

PERSONAL SOFTWARE

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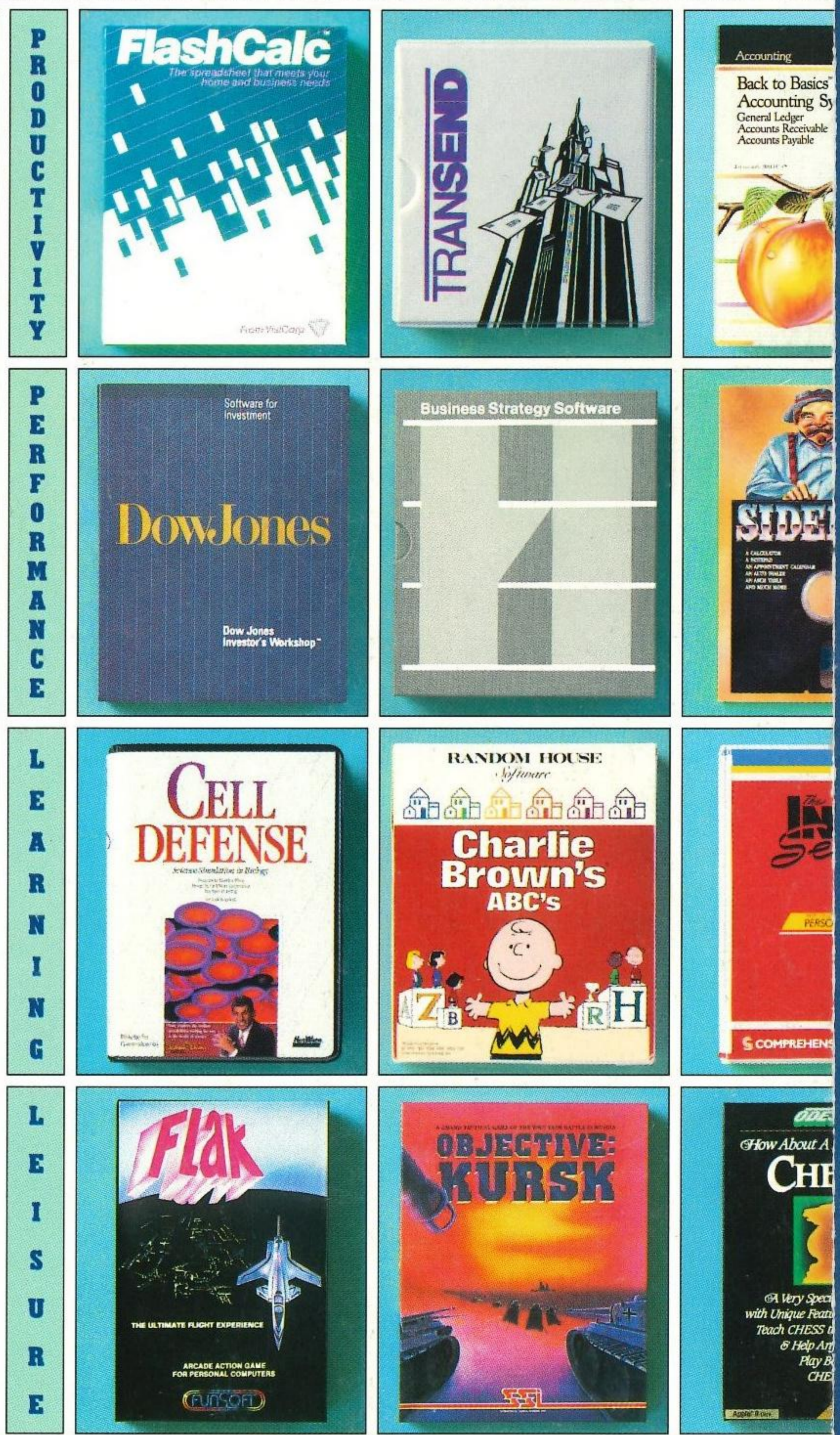
SEPTEMBER 1984 • THE TOP 20 PROGRAMS

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Share 'Test Drives' of:
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The Home Accountant
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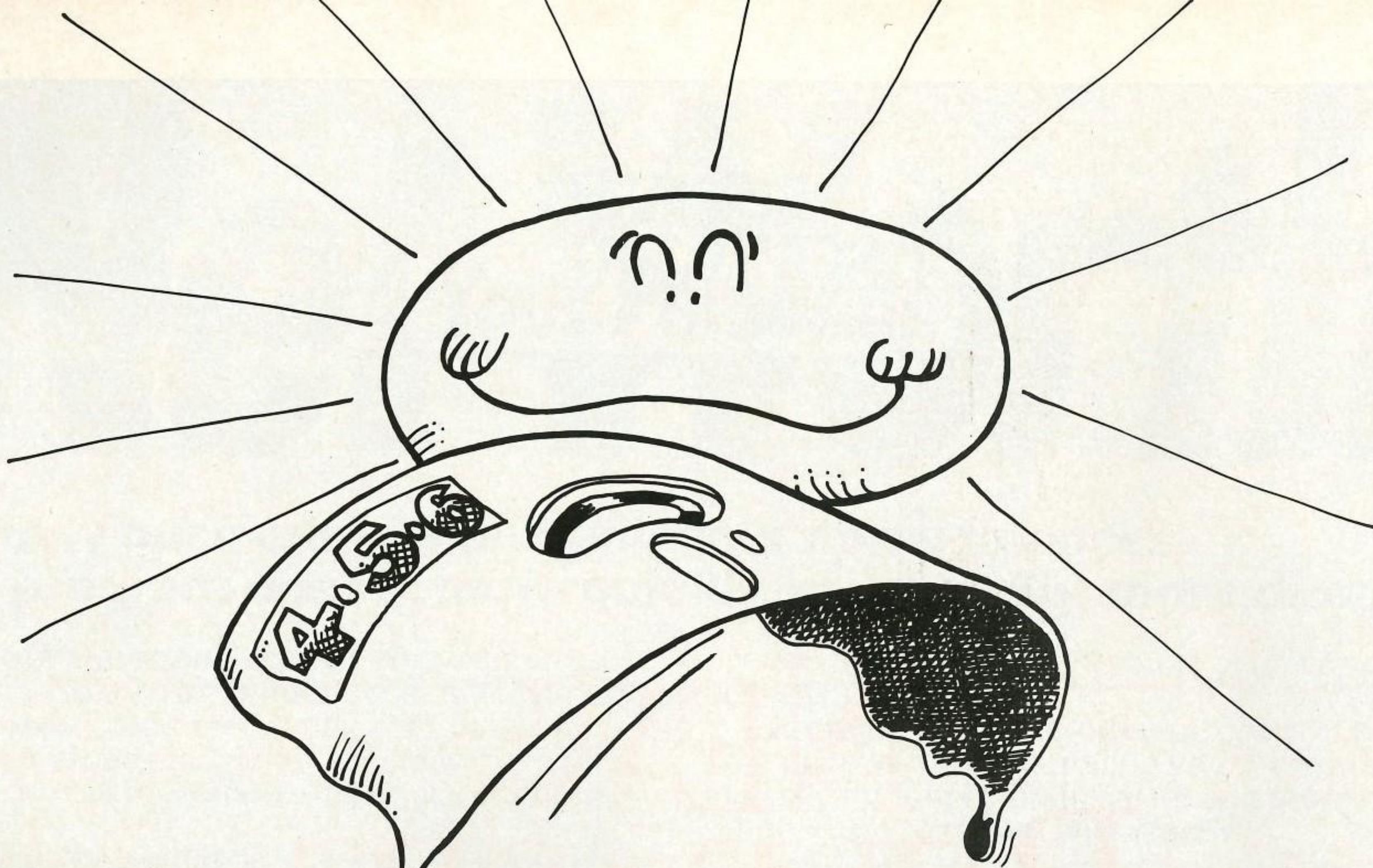
This Month's 90 Best-
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A Buyer's Guide
To Spreadsheets
BEGINS ON PAGE 117



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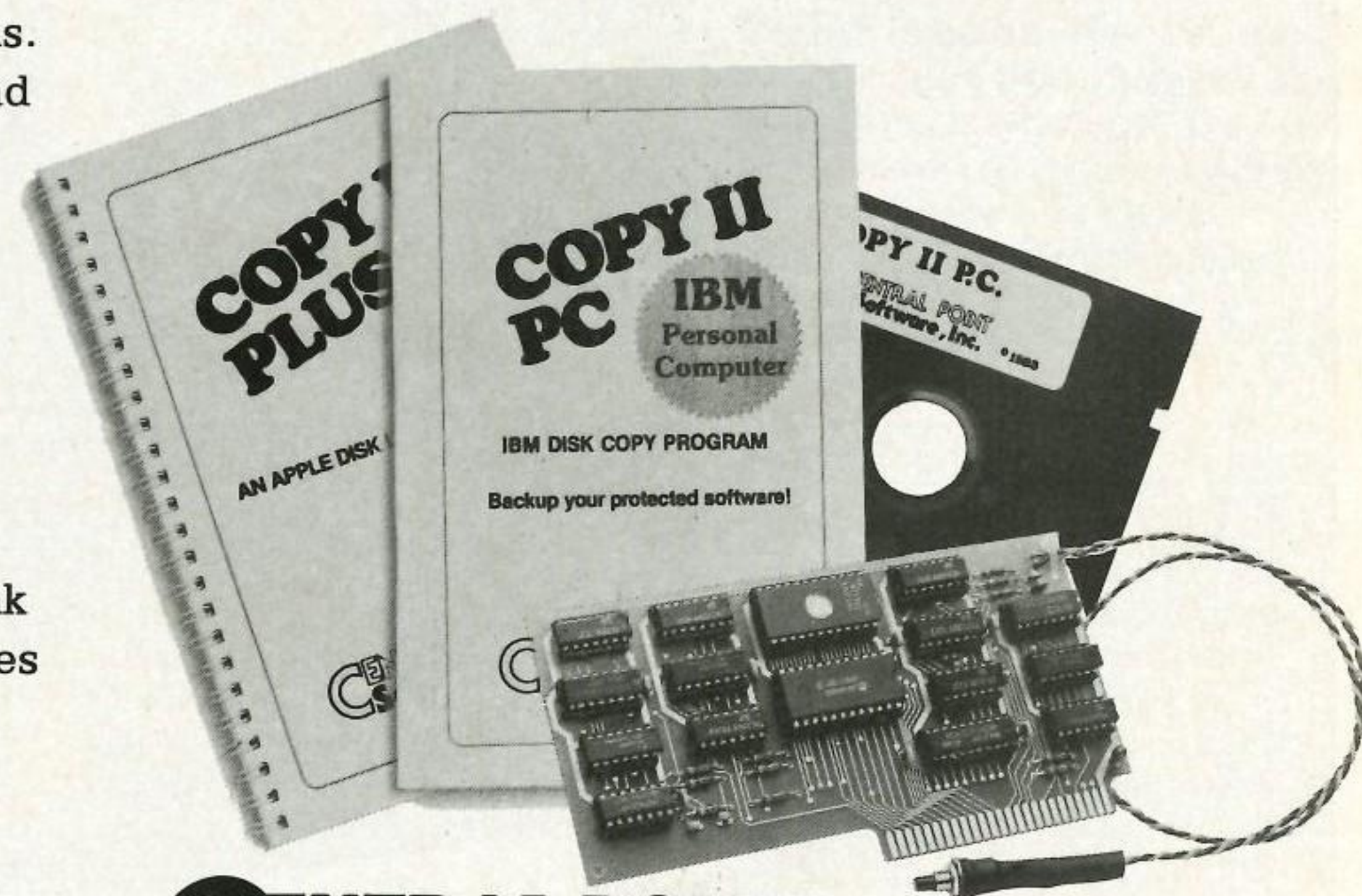
WildCard 2 (Apple][,][Plus, //e)

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NEW RELEASES/INDEX

Apple II/III Series

- ACT Preparation Series
- Ankh
- Armageddon
- Bartender Guide & Host
- Books! Modules
- Cell Defense
- Challenge Math
- Charlie Brown's ABCs
- Child's Play
- Computer Preparation for the ACT
- DB Master Business Writer
- Dinosaur Days
- Doctors-on-Disk
- Dow Jones Investor's Workshop
- El-Ixir
- Easy Com Easy Go
- Far Star
- 50 Mission Crush
- Finance Manager
- Fit and Trim
- Flak
- Flashcalc
- FourPlay
- French by Computer Series
- Fuzzywomp
- Graphics Exhibitor
- Hayden SAT Score Improvement System
- HES Science Programs
- History of Space Flight
- How About a Nice Game of Chess!
- How About a Nice Game . . . Series
- Huang's I Ching
- Imagination Series
- Introduction to Poetry: Poetic Meter
- KinderLogo
- Knoware At Home
- Language Development Software
- Language of Mathematics Series
- Learning to Read: Letters, Words, and Sentences
- Living Literature Series
- Mabel's Mansion
- Maestro
- Magic Office System
- Managing For Success: People Management

- Managing For Success: Personal Development
- The Market-Manager
- MasterType
- Memory Minder
- Merry Canned Nightmares and Dreams
- Mr. Fixit
- Music Readiness: Pitch & Rhythm
- MyChess II
- Objective Kursk
- Omnis
- On-Court Tennis
- On-Field Football
- Peanuts Maze Marathon
- Peanuts Picture Puzzlers
- PSAT/SAT Analogies
- SEI Literature Series
- SEI History/Government Series
- Shifty Sam
- Snoopy's Skywriter Scrambler
- Snoopy to the Rescue
- Spell It!
- Spy vs. Spy
- TestMaster
- Thwart!
- Time Travelers Series
- Tranquility Base
- Varicalc
- Webster's Numbers
- Wilderness: A Survival Game
- Wiz Type
- Word Walk
- World Challenge
- The Write Choice
- Writing Skills, Volumes 1-5

Apple 32-Bit System Family

- Books! Modules
- Cut 'N' Paste
- Da Vinci
- The Negotiation Edge
- Omnis
- Professional Composer

IBM (PC-DOS)

- Asap Barcode
- Asap Six
- ATI Software Sampler
- Back to Basics Accounting System
- Bartender Guide & Host
- Baseline
- Benchmark Graphics

- The Benchmark Series
- Cell Defense
- Chief Executive Series
- Huang's I Ching
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- Crime and Punishment
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- dBase/Answer
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- DFastest
- Dow Jones Home Budget
- Dow Jones Prospect Organizer
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- Managing For Success: Personal Development
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- The Negotiation Edge
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- Samna Word III

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- History of Space Flight
- Huang's I Ching
- SEI Literature Series
- SEI History/Government Series
- T-Base
- Training for TRS-DOS

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- Star Wars: The Arcade Game

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- Templates For Superbase 64
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- Wiz Type
- World Challenge

CP/M

- Bisybase
- DB/Compiler
- DFastest
- Kamas Knowledge and Mind Application System
- Reachout

Digital

- Acorn Professor Programs

Epson

- Acorn Professor Programs

NEC

- Benchmark Graphics
- T-Base

Sanyo

- CPemulator

Timex/Sinclair

- Family Album

KEY

- Productivity
- Performance
- Learning
- Leisure



You bought a computer to cultivate your kids' minds. Make sure it's bearing fruit, not growing vegetables.

Introducing a whole crop of Learning Adventure games from Spinnaker.

When it comes to cultivating adventurous young minds, the computer's potential is endless.

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IN SEARCH OF THE MOST AMAZING THING.™
It isn't easy to find—even in your B-liner. But you'll have help from your Uncle Smoke Bailey as you search the universe to find the Most Amazing Thing. **Ages 10-Adult.**

hours of adventure and learning. So the time kids spend with our games will help them develop valuable skills. Instead of just tired thumbs.

But what really makes our Learning Adventure games unique—educational value aside—is how much fun they are. Which isn't too surprising when you consider you can do things like bargain with aliens, search a haunted house, or build your own railroad empire.

In fact, our games are so much fun, kids will really enjoy developing some very important skills. Deductive reasoning, note taking, and problem solving, for instance.

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Spinnaker Learning Adventure games are available for Apple,® Atari,® IBM® and Commodore 64™ home computers.

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Disks for: Apple, Atari, IBM, and Commodore 64.
Cartridges for: Atari and Commodore 64—
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TOP 20/PRODUCTIVITY

VisiCalc Eclipsed

■ **FLASHCALC** runs on the Apple II series; \$99 retail; VisiCorp, 2895 Zanker Road, San Jose, CA 95134; (408) 946-9000.

FlashCalc, VisiCorp's newest spreadsheet, may at last put some life in the Apple computer spreadsheet market that has stagnated while innovations proliferated for the IBM Personal Computer. In short, FlashCalc is more than a song and dance, but it is certainly not a "symphony." For \$99 it doesn't have to be.

Today's Apple computers have grown up from a time when spreadsheets had only limited hardware to work with. Years of success—and some healthy competition from IBM—have brought hardware improvements like graphic interface cards, hard disks and expanded RAM capability. Apple has created ProDOS, a more advanced operating system designed to take advantage of all these new peripherals. FlashCalc is designed to take advantage of most of these advances, while VisiCalc, VisiCorp's pioneer product, was not. As a result, VisiCorp's grand dame of spreadsheets will be shunted out to make room for a new generation of spreadsheets.

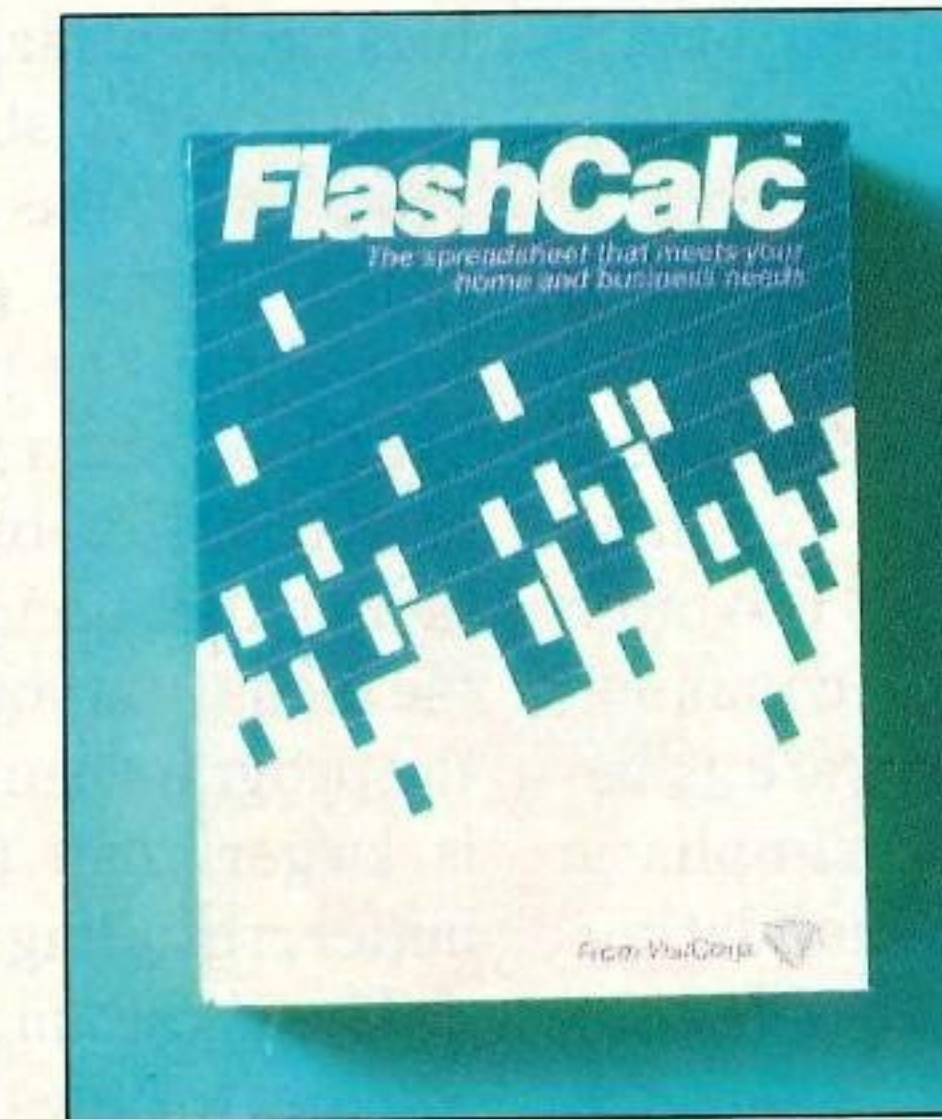
FlashCalc retains all of the best features of VisiCalc, including its what-if speculation, its multiple cells and its windowing, while solving the problems of limited size and unyielding structure that plagued VisiCalc users.

The size problem has been taken care of by expanding FlashCalc's memory limit to 512k (the minimum memory requirement is 64k), a vast improvement over VisiCalc's maximum of 128k. As a result, a larger number of cells—up to 254 rows and 63 columns—can be created with FlashCalc than with VisiCalc.

Where VisiCalc's structure was rigid in its column format, FlashCalc allows the user to adjust the size of the columns at any time. FlashCalc formats also allow a variety of format options

such as adjustable columns and floating decimal points.

FlashCalc operates within ProDOS, which means that it can address expansion RAM cards, 80-column cards and electronic and hard disks that VisiCalc does not serve in the Apple environment. More importantly, it can work on Apple's new IIc, which also uses ProDOS. And because FlashCalc takes advantage of such things as electronic



disks and expanded RAM, calculation speeds are markedly faster than those of VisiCalc.

In the Apple market, however, nothing is more important than ease of use. For many users, FlashCalc will be their first spreadsheet experience, as VisiCalc was for an earlier generation. FlashCalc makes the learning process

smoother than many of the so-called advanced calculators. The program features "pull-down" menus that are easily accessible and a "financial functions" package that allows users to make financial calculations—such as internal rate of return, net present value, future value, payment, payment periods, interest and interest discount rates—without having to create a spreadsheet. The user simply fills in the blanks with the required information, chooses the calculation to be performed, and instructs the program to carry out the command.

