions, and random and sequential disk files. List price: \$300. Requirements: 128K, two disk drives.

SuperSoft
P.O. Box 1628
Champaign, IL 61820
217/359-2112

CBASIC Compiler With Graphics

An extension of Digital Research's CBASIC Compiler, this program supports graphics under the CP/M-86 or DOS operating system. The graphics extensions fall into five groups: output, format, viewing area, input, and control. The extensions are additional statements and functions recognized as reserved words by the compiler and implemented in a run-time library to provide device-independent graphics. Graphics System Extension (GSX), the interface to the graphics devices, is bundled with the package for those using DOS. List price: \$600. Requirements: 48K, one disk drive.

Digital Research
P.O. Box 579
Pacific Grove, CA 93950
408/649-3896

WATCOM, APL, Version 2.0

An interpreter for APL, Watcom APL, version 2.0, supports the data-handling ability and interactive nature of this array-oriented language. Arrays can have up to 32,767 elements regardless of data type. Two types of files are used: a native file, which is defined by the operating system, and a component file, which can be accessed randomly or sequentially and is used to store arrays of any size or shape. The 8087 coprocessor is supported or is emulated if not present. There are report-formatting facilities, full-screen editing, string-handling capabilities, color graphics, and a machine-level interface. List price: educational buyers \$295, commercial buyers \$450. Requirements: 256K, one disk drive.

WATCOM Products, Inc.
415 Phillip St.
Waterloo, Ontario
N2L 3X2 Canada
519/886-3700

Business BASIC Compiler

Designed for programs with commercial applications, Business BASIC Compiler produces native machine code in relocatable format. Subprograms that call parameters by reference are supported, allowing entire arrays to be passed at once. This structured approach also includes multiline functions with parameter passing. Programs can be configured with separately compiled and reusable modules to create applications up to 1MB in size. Labels of 40 characters, dynamic and static arrays, and 32K-long string variables are provided. A translation facility can convert CBASIC source programs to the Business BASIC Compiler format to be compiled and run. List price: \$600.

Requirements: 128K, two disk drives.
Microsoft Corp.
10700 Northup Way, Box 97200
Bellevue, WA 98004
206/828-8088

SUNDB86M

A DATABUS compiler for 8086, 8088, and 80186 microprocessors, SUNDB86M offers professional business programmers a combination of features from BASIC, COBOL, and RPG. The language uses English verbs in a highly structured, columnar format. Ten definable codes can control display features such as color or secret input. SUNDB86M is written in machine code for quick execution, and it can incorporate subroutines written in assembly language. Sequential, random, and ISAM files are supported. List price: \$495. Requirements: 128K, one disk drive.

Sunbelt Computer Systems, Inc.
5525 E. 51st St. #120
Tulsa, OK 74135
918/660-0670

PC/Focus

A fourth-generation language, PC/Focus has a vocabulary that supports report generation, graphics, financial models, and statistical analysis. The system interacts with data bases organized as FOCUS, QSAM, VSAM, ISAM, IMS, IDMS, TOTAL, ADABAS, or DL1 structures. PC-Focus includes menu- and screen-creation facilities, logic and computational functions, dynamic file joining, and DBA security from file access to field values. It supports COBOL, BAL, FORTRAN, or PL/I subroutines. TableTalk and FileTalk modules build report requests or design files as menu choices are formulated into commands. List price: \$1595. Requirements: 512K, 5MB hard disk.

Information Builders
1250 Broadway
New York, NY 10001
212/736-4433

MWC86, csd

A C compiler for DOS, MWC86 supports large and small models of compilation, the 8087 math coprocessor, and DOS 2.00 path names. The compiler offers common code elimination, peephole optimization, and register variables.

MWC86 also supports the full C language including recent extensions such as the Berkeley structure rules, voids, enums, UNIX I/O calls, and structure assignments. A C source language debugger, csd, features on-line help, the ability to walk through the stack, debugging of graphics programs without disturbing the program under test, and windows for evaluation, source, program, and history. List price: \$495. Requirements: 256K, two disk drives.

Mark Williams Co.
1430 W. Wrightwood
Chicago, IL 60614
312/472-6659

Waterloo Logo

A full implementation of the Logo language, Waterloo Logo features over 140 primitives, 12-digit decimal floating-point arithmetic, extended turtle graphics, music, painting, list processing, and a full-screen editor. An interface to DOS is provided. List price: \$125. Requirements: 128K, one disk drive, color graphics board.

Waterloo Microsystems Inc.
175 Columbia St. W
Waterloo, Ontario
N2L 3B6 Canada
519/884-3141

SMC BASIC

A BASIC package that semicompiles a pseudocode for its interpreter, SMC BASIC is compatible with Business BASIC III. It supports access to system and task variables, loops, subroutines, conditional and unconditional branching, and user-defined functions with return values. Files are arranged in B-tree structures with indexed, serial, or direct organization and can be accessed randomly or sequentially. I/O features include control over disk and file access and printer and terminal action. List price: \$395. Requirements: 256K, one disk drive.

SMC Software Systems
1011 Rt. 22
Bridgewater, NJ 08807
201/685-9000

GL/M

A graphics language, GL/M (Graphics Language for Microcomputers) generates precision graphics on daisy wheel and dot matrix printers. GL/M draws detailed figures; it is not a "screen dump" program. A picture can contain text, which has fully formed characters when printed on a daisy wheel printer. GL/M supports Spinwriter, Diablo, and compatible daisy wheel printers and Epson, Anadex, and Prowriter dot matrix printers. List price: \$195. Requirements: 64K, one disk drive.