The manual provides detailed coverage of each command and its function, from fundamental operations to advanced formatting techniques. There is even a shorter beginning manual for those who like to get involved in using a product before reading through the manual. The "Getting Started" guide is designed to let you do just that—load up the program and start playing. The serious business, like saving and printing spreadsheets, can wait until later.

The manual explains each basic FlashCalc command step by step. The commands are the familiar slash plus

single letter common to all spreadsheets. A "/M", for instance, will move a column or row; a "/D" will delete a column or row, depending on the option chosen. The manual is generously illustrated with representations detailing everything from the care and feeding of a floppy disk to screen shots and large displays of the available commands.

While FlashCalc goes a long way toward bringing the software up to date with today's hardware, it doesn't go quite far enough. The failure to support graphics cards and a mouse—even for the Apple IIe and IIc, may reduce its impact on a user community that is highly gadget-conscious. VisiCalc is often credited with giving the Apple II its first serious reason for being. FlashCalc could have done the same for the Apple mouse. Reportedly, VisiCorp is working on a Mac version of FlashCalc that will indeed make use of these peripherals. "If we were to put a spreadsheet on the Mac we would design it to take advantage of the windowing environment and the mouse," a VisiCorp spokesman explains.

But how much can we realistically expect from a \$99 package? In ordinary times, FlashCalc's price performance would blow the competition out of the water. Unfortunately, these are not ordinary times, as VisiCorp, Sorcim and other software companies are discovering—the hard way. It is a different world today. No matter what anybody might wish, the IBM Personal Computer and Lotus 1-2-3-like products are likely to continue to dominate the market and users are likely to measure other products by this yardstick.

However, at \$99, FlashCalc is destined to put perhaps the final nail in the coffin of that grand old lady, VisiCalc. VisiCorp's love affair with VisiCalc is apparently over. "The only ones (who will still buy VisiCalc) will be those looking for a brand name," says the VisiCorp spokesman.

Those may be harsh words coming from the company that adopted VisiCalc's first name for itself only two years ago. But it's proof of the fact that success and failure in the software market are only a "flash" apart.

—Robert Sehr

ROBERTO BROSAN

Communicating With Style

■ **PC COMM-LETE!** runs on IBM Personal Computer and close compatibles (including Eagle PC, Eagle Spirit, Compaq, Compaq Plus, Columbia, TeleVideo, and Panasonic) equipped with 256k and a modem; \$229.95 (for software), \$599 (for software plus a 300-/1200-baud PC ModemCard), \$675 (for software plus a 300/1200 baud external modem) retail (prices include discount offers for numerous on-line data bases and communications services); Transend Corporation, 2190 Paragon Drive, San Jose, CA 95131; (408) 946-7400.

In the dark ages of personal computing, way back about two years ago, communications software packages had to meet only a relatively limited number of demands to be satisfactory to users. The few users actually sending files back and forth or to a communications service such as The Source or CompuServe were willing to put up with a fair amount of grief to fulfill their limited ambitions. They were willing to learn the language of ACKs, NCKs, duplex, parity, overflowing buffers and error checking.

Familiarity has bred impatience—and higher expectations. The ability to automatically dial a number, or automatically log on to a service, for example, is taken for granted. People are no longer thrilled simply by the fact that they are able to communicate. They want to send multiple files with the assurance that good error checking will minimize problems; they want to accomplish this in a minimal amount of time; and increasingly, they want to be able to set up procedures that clerical-level support staff can handle, but without giving up the power that a skilled user can take advantage of.

This new generation of users is looking for packages such as Transend's PC Comm-plete! At \$229 for a communications program, Comm-plete! is hardly inexpensive, but it packs a lot of features into one disk. As a package with one of

Transend's modems, the price becomes extremely competitive. An internal modem for the IBM Personal Computer plus software goes for \$599, while an external modem is bundled with the program for \$675 (both retail list prices).

Comm-plete! can boast a full line of features: the ability to send multiple files to multiple destinations, and to string commands together with a learning capability; a built-in memo-level word processor; and an integrated index of addresses for automatic dialing and log-ons.

More significant is the way in which Transend has blended these capabilities to make them usable. Too often the choice in communications software is between the simplistic and the intimidating. Transend offers plenty of capability presented in a coherent, if sometimes a bit cluttered format. Beginning users can get going quickly; experts can take advantage of advanced features; and macros (command strings) and prompts can be constructed for non-expert users.

When Comm-plete! is first booted, the program shows what Transend calls mail boxes. One is labeled In, another Out and others can be labeled by the user. An automatic sequence can be set up so that at a given time the program logs on to MCI mail, for instance, sends an electronic message to one person, orders several copies of the message to be run off on MCI's laser printers and sent by mail or courier, checks for messages, stores the messages in the In box and logs off. All the user has to remember is to check the In box.

Function keys and their roles are displayed at the top of the screen. As a session progresses, the function keys take on different capabilities and the display alters to show their new roles in context. By using the Alt key additional functions can be assigned to each function key, with these again displayed in context. An Alt symbol shows that the functions are available, and hitting the

key displays them on the screen.

Although Transend doesn't use the magic marketing word "Windows" extensively in describing its products, Comm-plete! makes good use of them nonetheless. Windows can be opened into the MS-DOS operating environment to scroll through directories and within this window a file can be called up and partially scanned.

The simple memo-processor speeds delivery of short messages, while longer files can be attached to the memo. These include not just ASCII files, but such complex files as applications programs. Comm-plete!'s authors regularly sent versions of the program back and forth over modems and phone lines. Worries about buffer-overflow—the sinking feeling that occurs, for instance, when a file feeds into your computer faster than the program can store it or when the file is larger than the program's storage buffer, resulting in lost lines—are over.

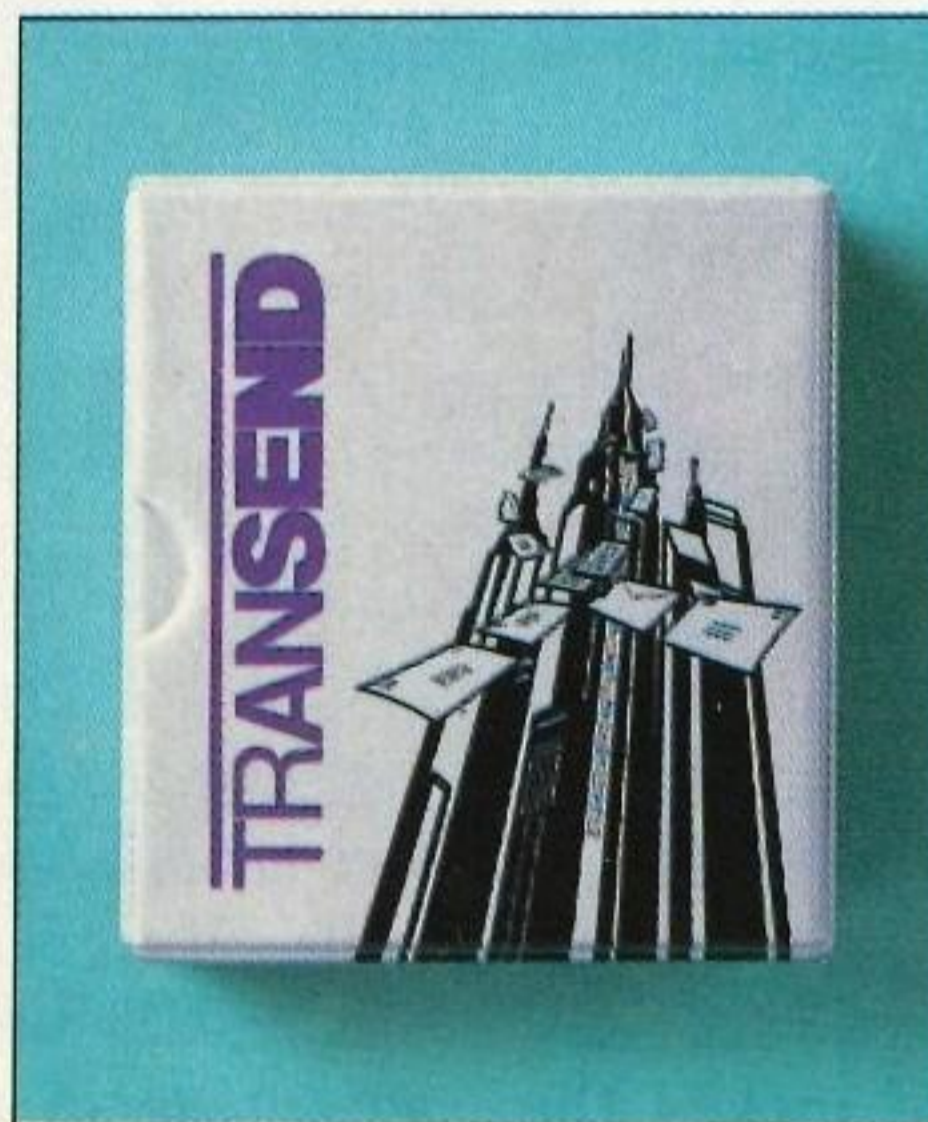
This program is limited in storage and the size of files it can receive by the capacity of your disk. The letter writer itself is limited to sending 8k and receiving 10k.

Comm-plete!'s implementation of command strings is sophisticated and slick, as well as functional. First, the program has a learn facility. That means the user can turn on the learn capability like turning on a tape recorder. The program records commands as they are used, then stores them under a couple of keystrokes so that they can be replayed at any time. Additionally, prompts can be built into macros to further generalize them. For example, we logged onto a service, checked flights from San Francisco to Las Vegas, then edited the macro to replace the date requested with the prompt "Enter the request date." When the macro is played back it automatically dials, logs onto the service, requests flights, then pauses to ask the user for the date he or she would like to travel on.

Results like this make you feel like the program is working for you instead of vice-versa.

—James E. Fawcette

For more information circle 101 on the reader's service card.



Accounting For Beginners

■ **BACK TO BASICS ACCOUNTING** runs on 48k Apple II Plus, Atari 800; 64k Apple IIe, IIc, Atari 800XL, 1200XL; Commodore 64; dual-drive IBM Personal Computer, 128k PCjr (IBM Personal Computer version also runs on Compaq, Columbia MPC, Eagle PC and Zenith Z-150 PC); \$195 (\$95 for single modules), \$295 (IBM Personal Computer—no single modules) retail; Peachtree Software Inc., 3445 Peachtree Rd. N.E., 8th floor, Atlanta, GA 30326; (404) 239-3000.

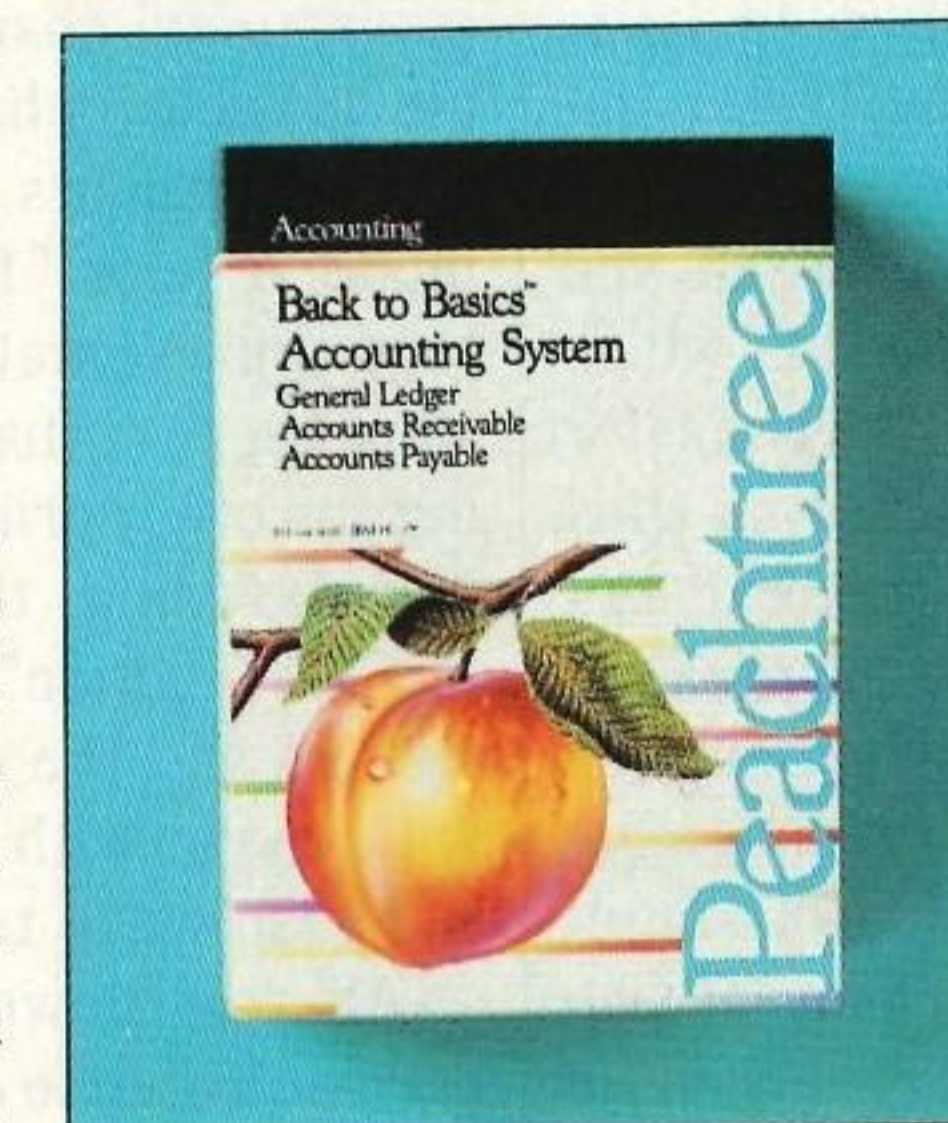
Aimed at small business and educational accounting needs, including self-education, Peachtree's Back to Basics Accounting package includes General Ledger, Accounts Receivable and Accounts Payable modules which can be run together or separately. Back to Basics also includes a thorough tutorial in computerized accounting, along with 60 practical how-to examples for both retail and service businesses.

Back to Basics enables a user to computerize a business's standard accounting operations and associated paperwork. It handles such tasks as automatic posting of both accounts payable and receivable in typical ledger form. It also forecasts cash requirements from the Payables module. The program generates mailing labels from vendor and customer lists. It also "locks up" all these records with password protection.

In the IBM Personal Computer version with double-sided disk drives, the General Ledger module can store in its chart of accounts up to 254 accounts, 1500 checks, 4500 entries per month to two accounts with no cash sales entries or 4410 entries with 30 cash sales entries. The Accounts Receivable module handles up to 750 customers, about 2100 invoices in two distributions and about 1700 payments. In its chart of accounts, Accounts Payable takes up to 115 accounts, 700 vendors, 1500 invoices distributed to one account and in addition, can handle about 520

payments distributed to two accounts.

Back to Basics' cost, degree of complexity and capabilities place it on the middle ground among home-oriented accounting packages. It offers more than some simpler programs, but less than those high-end packages that assume that the user is a master of accepted accounting practices. You don't have to know one thing about accounting to use the Peachtree package, yet it works on the same conceptual framework as the high-end programs. You can use Back to Basics to put your small retail or service business on a sound accounting basis, even if you've never taken a course in accounting or cracked a ledger. Though the IBM Personal Computer version requires several thousand dollars' worth of hardware, other versions



work on systems costing \$1000 or less—such as one for a Commodore 64 outfit with printer.

Many inexpensive programs work on cash-based accounting practices that only "notice" money when it actually arrives or leaves. This simple format works reliably only when you borrow nothing and get paid immediately. Bookkeepers question the validity of cash-based accounting systems for most businesses.

Virtually all professionally run firms use double-entry, accrual-based accounting. This takes notice of assets, liabilities and equity from the moment a financial debit or credit accrues. Every transaction gets recorded at least twice.

Double-entry systems involve complicated procedures, since you're simultaneously dealing with the immediate financial situation and the developing, long-term one. Back to Basics addresses this with a relatively simple program and slick software documentation. It includes a 374-page handbook which covers every operation of the package's three modules and includes real-world applications, a computer error message guide and a 10-page index. Interweaving

theory and practice, the documentation also includes a 48-page booklet showing sample reports for a mythical retailer.

The package also comes with a booklet on how to use Back to Basics with any particular computer, a "roadmap" of all accounting operations showing how to get to any given operation in the program and where to look for help.

The program covers the 33 most common business accounting forms, from a chart of accounts (the heart of the General Ledger) to sample checks from Accounts Payable. The program automatically prints out all of these on standard forms that work with both serial and parallel tractor feed printers.

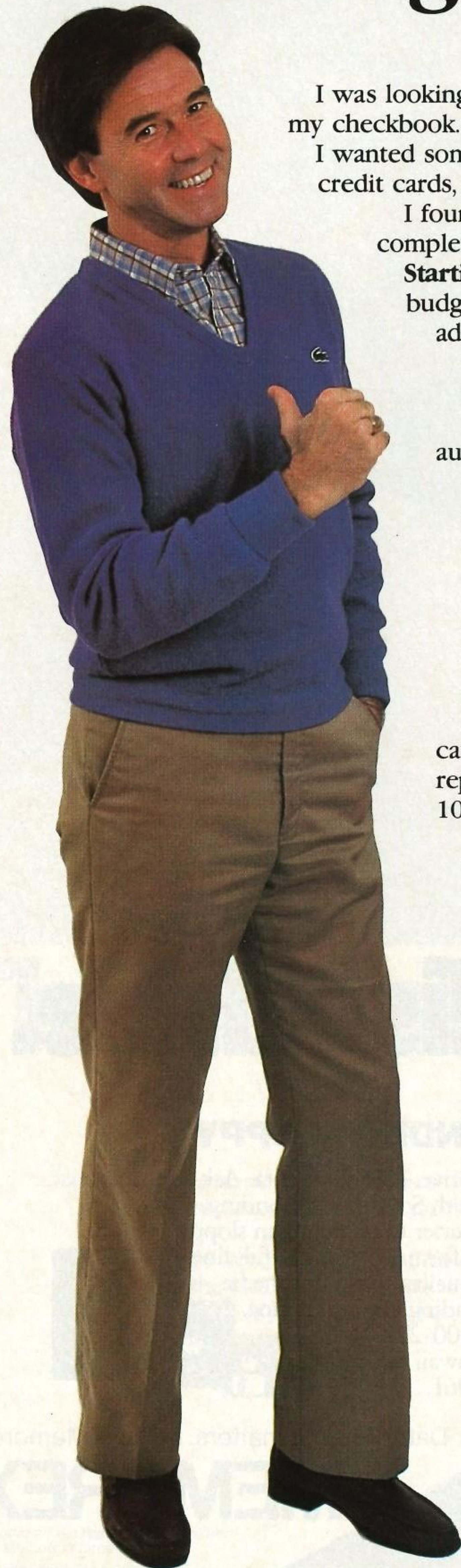
Running the program itself makes no more demands on a computer user's knowledge than on his or her accounting expertise. There is no need to install an operating system or format data disks. The program takes the user through all its functions via help menus. It is possible to opt for an abbreviated help setup when a user becomes proficient in the program.

Back to Basics does have real weaknesses. The system works awkwardly for manufacturing operations, doesn't integrate with any other programs, isn't file-compatible with other programs—including other Peachtree accounting packages—and runs on floppy-based systems only—no hard disks. The problem here is that if a business expands significantly, financial data may have to be rekeyed into another program. But the high-end packages can be so difficult for some people to learn that it may still be a plus for the new or small business to start out with an easy to use package like Back to Basics. In fact, Peachtree executives have hinted that, down the road, the company may develop a means of file transfer with other accounting programs and modules, though no definite plans have been announced. Such a feature would greatly expand the useful possibilities of Back to Basics. In its existing form, however, it is already an attractive program for the novice accountant and computer user alike.

—Lee The'

For more information circle 102 on the reader's service card.

"I'm finally having fun managing my money."



I was looking for a package that would organize my finances. Balance my checkbook. Set up budgets. Help me with my taxes.

I wanted something fast and easy to use for all my accounts . . . my credit cards, checking, savings, money market and more.

I found it with The Smart Checkbook, by Softquest. It's my complete personal finance manager!

Starting my own account was easy. I used the built-in budget and tax categories, changed some, rearranged some, added my own—even forgot a few, too. But that wasn't a problem because it was easy to go back and add more. I've got up to 200 budget and 200 tax categories to use! **Checkbook reconciliation is painless** . . . almost automatic. The Smart Checkbook finds amounts that don't match my bank statement and corrects errors on the spot. It locates duplicate entries and even catches bank mistakes!

The Smart Checkbook can even print my checks, and gives me the option of automatically including the payee address. That saves me time!

It does my tax "dirty work" for me, keeping track of all my taxable income and deductions. At tax time, I just push a button to get itemized lists and totals for each category. I can even combine my accounts for a single report. The totals are there, ready to be entered on my 1040. The Smart Checkbook makes tax time simple!

And I can see how I'm spending my money and how I planned to spend it . . . for each account separately and all together. The "what if" capability makes budget set-up and revision a breeze.

I can split a transaction into any 15 tax and 15 budget categories. Now I can make sure that I don't lose any deductions, and I can track every penny in my budget.

The Smart Checkbook even prepares net worth statements that I can use for credit applications and investment decisions.

And it's a snap to learn, with an on-screen tutorial and a user manual full of hints and examples. So get smart with The Smart Checkbook. And have fun managing your money!

Available for the IBM-PC family, including jr., PC compatibles and most MS-DOS and CP/M microcomputers.

Softquest, Inc., P.O. Box 3456, McLean, Va. 22103, (703) 281-1621.