Aspect
167 Worcester Rd.
Wellesley, MA 02181
617/431-7576

COGEN 6.0

A COBOL program generator, COGEN 6.0 increases programmer productivity by using a series of steps such as menus and prompts to generate structured COBOL source programs. You can permanently alter the way the system generates source code. COGEN 6.0 lets you specify up to nine conditions for data acceptance in a field. You can direct program output to the screen, enabling the utility to function as an on-line query system. You can also update data in the batch mode by generating batch control programs. A data dictionary makes all data fields and their definitions available in a centralized format. List price: \$950. Requirements: 64K, one disk drive.

Bytel Corp.
1029 Solano Ave.
Berkeley, CA 94706
415/527-1157

Turbo Pascal

Providing a menu-driven program development environment, Turbo Pascal is a one-pass native code compiler that has a full-screen editor. Features include 11 significant digits in floating-point arithmetic, built-in transcendental functions, and dynamic strings with a range of string handling functions. Turbo Pascal also offers program chaining with common variables, random access data files, support of the operating system, and heap management. With the PCjr and the AT, it supports windowing, graphics, sound, and color. There is 8087 support available. List price: \$49.95, with 8087 support \$89.95. Requirements: occupies 33K of RAM.

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4807 Scotts Valley Dr.
Scotts Valley, CA 95066
408/438-8400

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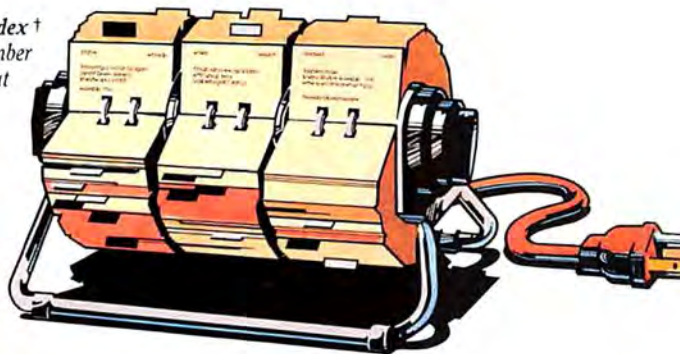
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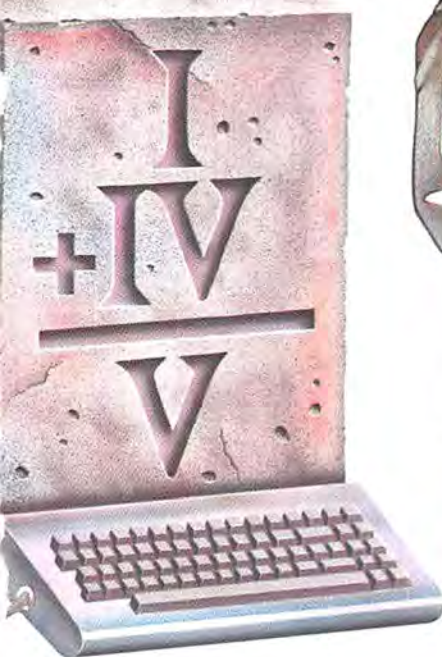
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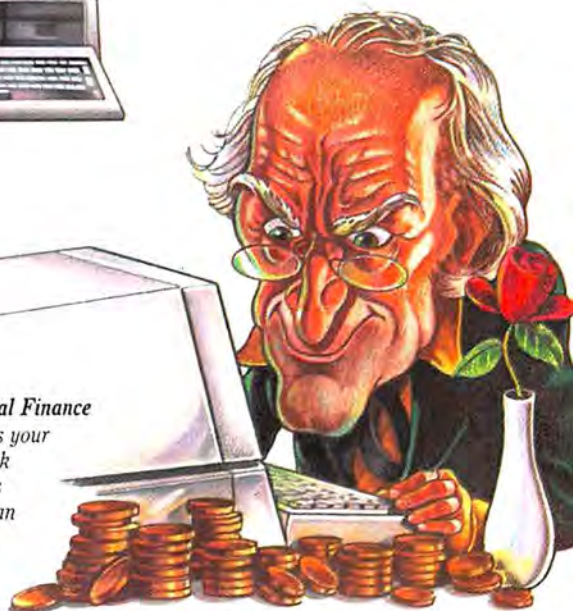
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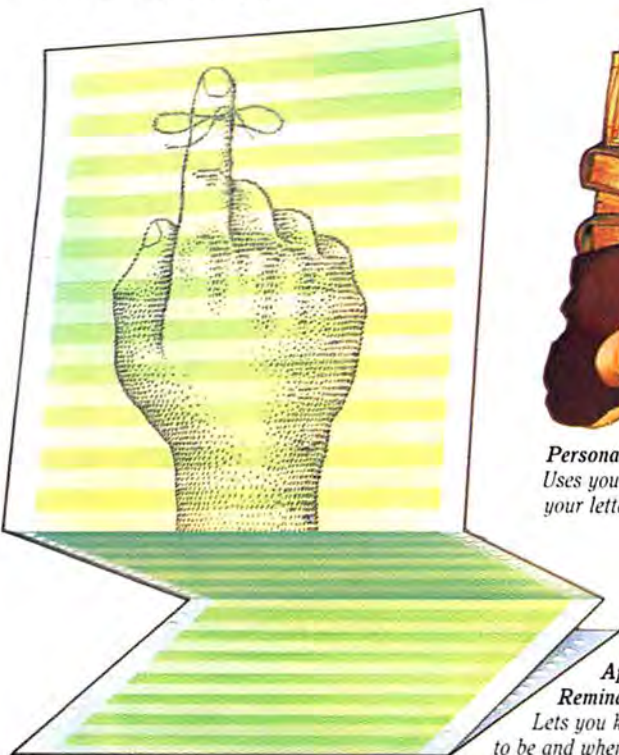
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