Tracking Stocks Via Apple

INVESTOR'S WORKSHOP runs on Apple IIc with one disk drive, Apple Modem 300/1200, Hayes Smartmodem 300 or 1200, or acoustic modem; 48k Apple II or 64k Apple IIe with one disk drive, Apple Modem 300/1200, Hayes Smartmodem 300 or 1200, or acoustic modem; Dow Jones & Co., Inc., Dow Jones Software Publishing, P.O. Box 300, Princeton, NJ 08540; (609) 452-2000.

There are as many ways to pick stocks as there are to pick racehorses. Whether the investor believes in fundamental analysis, technical analysis, following simple trends or just a gut feeling that the time is ripe, understanding past history of a stock's performance is central to making an intelligent decision.

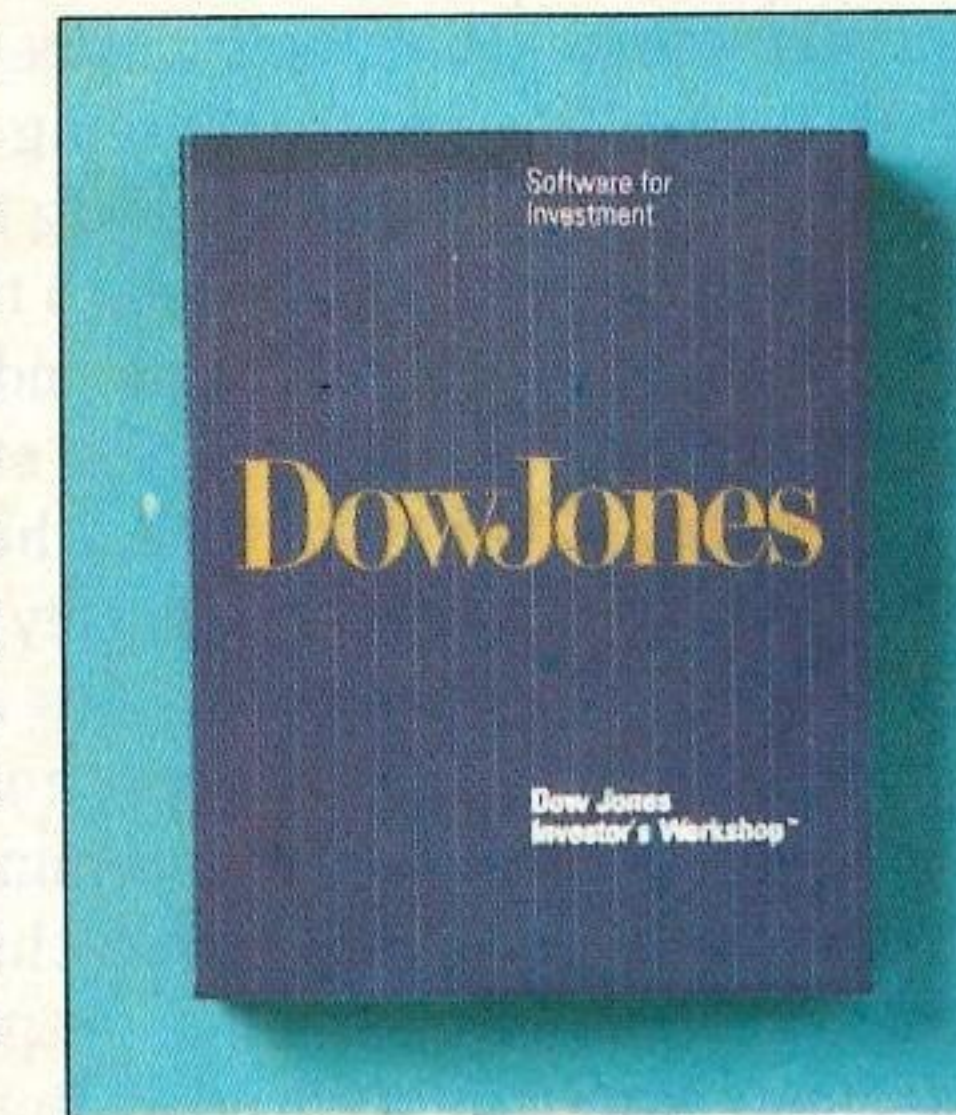
This need has made the Dow Jones News/Retrieval Service one of the more popular on-line data bases. But simply accessing volumes of numbers is only a partial solution. The investor still has to analyze those voluminous numbers. Spotting trends in a gray sea of digits is difficult and time-consuming at best. At worst, the trend can go on unobserved.

With packages such as Investor's Workshop and an Apple II computer, potential investors can turn stock prices into charts of moving averages and trendlines. These graphs can represent: composite daily volume and price action; simple moving averages of closing prices; either support or resistance trendlines; or prices and dates of short sales. This Dow Jones package can also allow the user to maintain a portfolio, generate reports of profits and losses or, using its communications software, access any of the Dow Jones data bases.

Using Investor's Workshop is relatively easy. The program comes on three diskettes, one for the main program, the second disk is for storing stock portfolio records and a third "text" disk for storing information downloaded from the Dow Jones News/Retrieval

Service data bases. When the program disk is run, simple, straightforward menus of options are presented, any of which can be selected by highlighting the selection and hitting Return. Dialing and log on through such services as Tymnet, Telenet and Uninet are readily automated.

In setting up a portfolio, the user is led through the process with prompts that request the stock symbol, the type of



activity (buy or sell), fees, dividends and the like. Similarly, when checking a portfolio the simple selection of menu choice "A" for Portfolio Report and entry of the portfolio title initiates display of current price per share (obtained from the News/Retrieval Service almost automatically for the entire portfolio when stock quotes are requested),

your profit and the percent gain or loss. As it should, the program calculates profit based on the price of the stock including brokerage fees. Historical or background data on particular companies can also be retrieved by responding to straightforward prompts from the program.

The ability to create and update portfolios simply and quickly is by itself enough to make Investor's Workshop a valuable asset for any stock market investor. Graphics add a tool that makes the program stand out. This capability is not novel. Proficient spreadsheet users can download data from Dow Jones News/Retrieval Service into spreadsheets and subsequently turn them into graphs. A Lotus 1-2-3 (Lotus Development Corp.), Framework (Ashton-Tate) or Symphony (Lotus Development Corp.) user sophisticated enough to write his or her own macro command routines can even automate this process so that a single name drives it. But it is rare indeed outside of the IBM Personal Computer and compatible world.

Dow Jones' Investor's Workshop now offers a specialized version of that capa-

bility to Apple owners in a simple, easy to use package. Reviewing a portfolio or logging onto the Dow Jones News/Retrieval Service to update prices is so well-facilitated that no one can use the difficulty or time involved as an excuse for not keeping up with their investments, stock market and other financial holdings.

However efficient it may be, this package does have its limitations. Its graphics capabilities may be easy to access, but they are relatively simple and lack versatility. Similarly, the documentation, while adequate, offers little more than the bare necessities, with limited explanations and examples, and attempts to put uses in context. And while the financial news services can be acquired through the communications section of this program, there is no attempt to simplify Dow Jones News/Retrieval's arcane command structure or further compensate for its lack of on-line help. A Dow Jones password is required at additional cost.

Also, the hardware configurations supported by Investor's Workshop are apparently somewhat limited. Although it works with the popular Apple Modem and Hayes Smartmodem, a Super Serial Card support for other cards and modems is not documented. Unfortunately, we were not able to widely test the program with a variety of hardware configurations.

Judged as a stand-alone package Dow Jones' Investor's Workshop does its job well. To put this in context, a moderately proficient personal computer user with a good communications package, spreadsheet and graphics program could do even more with these general purpose programs than this dedicated program offers. But for the casual user or the Apple owner with a limited software library, Investor's Workshop may be all he or she needs to greatly improve his or her ability to track a portfolio. A few hours saved on short selling decisions can pay for your personal computer, not to mention this software, in a hurry.

—James E. Fawcette

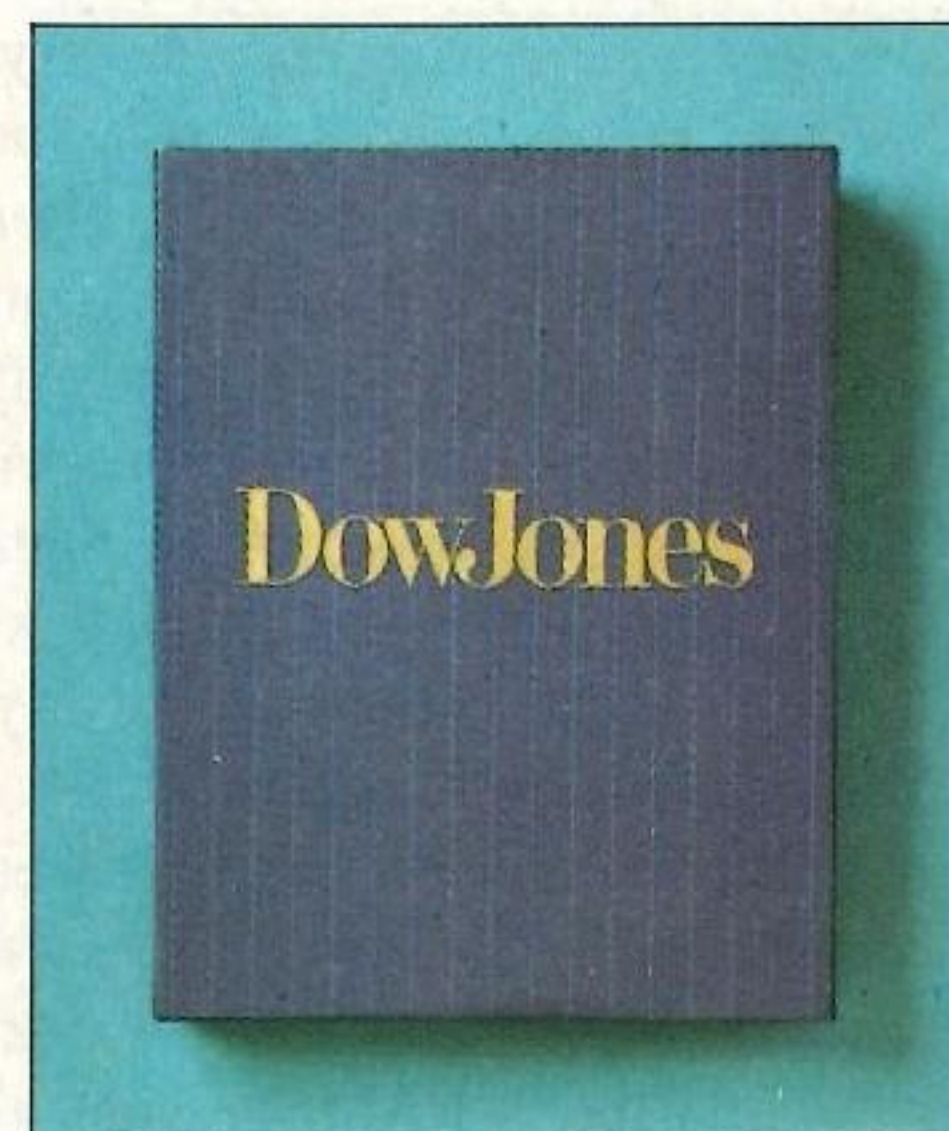
For more information circle 105 on the reader's service card.

The Family Financier

■ **DOW JONES HOME BUDGET** runs on IBM Personal Computer, XT; Apple II series; \$139 (IBM), \$99 (Apple) retail; Dow Jones Information Services, Div. of Dow Jones & Co., Inc., P.O. Box 300, Princeton, NJ 08540; (609) 452-2000.

All 50 states recognize my credentials as a layman in personal finance. In fact, before the Dow Jones Home Budget software package fell into my hands, I would have told you that "double-entry bookkeeping" was probably a technique used by someone who will eventually take the night plane to Brazil.

It's not, of course. It's an accepted, sophisticated accounting methodology, one that actually tends to be favored by the IRS as support for your feeble answers to their tough questions. So here is



Dow Jones trying to convince people like me—whose idea of a "transaction" is what happens when whatever is left in your pants pockets goes into the top dresser drawer—that we can play CPA. If we ante up and play along, the rationale goes, we will gain intimate knowledge, if not actual control, of every nickel that passes through our fingers. We will not only be able to tell exactly why ends don't meet, we'll know—to the micron—how far apart they are.

The package can in fact deliver on this offer—provided the inexperienced family financier on the keyboard end is willing to devote enough time and effort to the program and its documentation to learn slightly more about accounting than, most probably, he or she ever wanted to know.

The menu-driven program is designed to enable you to enter transactions—real ones, like checks and credit card charges—into up to 200 separate budget accounts, using the aforementioned double-entry technique, after just a brief sample run-through. And no pondering the theoretical basis of "debit" or "credit" assignments to your various accounts (the heart of the

double-entry system), because you are prompted merely to increase or decrease the key accounts when making entries. That's right—the program won't accept a wrong entry.

But wait. All the above is predicated on the fact that you went deeply enough into the documentation to set up your accounts—assigned as either "Asset," "Liability" or "Reserve"—correctly in the first place. And that you noted and committed to memory the inviolability of the Prime Accounting Equation—*Assets equal Liabilities plus Reserves*—as stated in the introductory section. (Don't dwell on its ambiguity; accountants apparently know a liability is always a "minus".)

If you do this and press on, leaving full comprehension of it all to the software authors, you can follow the menu directions for making transaction entries or adding account classifications. You are also invited to add up to 63 codes to your transactions in various accounts, so that subsets of transactions can be retrieved and examined immediately. Having done that, you may realize that you have been lured into creating a full-featured data base out of what was once your private fiscal chaos.

Furthermore, you may have cause to reflect that creating the data base wasn't all that difficult: You can, after all, "roll over" the account titles and code structure from the sample accounts which occupy the third (demonstration) disk in the set. Sure you have to add, delete and rename some of them—even change account assignments to codes and vice versa—to fully customize the data base, but the roll over facility saves tons of input. Another convenience feature jumps up right away: You can set up automatic entry for regular transactions via accounts like home mortgage, salary or loan payments. These can be triggered monthly or at any regular set of dates with a couple of keystrokes.

As to what you do with the data base

once you've established and are maintaining it, there are options galore. Taxes, taxes and taxes might be the first three... fed, state and local, that is. You know every minute of every day, with this program, the exact amount of your precious financial essence that is being drained away by government at any level. You also know, as a matter of course every time you call up the Balance Sheet option with a keystroke, your Net Worth. Monthly summary for any of your (up to 200) accounts? Two keystrokes. Bar graph of the same summary? Another keystroke. Previous month's performance in the same account or group or code set? No more than three additional keystrokes.

And strictly as an ancillary benefit, the problem of how to entertain your in-laws is gone for good. You simply print out every DJHB report option, including alphabetic summaries of every account you've defined. They can't ignore them.

Some of the program's power, to be sure, is purchased at the price of convenience. Various utility operations require switching from the first to the second program diskette—not an unusual process, but when you're first learning the ropes you can easily get into a switch mode unintentionally. Then you have to change over, call up the program you didn't want and escape back to where you started from. Those who have some familiarity with formal accounting procedures, of course, are less likely to make these time-consuming mistakes; they can, as well, eliminate transactional entry prompts and decide on their own debits and credits.

Thus if you want to put a lock on your home finances with the double-entry method, this package is for you. But you are committing to hours of dedicated input and maintenance, without which the most sophisticated accounting system ever devised is so much Swiss cheese. Opportunities do exist for misinterpretation and misdefinition of accounts and entries, so don't spend what this costs if all you want is a simple electronic checkbook.

—Robin Nelson

For more information circle 108 on the reader's service card.

Keeping Investors Informed

■ **PORTFOLIO DECISIONS** runs on IBM Personal Computer and PC-DOS (versions 1.1 or 2.0) compatible machines with a minimum 128k memory, two double-sided disk drives or one double-sided disk drive with hard disk; \$249.95 retail; Eagle Software Publishing, Inc., Suite 405, Old Eagle School Rd., Wayne, PA 19087; (215) 964-8660.

The first thing an investor is likely to notice about Portfolio Decisions, a new investment software package from Eagle Software Publishing Inc., is that it is downright slick. From the very beginning, there is little doubt that the designers of this investment-oriented package have reached deep into a bag of user-friendly tricks to come up with a captivating tool for serious investors, whether their portfolio involvement is professional or personal.

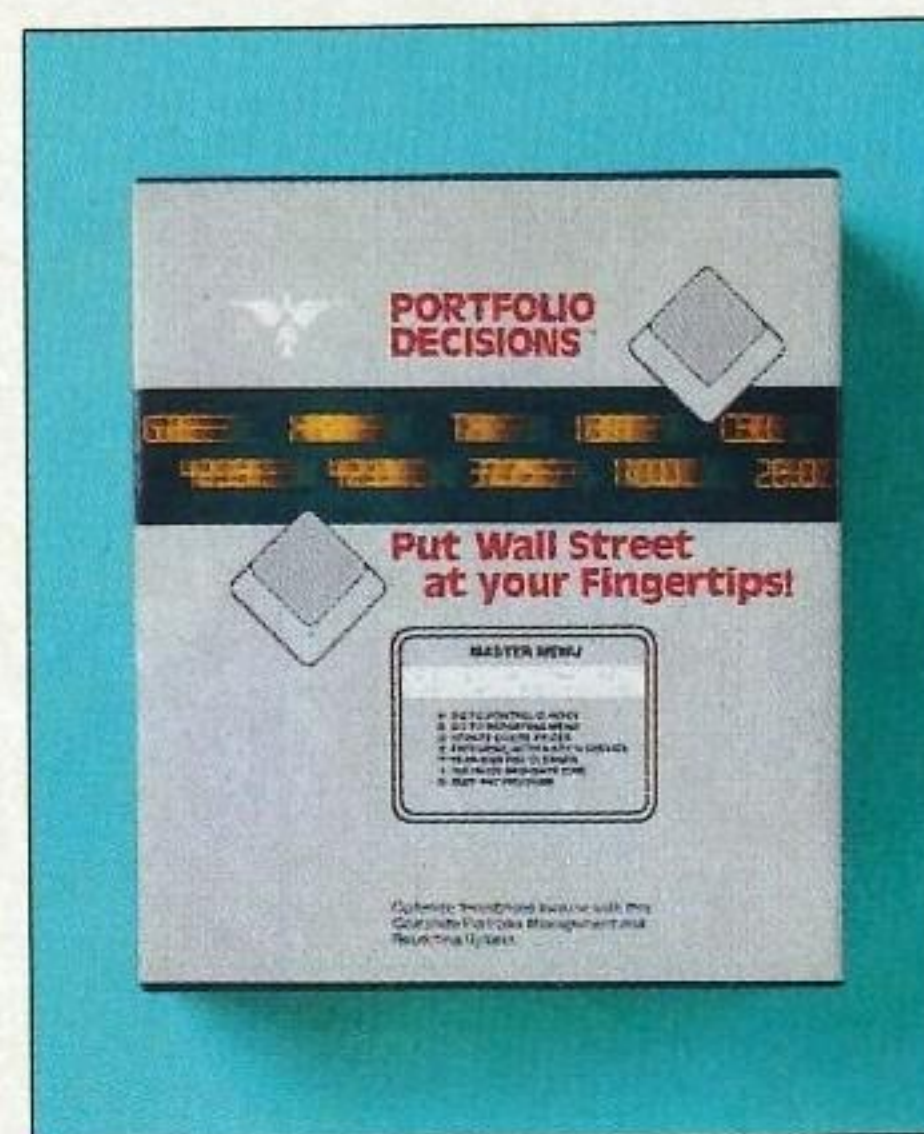
Take the opening menu screen, for example. Across its top, fictitious stock market quotes float by—Big Board, ticker tape style. Even Eagle has to admit that this touch leans toward showbiz.

It would be a mistake, however, to pass off this program as nothing more than gimmickry. Beyond the facade of a handful of added touches, and to some degree as a result of these extra details, Portfolio Decisions has honest-to-goodness utility, due to its information management capabilities.

Portfolio Decisions hews to no particular textbook investment theory. It promises no surefire technique for picking stocks or to know when to buy or sell. Rather, the program makes a legitimate case for itself as one of the easiest to use, most comprehensive and flexible portfolio management packages available. Its case is based on one simple yet difficult to dispute tenet: The more information an investor has, the better.

To start, Portfolio Decisions provides an investor with a record-keeping function so that all security transactions, from purchases to sales to dividend dec-

larations, can be neatly filed and updated with relative ease. The purchases and sales information are fed into the program by typing the data for insertion onto an index card-style screen format. These become the purchase and sales records. The two disk package also has a built-in communications program for linking with a real-time quote service—by now an almost obligatory feature of the genre. Finally, there are the various



reports that the program is able to generate by compiling all or part of the portfolio data in various configurations.

Still, investors who become familiar with Portfolio Decisions are likely to appreciate it as much for what it does not do. The program leaves the stock picking to the human experts. Its most sophisticated stab at in-

vestment analysis is the provision of price earning ratios and annualized yields. Even these run-of-the-mill statistical guideposts are, in fact, geared to the truer face of the program—that of a reliable accounting tool for the generation of audit trail reports and year end tax summaries.

Portfolio Decisions is a menu-driven program that can generate eight different reports. There is an all-inclusive Portfolio Activity Report that will detail any transaction in an investor's stocks, bonds or other securities such as treasury bills, mutual funds, options, warrants or certificates of deposit. The user simply determines the starting date and ending date of this report and any activity is duly noted for the prescribed time frame. The Portfolio Summary Report provides a quick and easy way to look at the financial performance of an investment portfolio as a whole. And of course there are reports that provide updates on the transactions involving individual securities.

The Tickler Report is an ingeniously simple way to call up pending activity, such as upcoming dividend dates or options expiration dates that loom ahead.

Essentially, the Tickler Report contains information that would ordinarily require a good memory or an expert secretary to keep track of. For the forward-looking investor more concerned with the bottom line, the Monthly Income Forecast Report provides a look at future investment cash flow.

As one would expect from the developers of Tax Decisions, the newer Portfolio Decisions shows a serious concern for the tax obligations of its investor users. Three tax-reporting forms are available: the Interest Report, The Dividend Report and the Capital Gains/Losses Report. It is this Capital Gains/Losses Report that demonstrates the expertise that was tapped for Portfolio Decisions. It is straightforward and easy to generate, decipher and use.

The program's documentation is consistent with its overall ease of use. Few competitive packages can boast such a clearly written and informative set of instructions. Moving around within the program itself also turns out to be a matter of rare simplicity. All the data screens in the program are divided so that the top portion is available for information input and the bottom portion contains a menu of selections called "next action." Even the menu selection commands are logically based on the first letter of each function, such as "S" for Sell and "D" for Dividend. On the whole, it is details such as these that enable the Portfolio Decisions user to concentrate on the investments—and not on the program.

Calling for "Help" from Portfolio Manager produces a curious result. An organizational chart of the program appears on the screen with the user's current "location" highlighted. Your first reaction to this unusual screen might be something like, "You call this help?" But the net effect is that the user knows which portions of the program he can and cannot get to directly from his current location. It is different. It is slick. And like most everything else in Portfolio Manager, it is intelligent and it works.

—Fred Abatemarco

For more information circle 109 on the reader's service card.

Your Modem is on Vacation

Unless it's using TRANSEND



New for the Apple IIc and IIe Easy Com/Easy Go Communications Software

Introducing the telecommunications software that will put your modem back to work. If you want to send a letter, chat on the SourceSM, check your financial situation on Dow JonesSM, get flight information on OAG, check the news and sports out on Newsnet, obtain some legal or medical files with the Knowledge index, send an overnight letter through MCI mail or Western Union's Easy Link, or even line yourself up with a date in a city you'll be traveling to, then get your modem back to work with Easy Com/Easy Go, new from TRANSEND.

If you want to swap files, programs, or games, Easy Com/Easy Go will do it in either CP/M, DOS 3.3, PASCAL, or PRODOS — and we'll even verify your transfer to make sure you've got it all and in good order.

Its Built-In Text Editor Is Always Ready to Go

Now with Easy Com/Easy Go you can write or receive information, replace a word or sentence, move a paragraph, or modify the margins. All this is a simple job for Easy Com/Easy Go. Then with just one keystroke you have sent it—and at a speed of over 670,000,000 MPH. Print it, or save it on disk just as easily.

It's Simple But Not Stupid

It knows the basics such as telephone number retention, Auto-Logon, on line printing, has a big Capture Buffer and auto disk save. But that's not all. Easy Com/Easy Go also handles advanced operations including keyboard macros, redefinition of the keyboard, XON/XOFF, verification protocol, and multi-

ple flow control options. It works as well with most modems as it does with Transend's own modem, and at speeds up to 1200 Baud. Compatible with all Apple II's, Easy Com/Easy Go is so simple even a mouse can use it.

Limited Time Offer

With each purchase, receive offers worth over \$400 from leading information services like Dow Jones News RetrievalSM, The SourceSM, MCI Mail, OAG, Newsnet, Dialog Knowledge Index, and Western Union Easy Link.

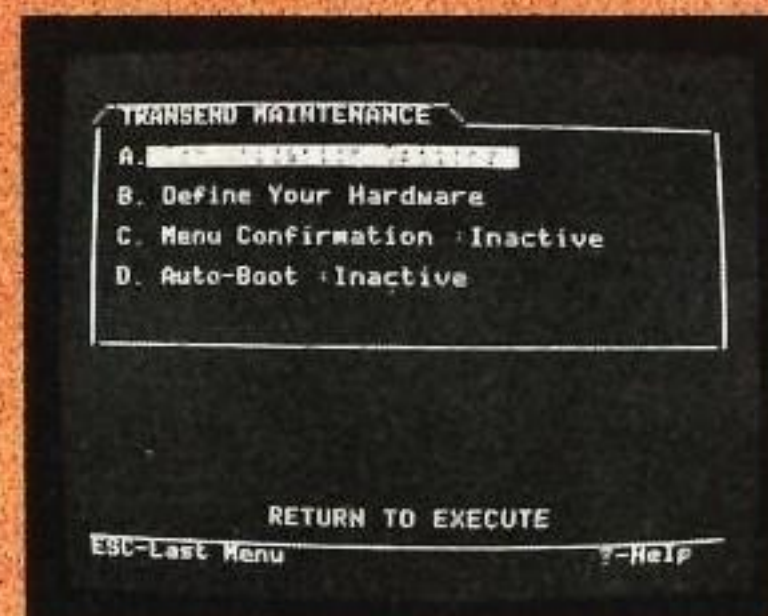
Money Back Guarantee

If Easy Com/Easy Go doesn't put your modem back to work within 30 days, we'll give you your money back.

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2190 Paragon Drive
San Jose, CA 95131
(408) 946-7400
Telex 1711171
Source ST1422



The first screen gets you in touch with a service — preprogrammed.



All you do is select, and Easy Com/Easy Go does the rest.



Even in an advanced situation, the screens are easy to use.

TRANSEND

ELECTRONIC COMMUNICATIONS MADE SIMPLE.

Cellular Warfare

■ **CELL DEFENSE** runs on Commodore 64; Apple II series; IBM Personal Computer, PCjr; \$29.95 (Commodore), \$34.95 (others) retail; Human Engineered Software; 150 North Hill Dr., Brisbane, CA 94005; (415) 468-4111.

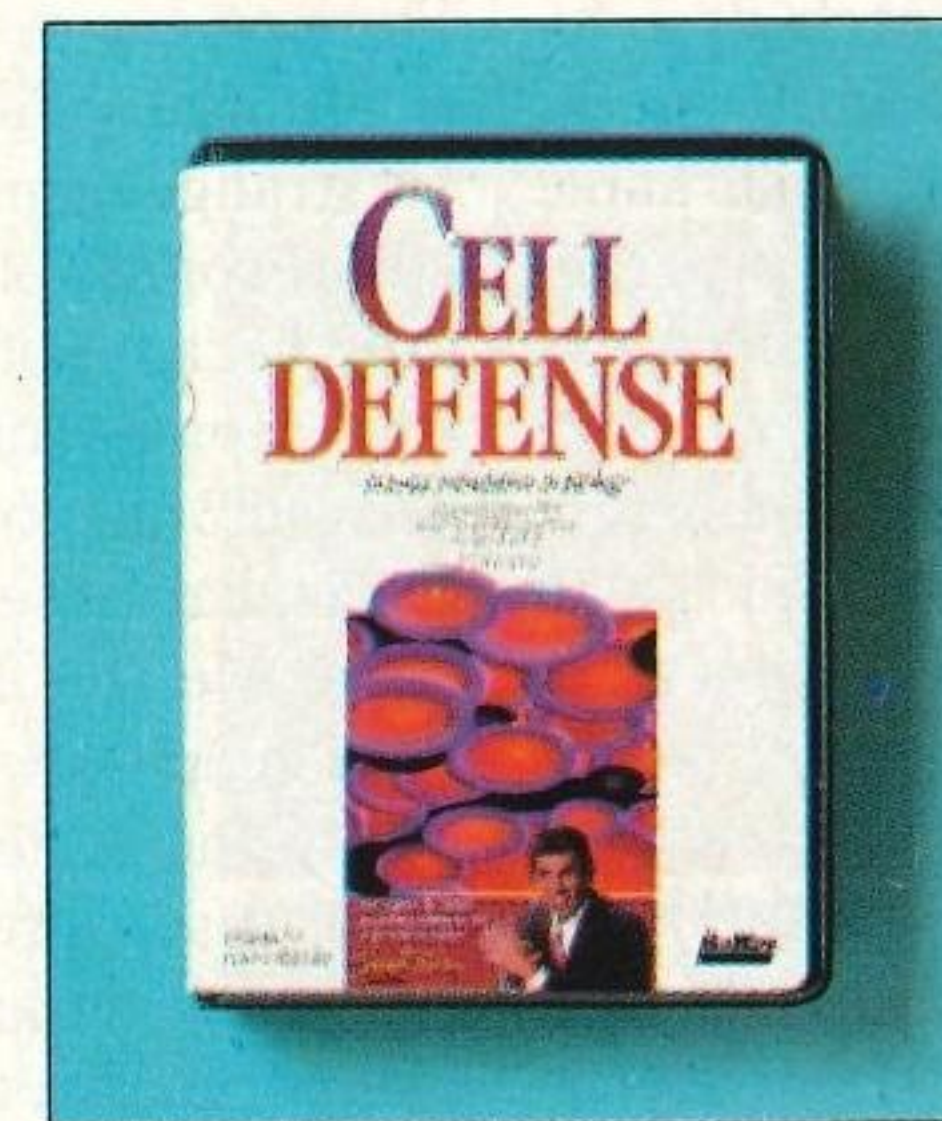
Cell Defense, from HesWare (Human Engineered Software), is a science simulation game based on the struggle fought at the cellular level between viruses and the body's immune system. According to Sueanne Ambron, HES's director of educational software, it is "part of a science software series designed to get kids excited about science by taking real science concepts that work well on the computer and building games or simulations around them."

Cell Defense meets at least part of that specification. Certainly the concept it presents works well on the computer, at least as a game. In fact, it is riveting entertainment, with all the strategic elements and frenetic action of a top-notch arcade game. But how many budding microbiologists it will inspire remains to be seen.

To some degree, calling any game/simulation such as Cell Defense "educational" is problematic. Visually and actionwise, Cell Defense bears more resemblance to Pac-Man than it does to a biology textbook. Undoubtedly it has some educational value—for instance, the game's excellent graphic representations of the viruses and the cells they invade are based on photographs of living cells and viruses. To win the game you must learn how the body applies each of the immune system's basic weapons against viral invasions—but still, the game's coverage of the subject is purely surface-level. What there is to learn from Cell Defense you learn in the first 20 minutes. After that, the only thing to be found in it is entertainment.

To their credit, the creators of Cell Defense seem to have recognized that its lasting value will be as a game. They've produced one of the best action

games to come along in a while and one that remains challenging as your skills improve, thanks to its four adjustable parameters: The number of cell layers to defend (each layer contains 64 cells), the virus reproduction rate, the cell regeneration rate, and the overall health of the organism you're defending (which controls the effectiveness and availability of the weapons you use against the viruses). With eight level



settings for each parameter, there are 1680 levels of play, ranging from the ridiculously easy to the nearly impossible.

In addition, like any successful game, Cell Defense has a good "hook." (That is, a theme to which you can easily tie your fantasies.) For instance, in Castle Wolfenstein the hook is escaping from a Nazi prison. In

Cell Defense, the hook is the struggle for life and death itself, fought on the cellular level but affecting the overall viability of the organism. At the start of the game a parasitic viral infection has attacked the organism, invading cells and—as the game's short but well-written documentation puts it—turning them into "virus-producing factories" that will eventually destroy the host cell and infect its neighboring cells.

You've got several weapons at your disposal, but also many strategic factors to keep in mind. The screen display during the game has two major components: an 8 by 8 grid showing which cell your joystick-controlled "scanner" is in and the status (healthy, infected or destroyed) of the other 63 cells on that cell layer, a much larger display of the cell your scanner is in and its immediate environs. If you move the scanner to a cell when a virus is merely in the cell's vicinity, you can most likely find a macrophage floating in a neighboring cell and use it to consume the virus. But if the virus has already penetrated the cell, your only options are to destroy the infected cell with one of the much rarer Committed T-cells or to attach

the antibodies produced by the infected cell to its neighbors, which may or may not prevent the virus from spreading.

You also have to carefully plan which viruses you attack first. For instance, a row of red cells representing the bloodstream runs through some cell layers. It's imperative that you stop any viral attack on the cells bordering on the bloodstream, since the speed of the invasion will increase if the bloodstream becomes infected. Depending on how you set the parameter controlling the number of cell layers, you also have to be careful about which cell layers you defend most energetically. The first few layers are made up of labile cells which can divide and produce new cells, so you can sustain up to a 60 percent loss of cells on that layer before the organism dies. But the upper layers are made up of stable cells and perennial cells. The organism will die after a loss of only 50 percent or 40 percent, respectively, of those types of cells.

The game's manual explains the nature of each of the cell types, of viruses and of the weapons you use against them. Thus, it certainly furthers the educational value of Cell Defense. Unfortunately, the game requires only that you know you must defend perennial cells at all costs, not that you know why you're doing so. Still, Cell Defense does serve as an introduction to cellular biology and the form in which it is presented may be more likely to make an impact on the average young person than would a few lines in a textbook. Call it science with a sugarcoating. It isn't the equivalent of an in-depth study of the immune system, but it may spark enough interest in some youngsters to make them want to pursue the subject in greater depth. Even if that doesn't happen, a child complaining about losing at Cell Defense because he couldn't find a macrophage when he needed one would at least sound a little bit better educated than one complaining about being eaten by the blue meanies again. And in the meantime he would have had a lot of fun playing a challenging game.

—Paul Bonner

For more information circle 110 on the reader's service card.

Learning With The Gang

■ **CHARLIE BROWN'S ABC'S** runs on Apple II series, Commodore 64 (by late fall); \$39.95 retail; Random House Electronic Publishing, 201 E. 50th St., New York, NY 10022; (212) 751-2600.

Random House has done Charles Schulz, and themselves, proud with Charlie Brown's ABC's, one of a series of six educational programs based on Schulz's famous Peanuts characters. Designed to teach the alphabet to preschoolers, this program presents flash-card-like display screens for each letter of the alphabet. Each computer flashcard is colorfully illustrated with animated scenes featuring the Peanuts characters.

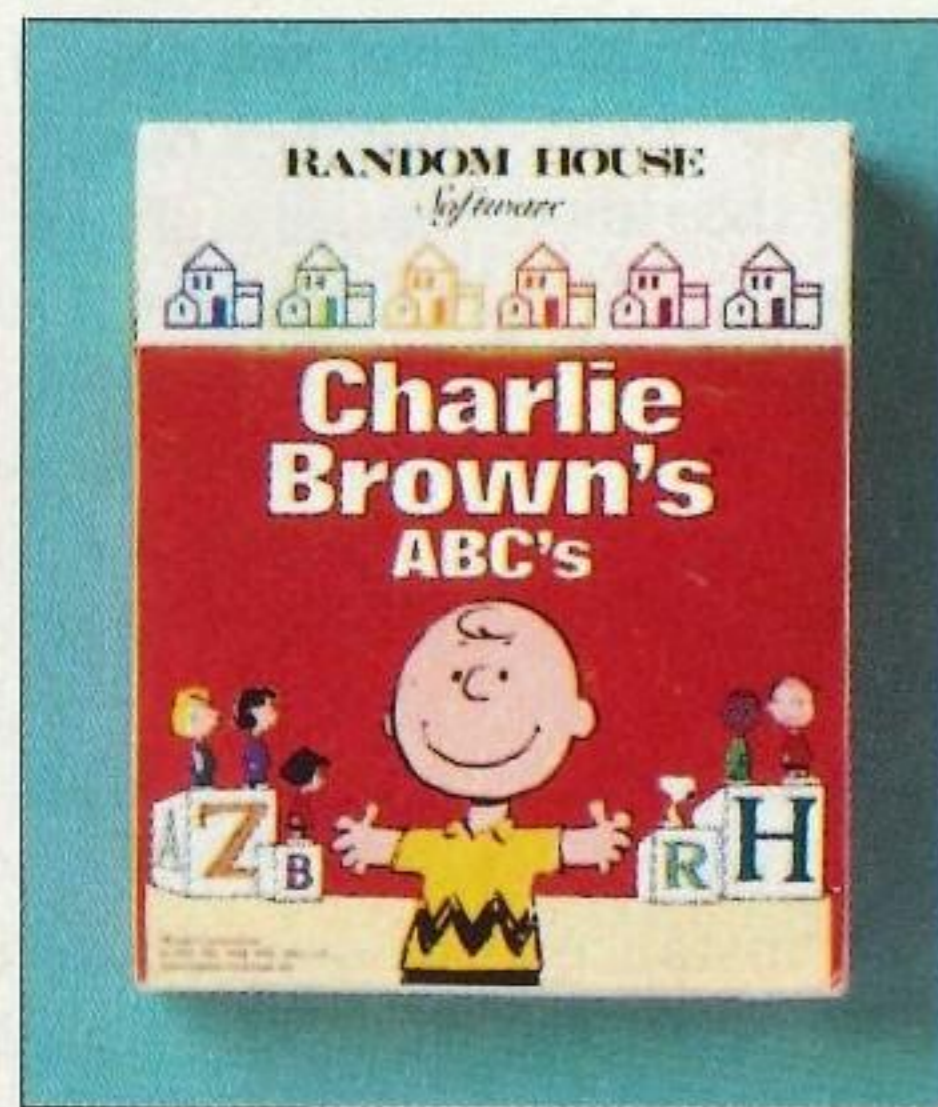
With the help of exceptional animation, music, an illustrated manual and the computer keyboard, the Peanuts gang leads the preschooler through this effective and proven memorization experience. All of the favorite Peanuts characters appear in the program: Charlie Brown, Snoopy, Linus, Lucy, Schroeder, Peppermint Patty and Woodstock. Even the little red-haired girl makes an appearance as Charlie Brown's sweetheart as he gazes wistfully to the S for stars (he always wished it would be so).

The program banks strongly on the recognition factor of the Peanuts characters and commendably, Random House has transferred Schulz's drawings to the screen with detailed accuracy (not an easy task given the limits of computer graphics). The characters' personalities also have been faithfully incorporated into each sequence. For instance, when the F key is struck, the pictorial description on-screen is that of Lucy holding a football for placekicker Charlie Brown. Just as he approaches the ball, Lucy pulls it away and Charlie Brown falls on his backside. Equally predictable is the appearance of Schroeder in any piano sequence.

The familiarity, as well as the authenticity, of all of this is not coincidental. Though the programs were written at

Random House's developmental center in Tulsa, Okla., where approximately 20 people worked nearly 10 months on the series, Schulz and his firm, Creative Associates, were involved all along. Creative Associates worked with Random House programmers and maintained the final approval of everything—from concept to artwork, graphics to text and documentation.

All of the illustrations are in color and music is a central element of each description. Without doubt, the most remarkable aspect of the program is its spectacular animation. The program incorporates animation on both large and small scale. Sometimes an entire character moves around the screen. Or there may only be slight movement of a character's eyes or lips. Essentially, each



scene is its own short cartoon sequence. For example, in the first sequence, A is for apron and Snoopy is standing at a stove, popping popcorn. As he slowly moves the pot back and forth on the burner, the popcorn begins to pop. Within a few seconds the mountain of popcorn gets so large it blows the top right off the pot and Snoopy's eyes open wide in disbelief.

Not all of the descriptions are brilliant, some are pretty boring. The L for lipstick simply shows Lucy smearing her lips while the K for kite depicts Charlie Brown taking the kite string from Peppermint Patty, only to have the kite come tumbling down on his head. Still, the animation and the characterizations add a little zip to some otherwise dull letters. The U frame pictures Snoopy on top of his dog house with Woodstocks standing on him opening and closing umbrellas as a rain shower passes.

It would have been easy for the creators of Charlie Brown's ABC's to use the character's names to represent some of the letters of the alphabet, but instead, all of the letters represent familiar objects—zipper, cake, ball and apron. These are representations of ob-

jects a child would encounter at home.

Throughout the program, the keyboard is the link between the entertainment and educational aspects of Charlie Brown's ABC's. Keyboard letters have to be hit twice for each sequence—once to see the letter and a second time to see the animation. The child cannot skip the animation sequence—the program will beep and not let him go on.

Most of the music used to illustrate the animated sequences is predictable Peanuts issue. The opening music to Beethoven's Fifth Symphony sounds a bit strange coming from an Apple, but is still recognizable. Sometimes, a tune is used because of its association with the on-screen pictorial. For instance, when Charlie Brown hits Lucy in the head with a baseball, the background music is "Take Me Out To The Ballgame."

In keeping with the program's simplicity, the documentation is straightforward, easy to read and well-illustrated. The publisher has tried to keep the cartoon strip effect of the Peanuts characters and made the documentation a black and white booklet that describes to the parent the different ways the program can be used. It is illustrated with the Peanuts gang "explaining" the different features of the program.

The games suggested by the documentation make extensive use of the learning aids, flash card-like Activity Cards, included with the program. The letter/object cards have the letters of the alphabet on one side and the object that relates to the letters on the other side. Upper- and lowercase cards not only help the child learn to write the alphabet but also learn where a letter is located on the keyboard.

The other packages in the series are Snoopy's Reading Machine, Snoopy's Skywriter Scrambler, Peanuts Picture Puzzles, Peanuts Maze Marathon and Snoopy To The Rescue. If Charlie Brown's ABC's is any indication, the series should be a worthwhile investment for parents who wish to give their preschoolers an educational head start.

—Elli Holman

For more information circle 111 on the reader's service card.

Computer Literacy In A Box

■ **THE INTRO SERIES** runs on IBM Personal Computer, XT, PCjr, compatibles; \$59.95 (each) retail; from Comprehensive Software, 2810 Artesia Blvd., Redondo Beach, CA 90278 (213) 214-1461.

If we were to lead a total novice through his introduction to personal computing, we'd hand this person a copy of Comprehensive Software's "Introduction to Personal Computing," the first of a series that also includes a tutorial on data bases and an introduction to PC-DOS 2.1 and ask him to boot up. If this person—let's call him Green—understood what boot up meant, he'd sit down at a computer, turn it on, insert the disk and watch what happened. Unfortunately, he would run into some problems.



All the programs require that an operating system be running before the program is loaded, but there's no immediate indication of this. If the novice loaded the disk straight from the box, he'd get an error message on the screen that read something like: "Non-system disk or disk error; replace and strike any key when ready." He might try again, get the same message and become frustrated. At this point, he might consult the manual, which would tell him, "If your PC is already on and DOS is running, skip to step 7." Skipping to step 7, Green would read: "Remove the DOS diskette from Drive A. Do not turn the PC off or touch any keys. Insert the tutorial diskette into Drive A, type Intro and press the Enter key. After a few seconds you will see an introductory screen. The tutorial will explain everything else you need to know.

At this point Green might slip the diskette into the drive, press Enter and read—you guessed it: "Non-system disk or disk error; replace and strike any key when ready." This could be enough to turn any mildly computer-shy person into a quaking computerphobic.

Once Green actually loads DOS and

the program, he'll be in clover, because The Intro Series is elemental and easy to get through—even enjoyable. The program doesn't even assume the user knows the keyboard. It prompts: "Press the Space Bar. It's the biggest key on the keyboard," as a diagram of the Qwerty keyboard (with space bar flashing) shows on the screen. When you press the biggest key on the keyboard, the program thanks you and courteously asks you to enter your name. But the machinations and frustrations involved in getting this far could be avoided by a card or other aid warning the user to boot up the operating system before trying to run the program.

The program allows you to scan topics you may be familiar with, passing over sections as you see fit, a welcome time-saving feature, and guides you through the initial maze of personal computing, touching on hardware, peripherals, operating systems and various types of software packages. It's a gentle teacher, holding your hand, pausing occasionally to question you on your understanding—rewarding you with positive responses when you're right and answers when you're wrong.

The data base tutor, entitled "Introduction to Databases," first defines a data base, then runs through examples of applications. It introduces common terms, such as fields, records and data types, then quizzes you on what you've learned. You can cheat by pressing the F9 key, which fills in the blanks for you. If you want to review a section, press F7 and the program pages back to the previous topic. You can cancel the current topic and return to the main menu by pressing the Esc key at any time.

The program points out that the advantages of using a data base manager include reducing data redundancy and making it possible to centralize data. This makes it easier to keep track of information that otherwise would be far flung and therefore unmanageable. The

program also takes a quick look at three popular data base managers: dBASE II, Lotus 1-2-3 and T.I.M. Two other diskettes included with the package are devoted to Comprehensive Software's PC Base, a functional, menu-driven data base manager.

The real standout in this series is "Introduction to the Operating System," a reincarnation of the PC Tutor program updated to cover PC-DOS 2.1 and set up to run on the PCjr.

This program is an excellent primer on PC-DOS. It leads from one topic to the next in logical steps. It treats, for example, internal commands, such as Cls, Dir, Copy, Path, as well as external commands (e.g., Assign, Mode, Format and Tree) so thoroughly that if you had no idea what they meant before, you surely will afterward. In fact, if there is any problem with this program, it's in its paradox—on the one hand you feel as though you will suffer a crippling case of information overload. But on the other hand, and all too often, you hunger for more detail on topics that are brought up and dropped just as quickly. It's understandable that given the limitations of space on a diskette, the program may have to omit some bits of information, but this can be frustrating. For example, in describing communications hardware, the program explains that there are two types of communication boards, synchronous and asynchronous, but fails to say what they are.

There are useful bits of information interspersed throughout, including an explanation of the Edlin command, the line-oriented text editor included with PC-DOS. Also, there is an extensive treatment of directory functions, describing the use of directory paths and writing and using batch programs. It also explains how to use the special command key sequences of PC-DOS, such as freezing program execution by pushing Control Num Lock.

The Intro Series provides solid groundwork, a strong step in the right direction for beginners and a useful review for old-timers.

—Charles A. Miller

For more information circle 112 on the reader's service card.

A Program For Preschoolers

■ LEARNING WITH FUZZYWOMP

runs on Commodore 64, all Apple (except Macintosh); Coleco, Commodore 64 cartridge (by the end of the year); \$29.95 retail; Sierra On-Line, Sierra On-Line Bldg., Coarsegold, CA 93614; (209) 683-6858.

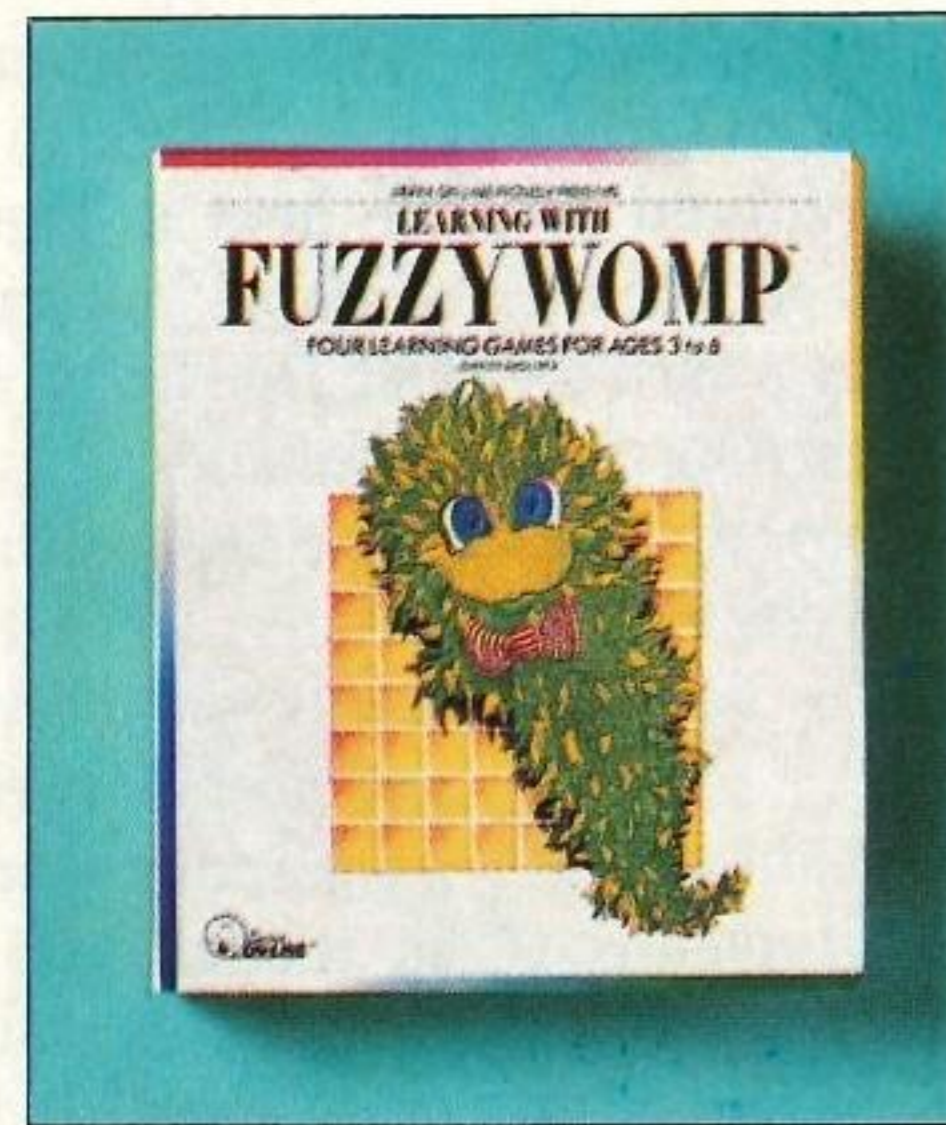
Software manufacturers are beginning to recognize parents' reluctance to shell out \$30 or \$40 for computer programs their children will tire of after a few plays. Today's trend is toward multi-dimensional software—programs which contain several games and various difficulty levels and have some real educational value to offer.

Sierra On-Line's new educational program, Learning With Fuzzywomp, is part of that trend. The program contains four games with varying levels of difficulty designed to teach children ages 3 through 6 reading, math readiness and other preschool skills.

The Fuzzywomp games contain superb graphics and animation. (Fuzzywomp himself is a small furry creature that the child uses to make selections and move objects in all four games.) The games are controlled by joystick and accompanied by such engaging animated characters as eyebrow-wiggling clowns, bubbling pipes and jumping monsters. There is plenty of action, bright colors (if you have a color monitor) and sound effects in the program that hold a child's interest while developing and reinforcing skills.

In Juggling Clown, for example, the clown displays a numeral from 1 to 10; a gumball machine is also on-screen. The player moves Fuzzywomp toward a release lever on the machine, counting out and releasing a number of gumballs to match the number the clown displays.

The object in Bubble-Up is to order numbers from 1 to 10 or 10 to 1. Numbers in random order "bubble" out of a pipe at the bottom of the screen. The child uses the button on the joystick control to shoot at the numbers in sequence.



Domino Match is a pattern matching game. On-screen are eight dominoes, each displaying a different number combination. When the game's animated computer produces a random domino, the child uses the joystick to point Fuzzywomp at the matching domino.

The fourth game, Make-A-Monster, lets the child create a monster from a large inventory of body parts. Players choose a head, body and feet for their monster. Once the monster is completed, the player finishes the game in an arcade-like mode, aiming and firing a hairdryer at moving targets.

Each of the different games is designed to teach children a new skill. Juggling Clown helps them recognize the quantity that a numeral stands for—a critical math readiness skill, according to

Sierra. Bubble-Up fosters learning about progression of quantities. Domino Match teaches pattern matching skills that help prepare a child for reading. And Make-A-Monster encourages creativity and can aid a child's hand/eye coordination.

In terms of both educational and entertainment value, Fuzzywomp gets an "A." Unfortunately, the same cannot be said for its command structures and documentation.

For one thing, the program's commands aren't consistent across the four games, making them harder to catch on to than they need to be. In three of the four games, for example, pressing Escape will bring the child to a more difficult level of play. Once at the highest level, pressing Escape will bring him or her back to the menu. In Make-A-Monster, however—the fourth game—there is only one level of play. Why? What is even harder to understand is that *there is no way to escape this program short of playing it all the way through*. Pressing the Escape key will not bring one back to the menu as it does for the other three games.

There are other examples of inconsis-

tency. Sometimes the program will bring the player back to the main menu when through with a game, other times it will automatically assume the player wants to play the game again.

These inconsistencies may seem trivial, but considering the program is intended for children as young as 3, they are serious flaws. (Remember, 3-year olds live and die by the *rules*—"I only eat my cereal from the *green* bowl"—and any deviation from the standard will be most unwelcome.)

The documentation does little to clear up the confusion. For the sake of brevity, it omits any explanation of the different levels of the multilevel games—how many levels are available and just what the next level will bring you. It doesn't mention the idiosyncracies of the program's ability to escape from some programs and not from others. You have to learn through trial and error.

The documentation presents its brief explanations of the games in an order that's entirely different from the order in which the games appear on the menu. There are only 52 lines of text, single-spaced into a small cardboard folder. Printed in brown ink and containing no color or illustrations, it is about as visually appealing as an electronics textbook. It almost seems as if Sierra has treated the documentation as an afterthought, rather than an integral part of the software package.

Overall, it's a good program with some very nice extra features. The sound can be toggled on or off with Control-S. The menu is comprised of pictures, not words, to make the selection process easier for a child.

But ironically, the program's extra touches make its inadequacies even more obvious. Fuzzywomp has the ingredients of an outstanding program—high-quality graphics, entertaining animation and good educational value. Yet, in skimping on the documentation and user interface, the program settles for mediocrity. With just a few simple changes, Fuzzywomp could have been an extraordinary program.

—Lynn Walker

For more information circle 113 on the reader's service card.

Basic Skills Help

■ **THE LANGUAGE OF MATH** runs on Apple II series, Commodore PET and 64; \$299.95 retail; Krell Software Corp., 1320 Stony Brook Rd., Stony Brook, NY 11790; (516) 751-5139.

Student competency in the basic skills of reading, writing, and mathematics is a subject of much concern among parents and educators. It is also the goal of a series of software packages from Krell, collectively called the Basic Educational Skills Tutor (BEST) system. Krell says their BEST packages help prepare students for the competency/proficiency exams which are now required for high school graduation in some states.

The Language of Math serves as an introduction to the 10 packages in Krell's BEST math series. It provides individualized explanation, drill and quizzes on math topics which are expanded on in later packages.

The Language of Math combines sound educational methods and the inherent teaching power of the computer. As if they grew out of good lesson plans, topics covered in The Language of Math are often prefaced by interesting introductions, and new concepts are connected with previously taught ones. The package entices students to interact with the lessons, and provides the opportunity for plenty of drill. Graphics, an integral part of all the lessons in The Language of Math, demonstrate concepts in a more effective and entertaining way than a blackboard ever could.

The Language of Math is categorized into nine interrelated modules. Module 1, titled Numbers, uses a sometimes corny story of a prehistoric couple, Homer and Homa Sapiens, as the foils for instruction on the concepts behind numbering systems, fractions and decimals. Generally, the text builds a good conceptual foundation, although some of the story devices may be too childish for high school students. A highlight of this module is the way graphics are used to

"build" Roman numerals—a technique that helps clarify the topic in an innovative way.

Module 2, Processes, uses an eclectic mix of offbeat stories to help explain arithmetic concepts. These stories give the impression of trying too hard to be entertaining, and may in fact get in the way of student understanding. The strength of this module is the drill it provides in addition, subtraction, multiplication, division, exponentiation and root extraction.

Geometry is the topic of Module 3. Unsophisticated but generally effective computer graphics really come into play here, demonstrating the properties of various geometric shapes. The story used borrows vaguely from a "Star Trek" TV episode. Although it is clever, it is

probably too abstract for basic skills instruction. The module's high point is the "UFO" quiz on geometric shapes.

Module 4, Graphs and Charts, may be the best module of the bunch. The topic is well-suited to computer graphics, and this module uses graphics very well to demonstrate concepts.

Module 5 focuses on Money, using graphics to show the various denominations of bills and change, and providing plenty of drill on how much money various combinations of bills and change add up to. Giving its teenage audience a situation to relate to, Module 5 tells the story of a young man who wants to buy a motorcycle and must grapple with the meanings of down payments, sales tax, discounts, loans and monthly installments.

Measurement is the topic of Module 6. Focusing on the English system and all but ignoring metrics, Module 6 relies on straight explanation and draws its examples from mundane situations. The text tends to be boring, and some concepts are not fully developed. Graphics which move on the screen to demonstrate how measurements relate to each other are this module's best feature.

Module 7, Rates and Ratios, repeats the pattern of straight explanations that Module 6 employed, and also lacks imagination in the presentation. The student does get plenty of drill, and is encouraged intelligently. For example, I calculated and reduced a ratio in one step instead of two and got a "very good" message instead of just a "correct."

Inspired presentation returns in Module 8, Comparative and Descriptive Terms. The module opens with a story about Ishmael, who has a rock group called Pequod and goes to a talent agency headed by Colonel Ahab. While some literature teachers may drop their jaws at the irreverent reference to the classic novel *Moby Dick*, the dialogue is an entertaining introduction to the concept of comparison.

Module 8 also explains mode, median, mean and range by making useful analogies. Drill is plentiful, and the A La Mode quiz is another good use of imaginative methods.

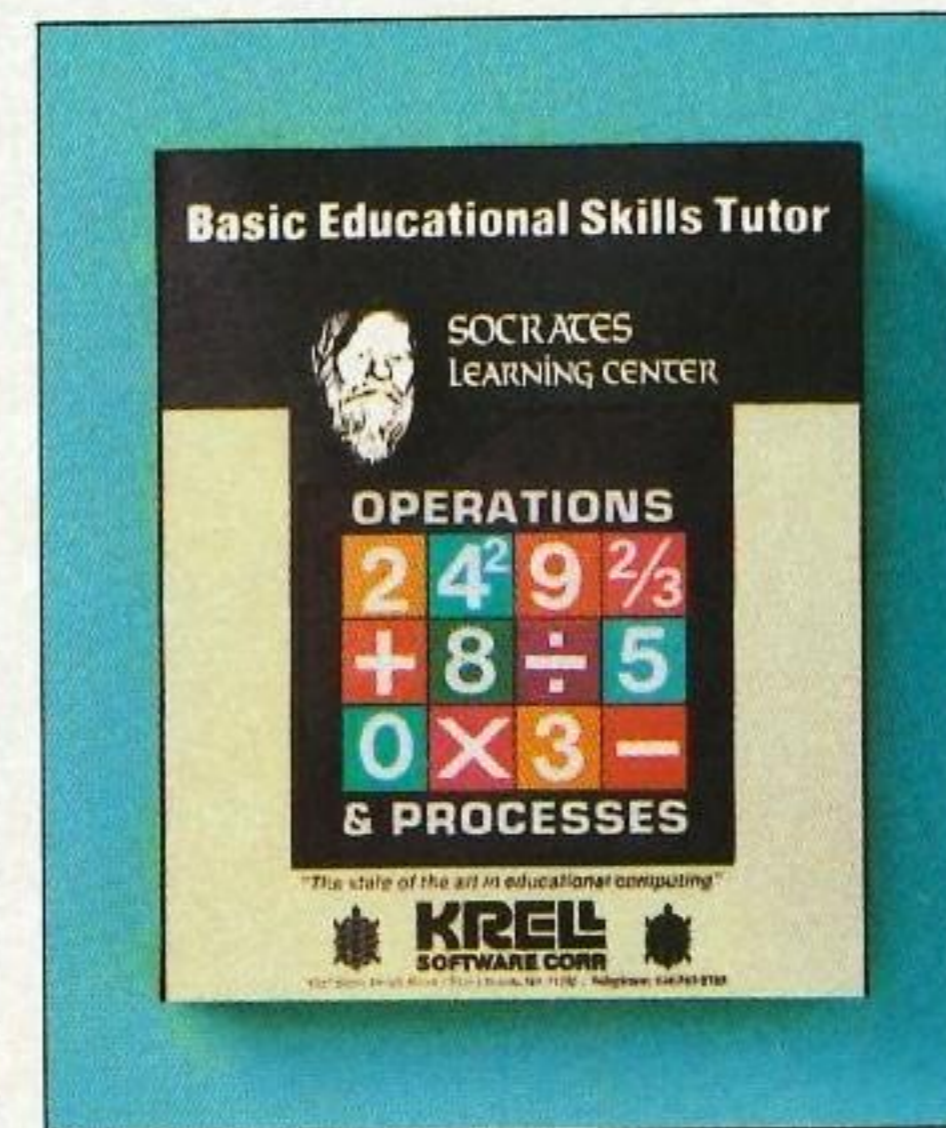
Module 9, Dictionary of Mathematical Terms, is a computerized glossary. The student can review definitions or take a quiz on about 100 math terms. Review is self-paced and includes a sentence with each definition. The quiz takes the form of a game, in which the student can choose the severity of the penalty for wrong answers. This module is probably more fun and may be used more willingly than the glossary of a book.

Individual modules of the Language of Math can be purchased for \$49.95 each. Any five can be purchased for \$199.95. Modules differ in number of disks: Modules 1, 2, and 3 each have three disks; Modules 5, 7, 8, and 9 each have one disk; Module 6 has four; and Module 4 has five.

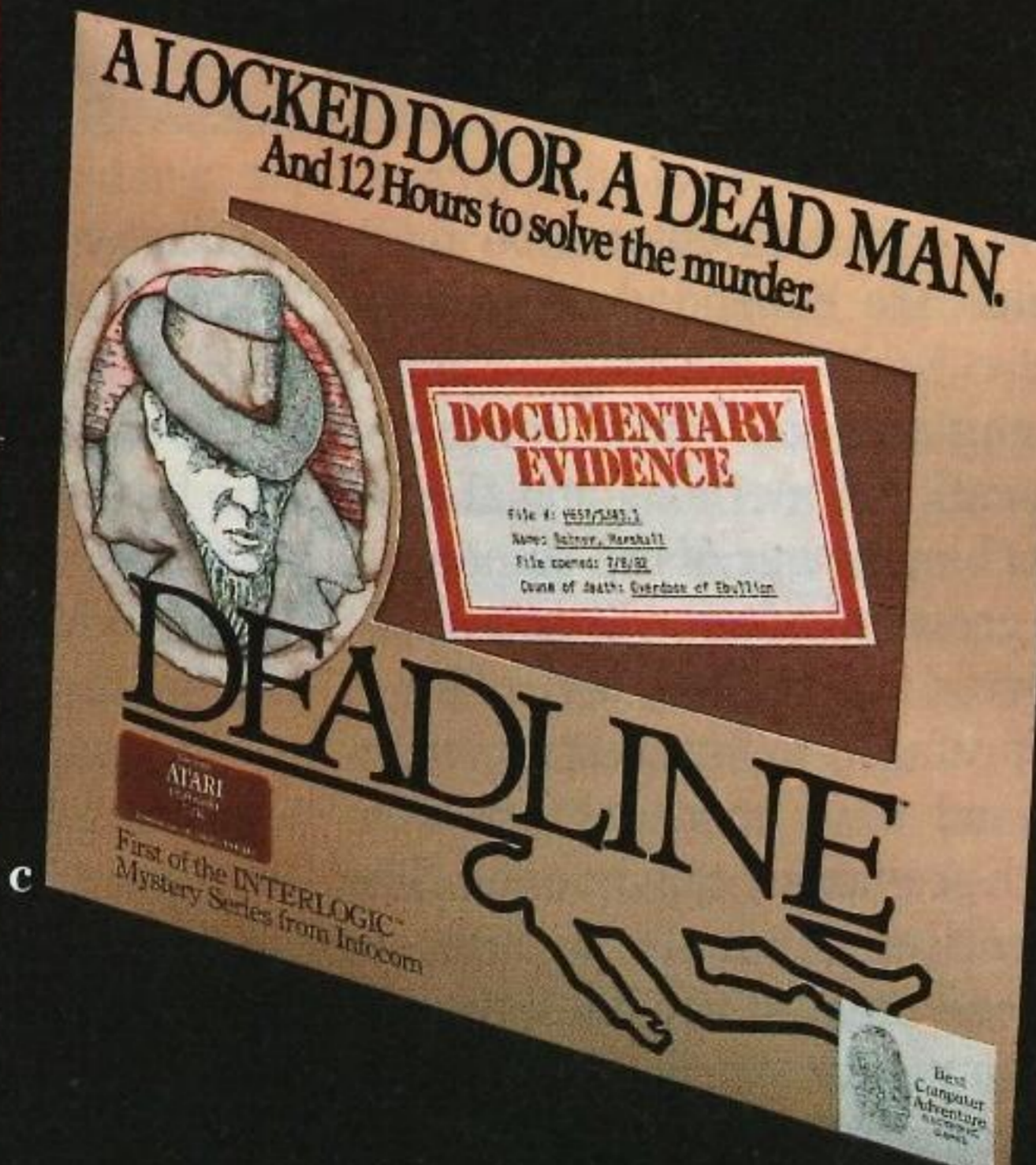
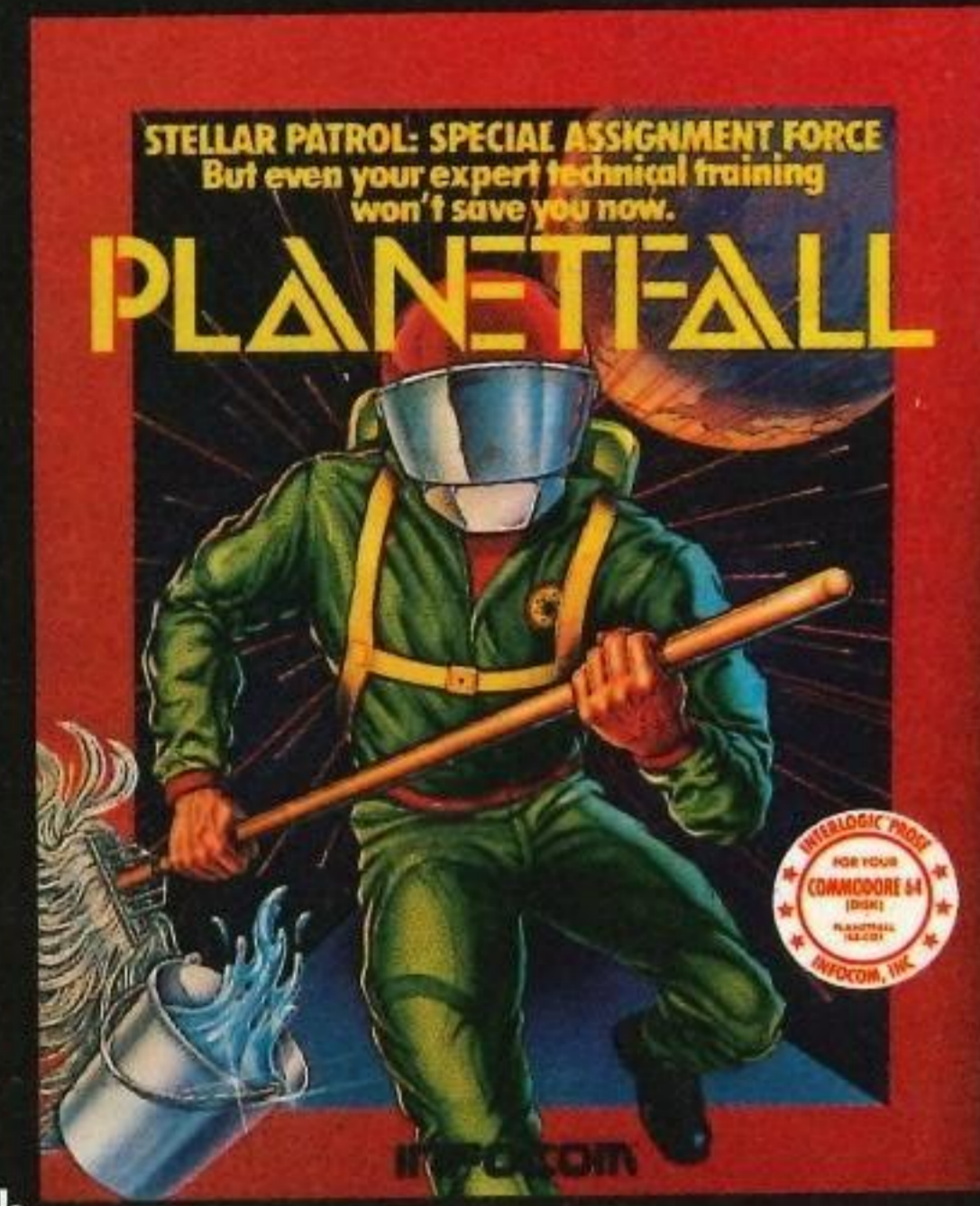
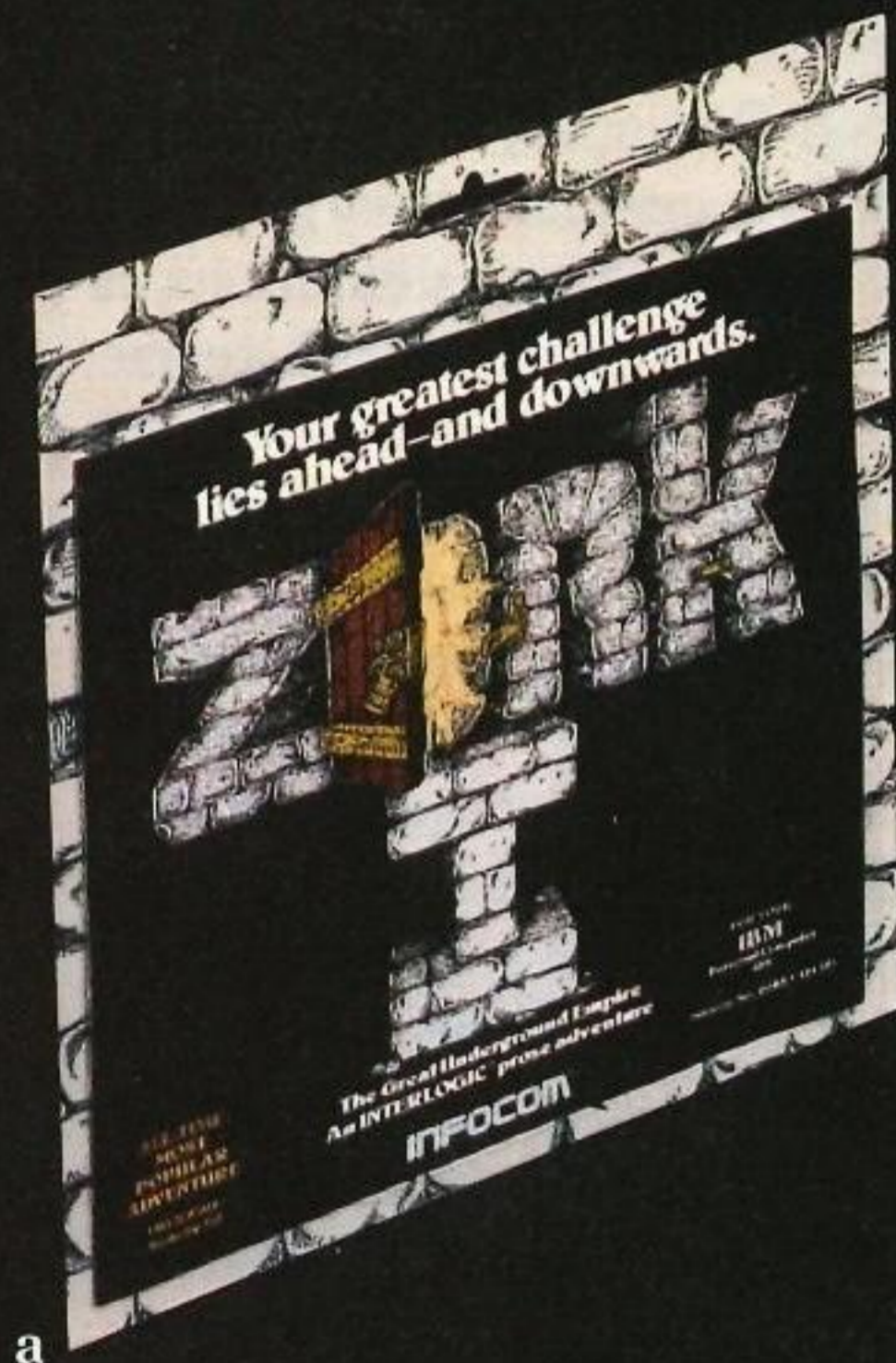
As a whole, The Language of Math is an ambitious and helpful package with a somewhat steep price tag. Still, an investment in this BEST series may be more economical than the cost of a private tutor. And no tutor is likely to be as readily available as is a computer and its software.

—John F. King

For more information circle 114 on the reader's service card.



Venture



Into the suspense, mystery and adventure of the newest in the world of interactive computer software — a) Enter the world of Zork, the Great Underground Empire, and immediately become challenged by the interwoven intrigue, danger and mystery of the first of the ZORK Trilogy, the most popular computer adventure series \$39.95. b) Join the Stellar Patrol. Take off on an exciting,

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Pilots In Peril

■ **FLAK** runs on Apple II series; IBM PCjr; Atari 800, XL series; Commodore 64 (joystick optional on Apple version); \$39.95 retail; Funsoft, 28611 Canwood, Agoura, CA 91301; (818) 991-6540.

In Flak, a new high-flying combat game, a maneuverable jet fighter armed with a focused-beam energy weapon must be flown over heavily defended hostile territory. The player must reach and destroy a renegade war computer before the sophisticated anti-aircraft missile batteries that it controls team up to annihilate the jet. The closer you get to your target, the more deadly and determined the opposition becomes. You'll need two traits to survive: coordination and aggressiveness.

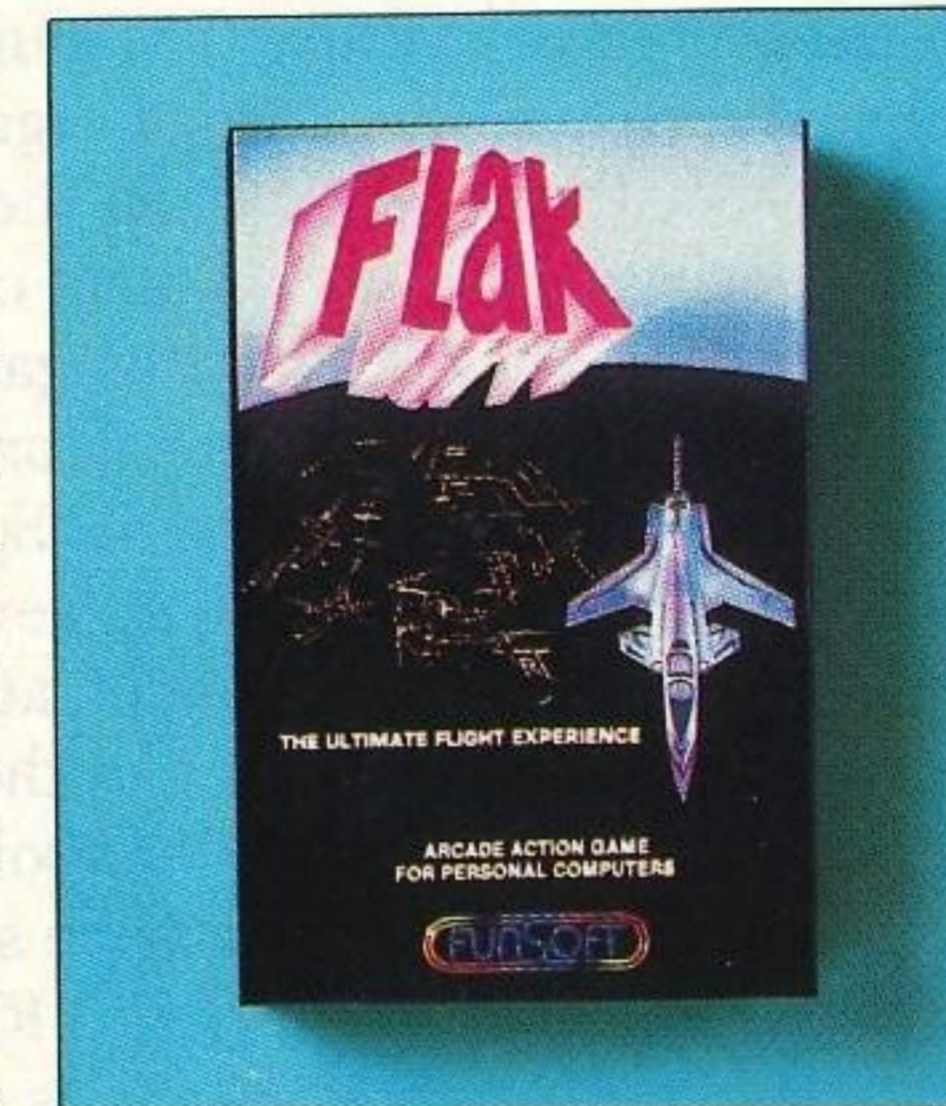
Do you have a killer instinct? If so Funsoft's newest arcade-style game will provide a rich outlet for it. The people at Funsoft claim, with merit, that Flak pushes 8-bit computers to their graphic/action limits. And Flak pushes people with equal strength to their aggressive limit.

The meek don't inherit anything here. In Flak, they just get blown out of the sky. So promptly and repeatedly, in fact, that they are likely to quit in despair. The game's architecture mandates aggression. You can't simply dodge missile batteries because they'll get you from behind and in between banks of launchers if you don't take them out first. It's kill or be killed. Flak scores you on the number and type of batteries you destroy, with extra points awarded for blowing up the enemy computer itself.

The game has a realistic "feel," even though personal computer graphic limitations make the landscape scenario somewhat schematic. But you do get a colorful and seamless scrolling landscape and enough surface detail and color to keep your interest. Graphic features include forests, lakes, an ocean (only on the Commodore version), roads, buildings and six anti-aircraft installations. Flak also functions well in

monochrome, although you may have to strain, at times, to spot missiles.

As the jet pilot, the player travels over this landscape at a constant speed through most of the action, covering one screenful of territory in about seven seconds. The aircraft is seen from above, with the player looking down at a scale viewing altitude of about 9000 feet and a scale velocity of some 900 miles per hour. Each Flak mission provides the player with four aircraft with which to attack the missile bases on the ground.



The anti-aircraft installations fire unguided missiles at you; all except the Apple version have proximity fused warheads. You can generally get out of the way of one missile, but you usually have more than one to dodge. The enemy launchers actively

track you and change tactics with every round. You fire your own weapon in pulsed bursts of up to about two per second. You can only demolish a target if you can "acquire" it in your crosshair's focus at the moment your pulse arrives exactly on target, although you can hover briefly in front of a target to acquire it (at no small risk!). The crosshairs float some distance ahead of your craft.

You can haul about on your joystick to accelerate, decelerate and maneuver laterally within the confines of the scrolling screen. If you make it to the enemy computer, you will likely notice a droll touch: A resemblance to the motherboard of the computer you're using, right down to the labeled 6502 microprocessor. The game saves the top 10 scores.

Thus far, the different versions of Flak resemble each other. Yet, in fact, AppleFlak differs greatly from CommodoreFlak and AtariFlak—which closely resemble each other. The action moves much more slowly on the Apple with a somewhat mushy craft response to joystick inputs. The most difficult of the five levels on the Apple version barely approach the pace and difficulty of the

other version's first of two levels. All versions use a joystick, though dexterous masochists may want to try AppleFlak's optional keyboard control.

The Atari/Commodore versions begin with a cute, "Star Wars"-style two-part harmony. However, the Apple landscape seemed to have richer hues. Another distinction is the craters that appear after a successful hit on the Atari/Commodore game. The other version only showed a point score on the "hit" battery. In the Commodore versions you pass over a small ocean with hidden underwater batteries before reaching your target. This creates a sense of drama. Making it to the water's edge gives you an exhilarating sense of accomplishment. The Atari and Commodore versions are nearly equal in terms of difficulty, but the Atari version has an edge thanks to sharper graphics and is just enough faster than the Commodore version to discourage some timid or uncertain newcomers to the game.

We tested AppleFlak on several II Plus, IIe and IIc machines. All worked well, except for one IIe which wouldn't boot the game despite considerable fiddling and it required a fair number of attempts before it would run on the IIc. CommodoreFlak worked fine. But the first dozen times we tried to boot AtariFlak the program decided we were trying to copy it (not true!) and gave us a smirking "happy face" instead of the game at the end of the boot, proudly announcing the brand of protection (Syncrolok). We changed drives and tried many more times and it finally loaded. Heavily protected programs like this are often fussy about disk drive speed and alignment. Loading the program takes about 90 seconds on all versions.

Flak delivers ferocious fun. To more bloodthirsty game players, it is likely to become one of the more replayable two-dimensional games. It even merits comparison with Xevious, the challenging and popular arcade game that Flak passingly resembles.

—Lee Thé

For more information circle 115 on the reader's service card.

A Cold Soviet War Game

■ **OBJECTIVE: KURSK** runs on Apple II series, all Atari; \$39.95 retail; Strategic Simulations, Inc., 883 Stierlin Rd., Bldg. A-200, Mountain View, CA 94043; (415) 964-1200.

With the dark, dreary days of winter looming on the horizon, you might be looking for a good strategy game to snuggle up with next to the fire. If that's the case, you should take a look at Objective: Kursk, Strategic Simulation, Inc.'s, new war game that puts you in command of the German Army in its effort to win the Soviet city of Kursk for the Third Reich during Hitler's disastrous invasion of the Soviet Union in World War II.

Objective: Kursk is a strategy game which is played a bit like chess, except you deploy troops and airplanes instead of knights and pawns. You take the role of field commander of the Third Reich forces, maneuvering land and air troops through a series of heavily detailed strategies in an attempt to outwit either the computer or a second player.

It is July 4, 1943 and the German plan calls for the Ninth Army to attack from the north and the Fourth Panzer Army to attack from the south of the Kursk salient. Standing between you and Kursk (a city on the Seym River in the southwestern part of the Soviet Union with a current population of 375,000) are several divisions of the Soviet Army including tanks, rifle divisions and planes.

Your screen shows a map of the battle area, complete with troop positions and geographical characteristics in and around Kursk. You start out with an allotment of troops and weapons based on the historical details of the bloody campaign and your job is to deploy your forces for maximum impact on the defending Soviets. Your options include advancing, retreating, splitting up your divisions, transferring personnel and weapons between divisions and calling in reinforcements.

In addition to land movements, you

also have the opportunity to make air strikes, by way of air-to-air combat and bomber attacks. After the airstrikes, whatever fighters are left are automatically deployed for combat air patrol duty to prevent any enemy action from the air.

As if air and land battles weren't enough to keep you and your forces busy, you also have to deal with the fickle and ever-changing weather conditions which are controlled by the software. For example, there is a 10 percent chance that it will rain on each turn, causing streams to turn into rivers, gullies into swamps and the battlefield into a mire of twisted bodies and machinery. When this happens, you have the option of deploying engineers to bridge the rivers and clear paths through the swamps.

There are also morale and disruption factors to consider. These are both measured along the way and can affect the outcome of a battle. If, for instance, a combat group's disruption level is greater than its morale rating, and the disruption suffered by the attacker during the combat was less than or equal to 89, then the defending combat group will be forced to retreat. If a combat group's disruption level is greater than its morale rating, then it will be unable to move any further on that turn.

In addition, availability of weapons is calculated according to attack strength and weapon strength. This attack strength is naturally weakened after each offensive.

At any time during the game, you can toggle to a second status screen and discover how you are progressing in your battle against the Soviets.

Scoring the game is done through a formula more complicated than selecting delegates to attend the Democratic National Convention. Victory Points are awarded for the control of towns and for surviving combat forces. A town is controlled by the player who last had a combat group or supply depot move into the

town. Each town in the near vicinity of Kursk is awarded a certain number of points ranging from 5000 for smaller towns like Sudzha to 25,000 for Kursk itself.

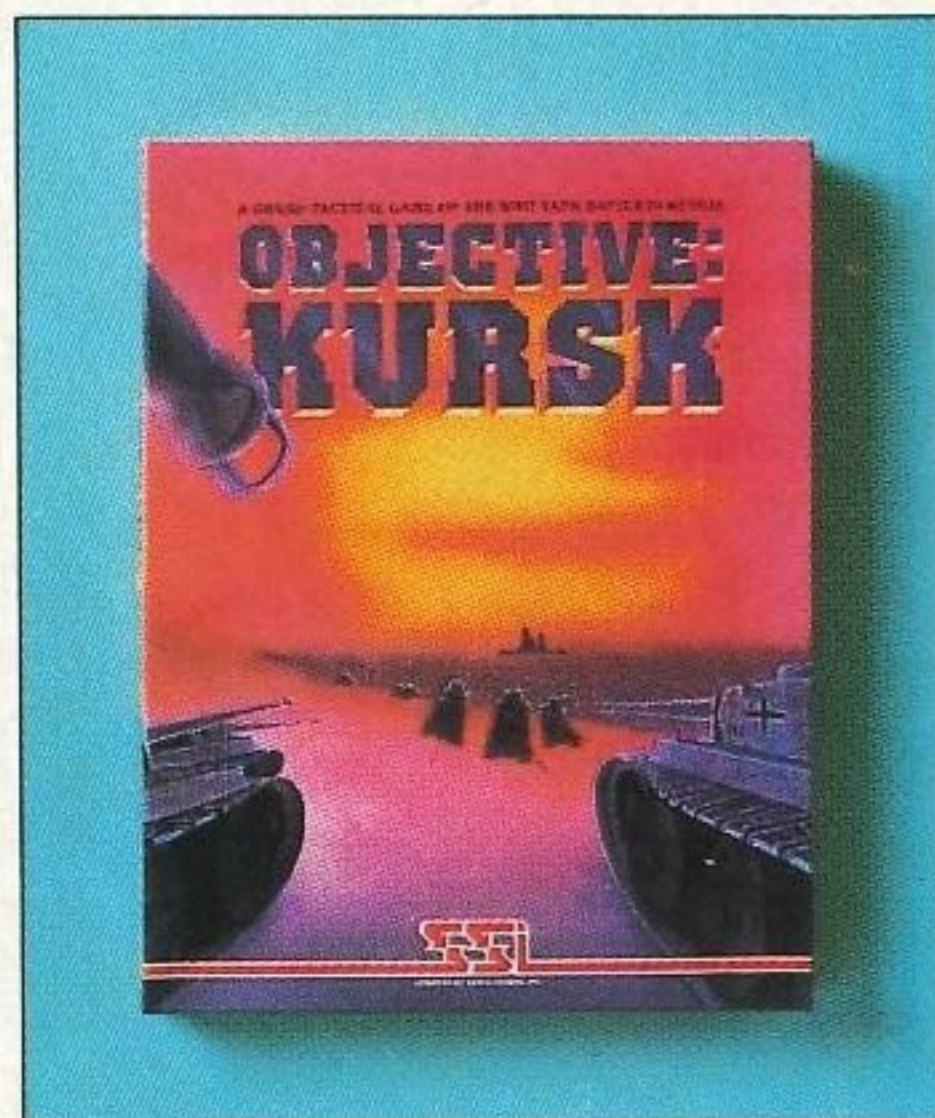
Because the game can tend to run on and on, players are able to exit a game, save it to disk and then return to battle on another day. (If only the vanquished Germans had been so fortunate.) The game is timed through the turns of each player. Each turn represents a 12-hour period. The game automatically ends on the turn designated as "PM" July 15, 1943, when the actual battle the game is based upon came to its conclusion.

Since this game is a realistic simulation of an historic event, the winner will always be the Soviet Army. What can be changed, however, is the extent of the German defeat. If your strategy—as calculated by the computer—brings you within 2000 points of the Soviet Army, then you have scored a decisive victory for the Third Reich. Being within 2000 to 4000 points will probably earn you a promotion to the top echelons of the Nazi Army. Staying within 4000 to 6000 points is still a victory of sorts, perhaps allowing you to keep your present rank. If your points fall 6000 to 8000 below the Soviets, you have scored a draw and possibly the right to return to the Fatherland. Drop from 8000 to 10,000 points below the Soviets and you may have to fight the Soviets again for a ticket home. When you drop from 10,000 to 12,000 points below the Soviet Army you have brought disgrace upon the German Army and you might as well pack your snowshoes for a one way ticket to Siberia. More than 12,000 points below the Soviet Army? Need we go into the gory details?

If you're looking for a video game with a lot of bells and whistles or some light entertainment to pass the day, Operation: Kursk simply isn't the game for you. If, however, you have the dedication of a battlefield general and the calculating mind of a master wartime strategist, then Operation: Kursk will be the sort of battlefield challenge you're looking for.

—Robert A. Sehr

For more information circle 116 on the reader's service card.



A Chess Program That Teaches

■ **HOW ABOUT A NICE GAME OF CHESS!** runs on 64k Apple II, II Plus, IIe, IIc; Commodore 64; \$34.95 retail; Odesta Corp., 3186 Doolittle Dr., Northbrook, IL 60062; (800) 323-5423 or (312) 498-5615.

A new chess-instruction program, the latest release from Odesta Corp. borrows its title, How About a Nice Game of Chess!—and more—from the movie "War Games." In the movie, the defense department's WOPER computer proffers this very question. The celluloid computer also plays every possible scenario in a variety of "games"—chess and global thermonuclear war among them—in order to "teach" itself a winning strategy. Likewise, Odesta has designed its software package so that beginning chess players can develop and test potentially victorious strategies. According to its manual, How About a Nice Game of Chess! is also intended to help *any* chess player—novice, intermediate or advanced—play a better game.

The program delivers on its promises. As a beginner who never learned much more about the game than the names of the pieces, how they move and the object of play, I assumed the program would cover these routine topics, briefly explain the game rules, and suggest playing several games with the computer to study its moves. Indeed, these topics are covered. Anyone comfortably familiar with such basics will want to skip by this part of the program and move on to what I found to be its biggest surprise. What I was unprepared for was the program's in-depth treatment of complicated strategy and tactics.

Learning to use the program is a simple task, and should take no longer than a few seconds. If you choose to use keyboard controls, you'll need only three keys: return and the right and left arrows. The arrows move the cursor through the on-screen menu; return selects an option. If you choose instead to play with a game paddle, you'll move the

paddle knob left or right to move through the menu, and hit the button to select an option.

The menu, which appears to the right of the monitor screen's chess board display, lists 13 selections. These options represent features of the program that will help you at different points in a game. For example, Flip, the first option, allows you to reverse the top-to-bottom positions of the white and black

pieces. This lets you view your chess pieces as your opponent views them, which is often important for anticipating your opponent's next move. Another option, Inward, shows you which chess pieces are attacking or defending a specific square. When the cursor is placed on the square to be investigated, pieces attacking or defending the square are highlighted. This is an especially helpful feature for beginners. It aids in determining a specific move and helps introduce the territorial aspects of the game.

Another option called Outward uses the highlight feature to indicate the squares and pieces that a particular chess piece is attacking or defending. This excellent feature can be used to learn how a piece can move in a particular direction, as well as to learn about positional strategy and the attack capabilities of various pieces.

The third option listed on the menu changes the program's level of difficulty from zero to nine. At the zero level, the game performs a quick evaluation of its potential moves and chooses one in about one second. At this level, the program may have a hard time beating you, which is a boon to beginners who lack confidence. At level one, the program plays a bit stronger, and takes an average of five seconds to make a move. In this and all levels above it, an Advice option becomes available at various times through the course of a game to offer suggestions on moves. If you are a beginner, this feature is a blessing since

it helps you put the program at a disadvantage.

At level two and above, an Opening Library feature helps players learn about the vastly different strategic options that come into play as the game begins.

In the intermediate levels three through six, the program becomes increasingly stronger as it takes more time to consider its moves. At level six, the program starts to consider your combination moves. The instructional value here is to teach you to think ahead. At level nine, the program takes as much as six minutes to make a move. This time can be well spent if you plan strategy against the program's moves.

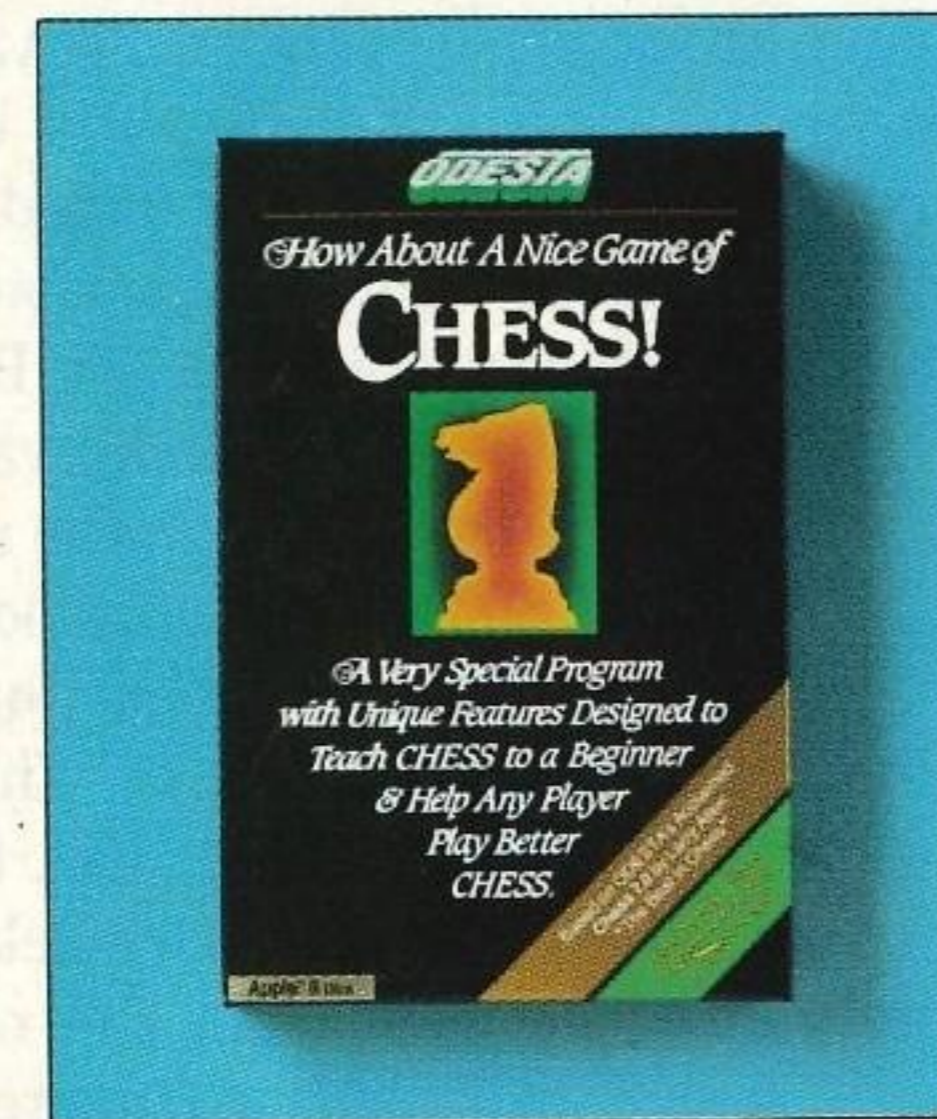
The manual that explains these skill levels and features is one of the best I've seen. In the tutorial section, diagrams are provided for each example. The illustrations are somewhat superfluous, however, since the tutorial is designed to be followed on-screen.

The tutorial takes up 50 of the manual's 96 pages. In six chapters, the tutorial reviews movement and capture, check and checkmate, special moves, and strategy and tactics in the opening, middle game and endgame. Each chapter is easy to get to through the tutorial option on the menu. One nice feature of this arrangement is that the tutorial is available during a game for on-the-spot refresher instruction.

In chapter one, movement and capture, the program shows a "movie" of each piece. The movie can also be frozen, allowing you to study the chess board. Chapter two—and most of the successive chapters—lets you answer questions and play through the scenarios that follow. But if you fiddle with the scenarios in the midst of a match, your game will be lost. Correct answers appear at the end of the manual. Though the drill and practice lessons may sound like grammar school drudgery, they are excellent techniques for the stated purpose of How About a Nice Game of Chess!: learning the game and then learning to play smarter.

—Cecilia Wessner

For more information circle 117 on the reader's service card.



May The Force Be With You

■ **STAR WARS, THE ARCADE GAME** runs on Atari 400, 800, 1200XL (joystick required); \$39.95 retail; Parker Brothers; 190 Bridge St., Salem, MA 01970; (617) 927-7600.

Based on the "Star Wars" movie series, Star Wars, The Arcade Game puts you in the center of some fast fighting action and provides some entertaining graphics, most notably the explosion of the Death Star.

The game was created in collaboration with the makers of the movie series and draws heavily on the stories and characters in the movies, raising it above the level of the average shoot-'em-up joystick game. The "Star Wars" musical theme urges you on at the beginning of every play and the screen designs were inspired by the movie's sets. Parker Brothers has even incorporated "The Force" into the game as a mysterious weapon that can help you win the game—if you figure out how to use it.

Unless your name is Luke Skywalker, flying the spacecraft is tricky—what works for you in one situation might not work in another.

The game is full of obstacles and targets. Although they are never all on the screen at one time, it seems like so much comes at you sometimes, the only thing to do is keep your finger on the fire button and move helter-skelter.

That's what I did my first fly-through and I managed to explode the Death Star and score over 24,000 points. Yet I had no idea what I was doing. A few more fly-throughs and I couldn't top 9000. At one point I reached a low of 33. That's when I decided to get some help from the documentation.

The documentation tells you most of what you need to know about game scoring and control of the ship—with one notable and intentional exception—how to use "The Force." The game can be confusing even after reading the manual and playing a few times.

The object of the game is simple enough: You try to score as many points as you can before all your shields are disintegrated and you are hit. You start out with nine shields and lose a shield every time you're hit. Your score and the number of shields are constantly displayed on-screen.

But two factors cause confusion: Scoring in the second and third rounds varies according to a complex set of

conditions that are hard to keep track of. More important, you can't always tell when something will hit your ship because you have control only of your proton torpedo sightings on the screen. Your guns and ship are represented by stationary icons on the screen.

As you move the joystick, the scene in front of you will re-

spond accordingly, but because it's not always easy to tell where your ship is, you may misjudge your position. You get zapped just when you think you've avoided something.

There are three rounds, or screens, to get past before you encounter the Death Star.

Hitting fireballs before they hit you is fairly easy on the first round. Tie (enemy) fighters, also buzzing around the first screen, cannot hurt your ship but hitting one is much tougher than hitting a fireball.

Fireballs and towers attack you in the second round, making preservation of your shields more difficult.

The third round has frequent fireballs coming at you very fast as you speed down the Death Star's equatorial trench. Here, evasion and attack are equally difficult, and you're almost sure to lose some shields before you make it to the main reactor port.

Ah, but that reactor port! It can give your game a new life, even if you haven't been scoring well up to this point. The port graphic comes up fast during the third round and you may not even recognize it the first few times

you see it. It goes off-screen as fast as it comes up. If you miss it, you have to go through the trench again. Just like in the movie!

Hitting the reactor rewards you with a colorful graphic explosion of the Death Star, the game's visual and emotional high point. But rather than signaling the end of the game, blowing up the Death Star gives you a new start in the first round as well as three new shields and bonus points.

The wide variance in bonus points depends on a variety of game circumstances, including use of "The Force," that mysterious weapon whose operation Parker Brothers says it has left intentionally vague.

Though the manual does tell you how many extra bonus points you get for using "The Force," it doesn't tell you how to use "The Force." You are left to guess at that, but the game's creators say it does relate to how familiar you are with the movie series. If you are really frustrated in trying to figure it out, you can call Parker Brothers to find out. But that's no fun!

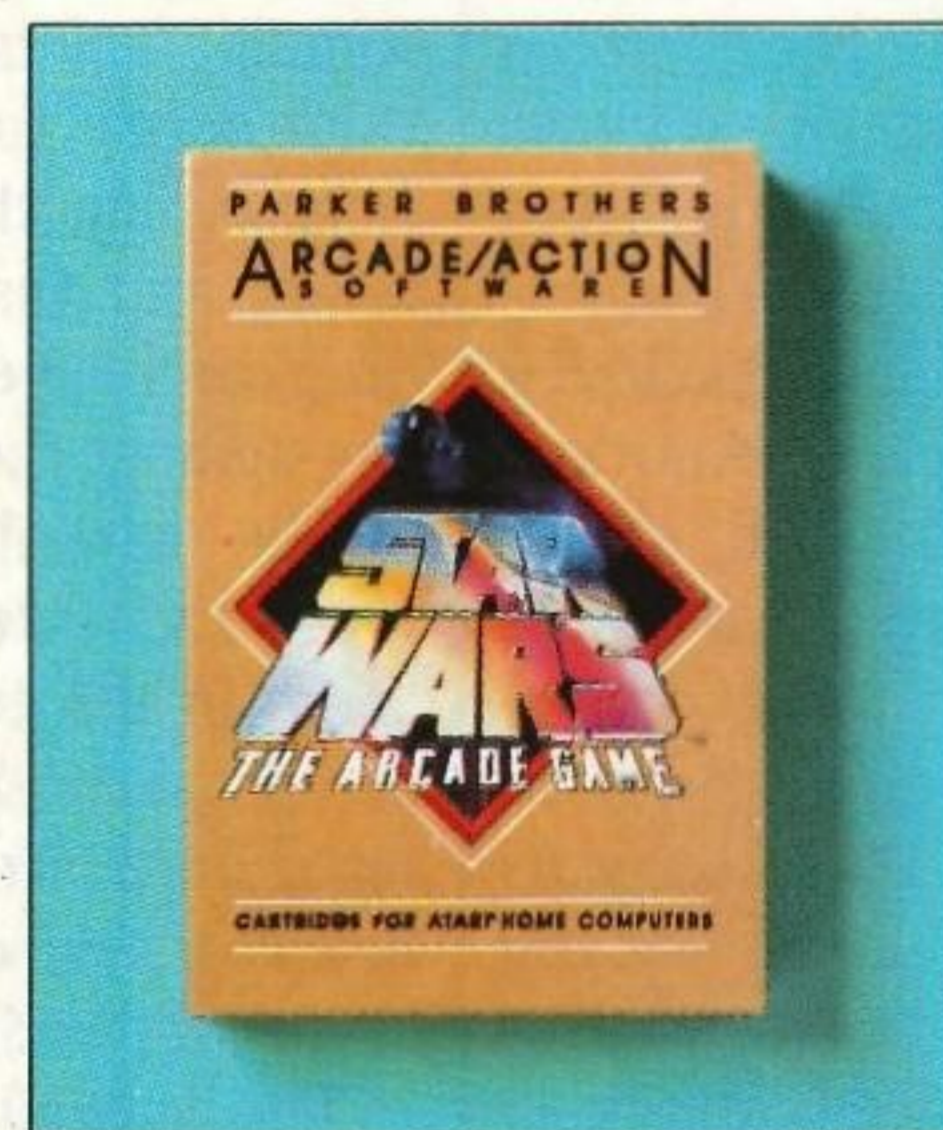
And though, especially for me, shoot-'em-up joystick games tend to wear out fast, I still enjoyed this one after almost two hours of play. Since you score points quite easily, frustration is never total, and as long as you make it to the reactor, you have a chance at a respectable score.

If, or rather when, your final shield is gone and you are hit, the screen motion stops until you press the fire button again. Presumably this happens so you can see your final score. It also gives you a chance to go out smoking, with your guns blazing—a lift that carries you into the next game.

There seems to be almost unlimited opportunity for improving your skills in this game, since you can win extra shields (though you can never have more than nine at one time) and stay alive a long time.

Personally, I'd rather see one of the movies again, with their dazzling special effects and colorful characterizations. But if joystick shoot-'em-ups are your favorite way to relax, Star Wars, The Arcade Game should do the trick.

—John F. King



Criminal Negligence

■ **CRIME AND PUNISHMENT** runs on IBM Personal Computer, PCjr; Apple II series; \$34.95 retail; Imagic, 981 University Ave., Los Gatos, CA 95030; (408) 399-2200.

Imagic, a company known largely for its efforts of the shoot-'em-up variety for game machines and then personal computers, has set out to—in its own words—"redefine computer entertainment" with four new product lines.

One of those lines, Fun With Experts, premieres with a program called Crime and Punishment.

The experts in this instance are Graeme Newman, dean of the School of Criminal Justice for the State University of New York, and Jack Kress, a professor at the University of Delaware Law School. The two are credited with Crime

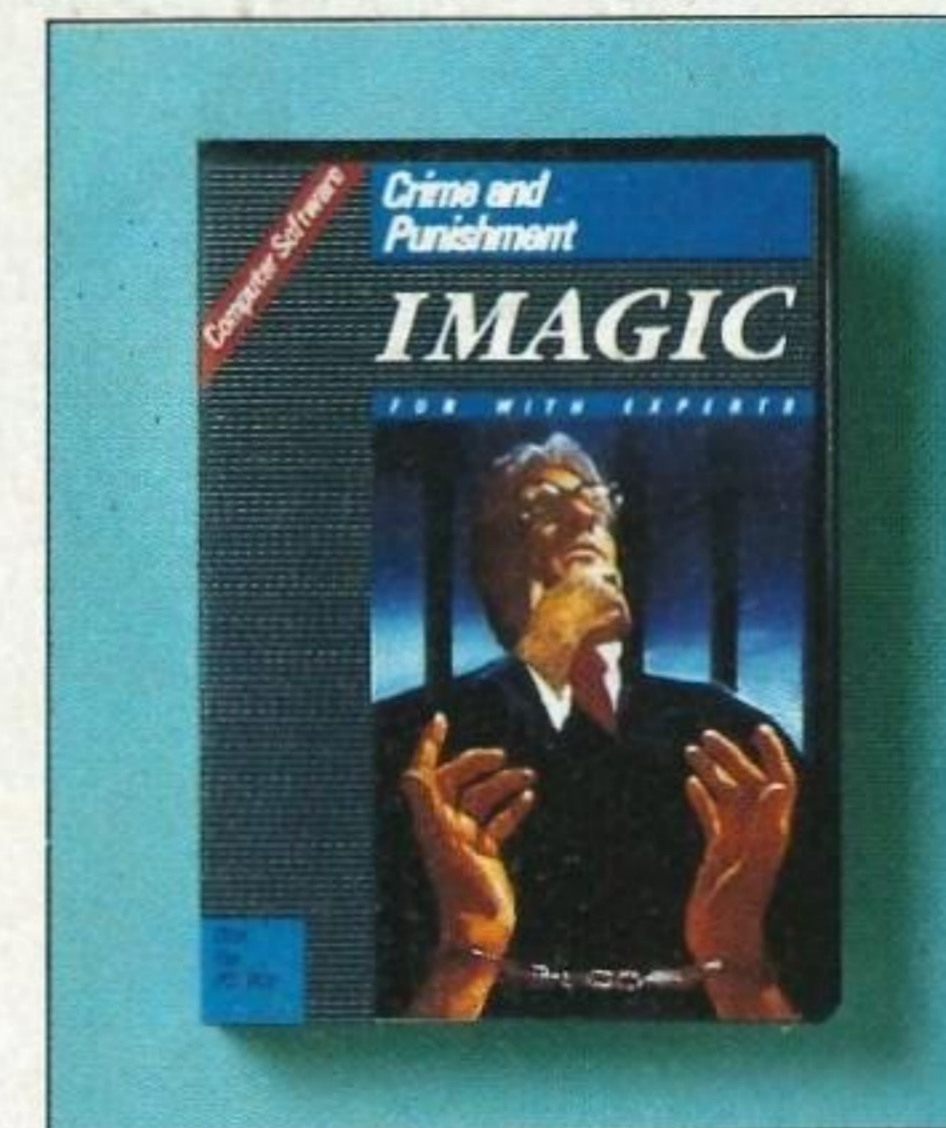
and Punishment's essential content.

Crime and Punishment is a game based on the judicial process in the United States, but rather than thrusting you into the midst of a courtroom drama, it takes you into the judge's chambers. The defendant has already been found guilty, presumably through due process, and it is up to you to decide what his sentence will be. You are aided in this weighty decision by the examination of pertinent information on the offender, the crime and the trial proceedings. The object of the game is to come as close as possible to the "model sentence," determined, according to Imagic, by actual government research into the sentencing practices of real-life judges. The concept is intriguing—the game, unfortunately, is less so.

Crime and Punishment opens by allowing you to either delve right into the game or read some background information. The background is largely a short course in the fundamentals of trial procedures, which, while it may be enlightening, is not essential to playing the game. A little background on the game itself is also thrown in, including an annoyingly blatant plug for the latest book

from each of the criminal justice experts who were involved with production of Crime and Punishment. Finally, there are some tips for playing the game. All of this appears simply as text on the screen—not very entertaining stuff but maybe a small service to those who won't read even a brief manual.

When the court session begins, you are confronted with a rather stern looking judge, gavel in hand, at the top half



of the screen. A description of the crime for which the offender is to be sentenced appears at the bottom of the screen, along with a query that asks you what further information you want to see. (The same graphic and format appears throughout most of the game.) Information you can ask to see includes prior arrests/convictions, the types

of crimes committed, juvenile record, etc. Details of the crime involve factors like property damage or loss, physical injury incurred, the relationship between offender and victim, and the excuse given for the crime. The presentence report provides a personality profile of the offender and some courtroom details from the trial.

Your task, like that of a real judge, is to sift through the information you feel is relevant to the case and determine a sentence for the criminal. Your choices are usually prison, jail (being a short-term incarceration) or probation. A fine or restitution of damages are options on selected offenses, as is the death penalty for murder. Once you've decided on a sentence, the scale of justice appears to show you how closely you've managed to emulate the "model" judge. On the basis of your performance, you receive one to 10 poundings of the judge's gavel (with 10 being a perfect score).

The pitfalls of Crime and Punishment become increasingly apparent as you go through this process several times. There are supposed to be over 80 possible crimes and "thousands" of different cases. And indeed there seem to

be, but there are two major problems with these cases. The more important of the two is the fact that the same crime—regardless of significant differences in circumstances—seems to carry the same (or nearly the same) "model" sentence each time the offense comes up. Even the not-so-clever player will realize this before long.

The other major flaw in the game is the manner in which the cases are pieced together to make them "different." The details of each case are drawn randomly together, one by one, from a base of information somewhere in the software in order to almost always form a unique case. The result, while always unique, is usually bizarre. You end up with large property damages for crimes of prostitution, female offenders with thug-like nicknames who smoke cigars and little league coaches who commit credit card fraud against homosexual Muslim lovers. Is all of this possible? Maybe. To suggest that the judicial process in America resembles a freak show is misleading at best.

A revised version of Crime and Punishment sent to us by Imagic featured greater speed (the original was written in BASIC) and a better format for information-gathering, but it did little to correct the main problems already cited.

Bruce Davis, Imagic's president, insists that it is "impossible to remove all possible inconsistencies" in a game such as Crime and Punishment and even puts forward his personal belief that "most crimes are not committed by ordinary people." As for the same crime/same sentence problem, he notes that the "most important variable in the sentencing of the crime is the nature of the crime itself."

While there may be some truth in Davis' statements, it will be of little solace to the player. The game remains a largely unchallenging endeavor, so any debate over judicial realities or the limitations of programming functions misses the mark. The idea is a very good one; the vehicle—at least for now—is a poor one.

—Christopher O'Malley

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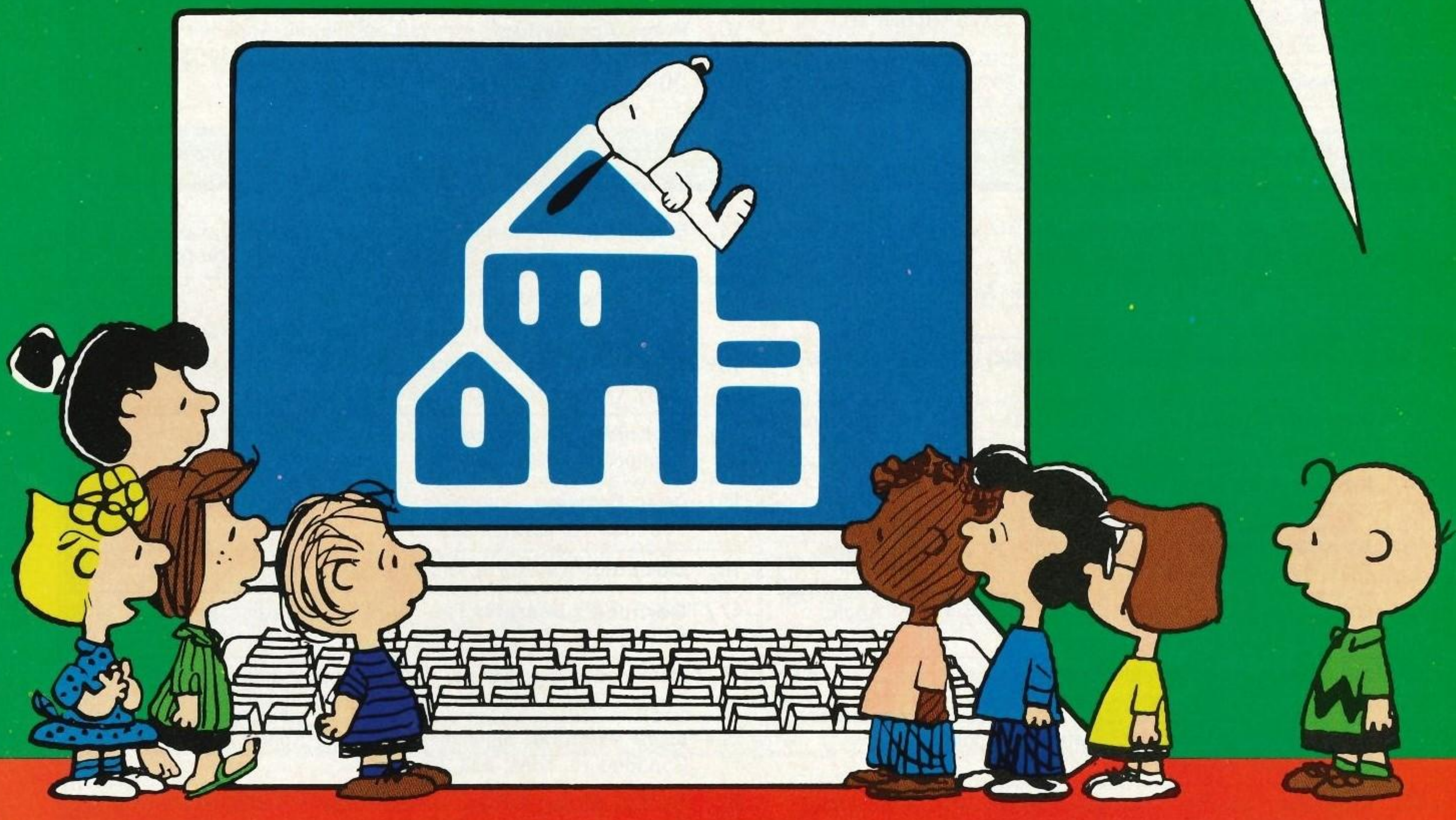
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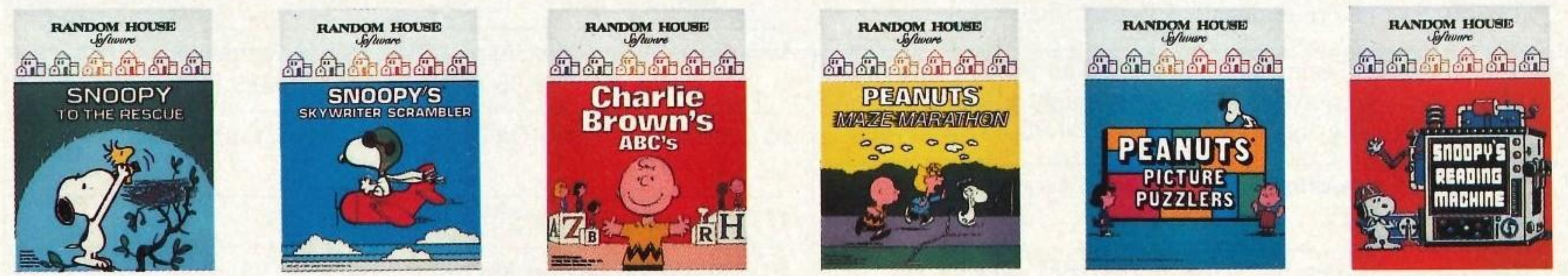
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Choppers To The Rescue

Evading the enemy on a hostage rescue mission is only one of the challenges in Choplifter. Learning to fly a helicopter is the other.

■ **CHOPLIFTER** runs on Apple II, II Plus, IIe, IIc; Atari 400, 800XL; Commodore 64; joystick required; \$34.95 (Apple, Atari disk, Commodore disk), \$39.95 (Commodore cartridge), \$44.95 (Atari cartridge) retail; Broderbund Software, Inc., 117 Paul Drive, San Rafael, CA 94903; (415) 479-1170.

A full moon hovers over the desert. The wash from an idling helicopter stirs the American flag perched atop an isolated post office compound. A rescue mission is afoot—a daring nighttime raid into Kurdistan to rescue 64 United Nations delegates to the Peace and Child-Rearing conference who are being held hostage by the Bungeling Empire. A chance to rewrite history, perhaps. Apply full power to the joystick and the chopper shoots into the air, spinning first one way, then another. You must struggle to maintain control and avoid a crash.

Thus begins Choplifter, the best-selling action game from Broderbund Software. At the very outset, John Wayne fantasies of immediate, impulsive action quickly fade with the realization that rescue will be impossible without some rudimentary flying lessons. Learning how to fly, it turns out, is a large part of what Choplifter is all about. And mastering the quirks of helicopter flight in a combat situation is not an easy assignment.

Choplifter's main character, if you will, is a military transport helicopter. As the game opens, it is shown idling on its home base helipad. The turret blades are spinning. In the background, the essentially flat horizon is occasionally interrupted by the jagged profile of distant mountains. Tiny stars flicker in the night sky which dominates the screen throughout the game. Later, when the player/pilot takes to the air,

new objects begin to appear on the screen's desert scenario: stick-figure hostages, enemy jets, missiles and tanks.

A quick perusal of the documentation tells you all you need to know to get started. Hostages in groups of 16 are imprisoned in four different barracks. One of these buildings has been blown up and its hostages are now wandering aimlessly. When the rescue helicopter lands, the hostages will run toward the craft and jump in. The pilot must then fly the hostages back to the safety of the post office compound. Once the craft sets down on the landing pad, the hostages disembark to safety. But the pilot must return to the desert until all 64 hostages are rescued. There are three helicopters—each with a capacity of only 16 passengers. If these are lost, the mission is a failure. To succeed, the Choplifter pilot must overcome the



A military transport helicopter is the star of Choplifter in a daring nighttime raid into Kurdistan to rescue 64 United Nations delegates.

deadly obstacles that lurk in the cold desert night.

The enemy Bungelers must be taken far more seriously than might be implied from their name. Their tanks move across the desert floor shooting at the helicopter when it is on or near the ground. In the air, enemy jets strike suddenly from any direction. Deadly heat-seeking bombs buzz in from time to time. Still, these hazards are secondary to the novice pilot who is on the verge of a flaming crash before confronting a single enemy threat or saving even one hostage.

Choplifter provides some "flight school" training. When the program is initially booted, there is a brief demonstration tour of the game. The demonstration shows the helicopter lifting smoothly from the landing pad, maneuvering into a 180-degree spin, and finally, zooming across the screen just above ground level. The scenery helps create an illusion of flight: The landscape scrolls along the bottom third of the screen, while the full moon looms steadfast. The chopper then swoops down among the hostages. They dash toward the helicopter, which stays on the ground for mere seconds. It lifts off again in barely enough time to elude an approaching tank. The demonstration is effortless and smooth.

The concept of flying a helicopter with joystick control is simple, but the

experience is not. For Choplifter, a two-button joystick is required. Push the stick forward and the craft will rise. Pull it back and the aircraft descends. Move the stick either left or right and the flight direction corresponds. A push on one button of the joystick will point the helicopter in the direction of the hostages. A sustained push reverses the direction of the helicopter. A second single push turns it 90 degrees.

Once the helicopter is pointing in the direction of the hostages, a hard push on the joystick tilts it forward and increases its speed. Most combat pilots will want to skim slightly above the terrain to avoid radar detection and enemy planes. But this is dangerous. A novice can easily crash the chopper in seconds. With a brush against the ground at full speed, the helicopter will crash and burn.

Soon after the chopper leaves the post office, the flight path leads over a long fence that merges with the horizon. The perspective created by the barrier provides a three-dimensional perception that draws you into the game as if you were watching a large-screen movie. On the return trip back to the compound recrossing the fence means that you're home free. No planes or enemy tanks can chase you past the barrier. Outbound, however, the fence signals danger ahead. Beyond it, as

veteran wartime helicopter pilots might say, is "Indian country."

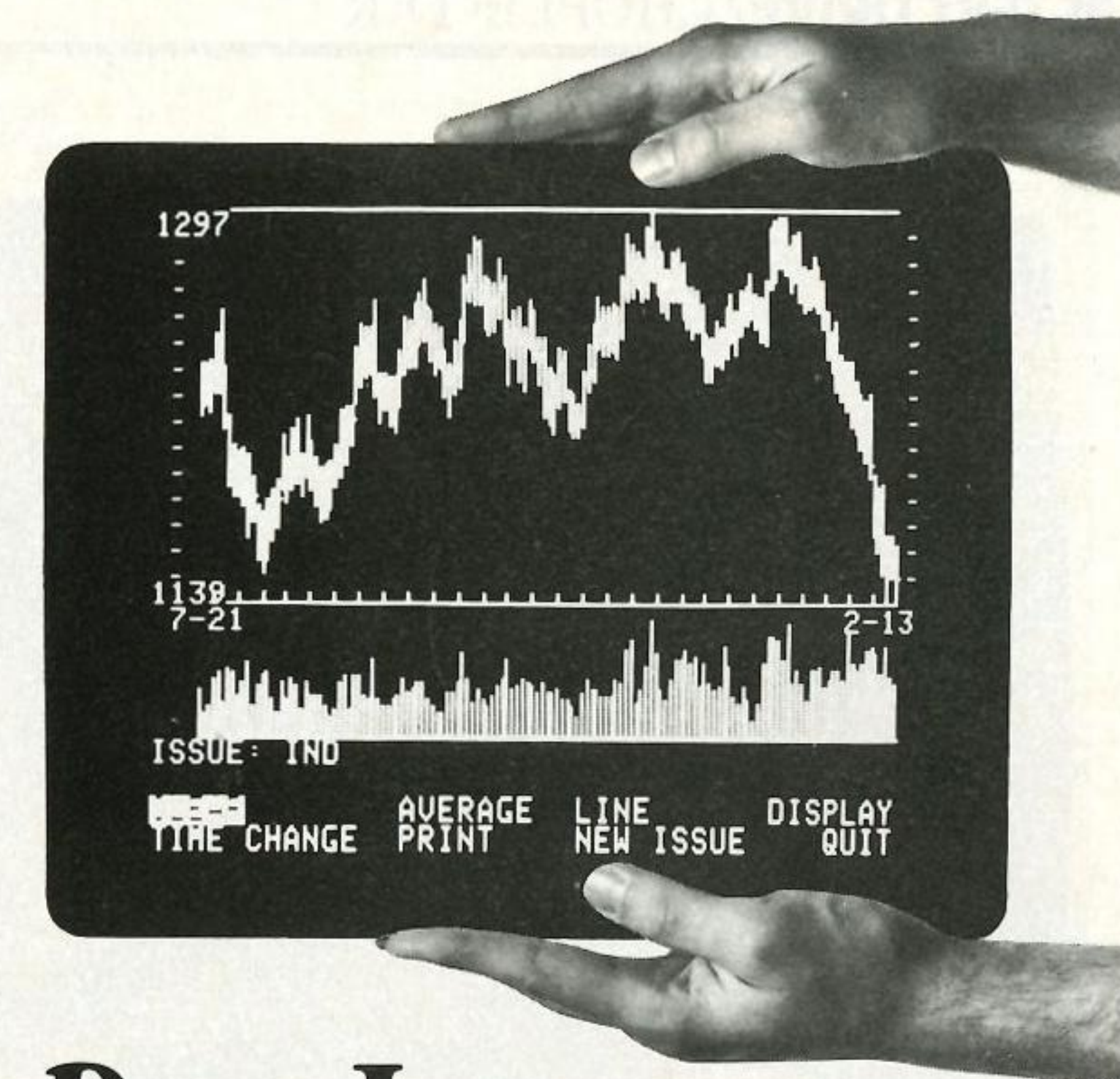
When you finally reach the battlefield on your initial sortie, you spot a barracks in flames and hostages running in panic. Your goal is to land the chopper and save them. You should try to touch down as close as possible to the people. Once the helicopter is on the ground, the hostages turn and run toward it. Here's where your flying skills come into play. The game instructions warn, "Don't land on the hostages. That kills them." You may laugh at first, thinking, "That's obvious. But I'm no klutz." But avoiding such a calamity isn't as easy as it sounds.

The problem is that the people are running in panic and your flying skills at this point are a bit shaky. If you try to land in a crowd, you inevitably land on someone, killing them instantly. You know they're dead because of the running body count tabulated across the top of the screen. The red lemon on the left keeps tabs on the dead hostages. The blue lemon in the middle tells you how many are inside the helicopter. And the green lemon on the right shows you how many you've rescued. (You can play Choplifter on a monochrome screen, but then the tanks and the landing pad blend in with the ground pattern, making them difficult to spot. And you miss some of the effect of graphics such as the flaming barracks.)



Objects like stick-figures, hostages, enemy jets, missiles and tanks appear on the screen's desert setting when the player/pilot takes to the air.

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PS-9



Saving lives is your mission. Some games will reward you for merely remaining on the field of play. But not Choplifter.

Before you master the flying techniques, landing can be dangerous, especially when tanks are shooting at you. As the hostages scurry about and you concentrate on dropping the chopper safely among them, enemy tanks zoom toward you. If you're a student of military science, you realize that tanks aren't great anti-aircraft weapons. What they're best suited for is moving rapidly over flat terrain and blasting things on the ground—in this case, the running hostages or the chopper as it lands. But to the skilled pilot, the tanks are more of a nuisance than anything else. To destroy them, you have to turn the helicopter into "tank attack" posture, which means spinning the craft until it faces you. You then fly directly above the tank and push the fire button. Bombs drop from the belly of the ship toward the tank. Getting on target can be a bit tricky because both the tank and the helicopter are moving. But if you swing back and forth while dropping the bombs it's not that difficult to destroy the tank. The problem is, as soon as one tank is demolished, another seems to take its place. It's best to keep the chopper in tank attack position at all times when loading hostages. It's much easier to lift off, bomb a tank and land again when you don't have to constantly spin the helicopter.

Ideally, it would be nice to get a full load of 16 people before heading back to base. But things get a little hairy out on the battlefield. For the sake of your

ego, if not the lives of the hostages, you'll want to spirit a few to safety just so you'll know you've accomplished something. This sounds easy but a jet attack may imperil the whole mission.

Just as a tank is no match for a helicopter, your chopper is in deep trouble against a jet fighter. These sky fighters swoop down at you, firing air-to-air missiles. They attack from the front or from behind. The higher the chopper is off the ground, the more vulnerable it is to the jets. You can shoot the jets down—but you have to be facing them to do it. Your cannons only fire forward. When a jet attacks from behind, you have to spin the chopper around before firing. If one comes at you head on, you still have to slow the chopper down and line up your shot, because when you're flying at top speed the chopper's nose tends to pitch down. If you don't correct it, your cannon sprays the ground instead of the oncoming jet.

One tactic novices and cowards can use to evade the airplanes is simply to land. In this game, the jets and the missiles tend to cruise over your head when you're on the ground. But then that leaves you vulnerable to the tanks. Get the picture? Choplifter captures war's total chaos. You'll often find yourself cruising at top speed back to the post office while you glance nervously around, hoping you reach the safety barrier before a jet catches you. And

once there, you still must contend with errant drone bombs. These are like mines that float through the air and home in on the helicopter whether it's on the battlefield or in the "safety" of the post office. The drone by itself is not much of a hazard to the expert pilot, but the inexperienced pilot is liable to crash his chopper in trying to elude it.

By now, you should have the feeling that it's not easy to be a hero. But don't give up. Choplifter teaches you that heroes are made, not born. The more you practice, the more lives you save. And that gives the game a nice feel. You don't get a single point for zapping a tank or shooting down a jet—only for saving lives.

After you secure the first 16 hostages, you fly on to the next barracks where 16 more are locked up. Here the game throws you a curve. You're expecting to swoop down and rescue people, but they're nowhere in sight. The hostages are locked in the barracks and you have to figure out how to get them out. Tanks and planes are bearing down on you, giving you an overwhelming desire to get back to the post office. But if you can stand the heat long enough, the riddle solves itself: When an errant shell hits the barracks, the hostages quickly scramble out.

Some games will reward you for merely remaining on the field of play. But not Choplifter. Surviving with one or more choppers and proceeding to the next barracks is a hollow feeling if the scoreboard shows 16 dead, 0 saved. Saving lives is your mission. This in itself sets Choplifter apart from the typical shoot-'em-up scenario of many arcade games. And the graphics give you the feeling that you're saving real people. As the hostages get closer to the helicopter, they duck to avoid the propeller. They wave good-bye when they disembark to freedom.

When at last the tally reads 64 saved, 0 killed, the game is over. No more rungs to ascend. No more point totals to break. You've won. You're an official hero. But don't think Choplifter is a game you will crack after a few sittings. Saving 64 people against impossible odds isn't easy. After all, it takes a long time just to learn how to fly.

—Craig Zarley

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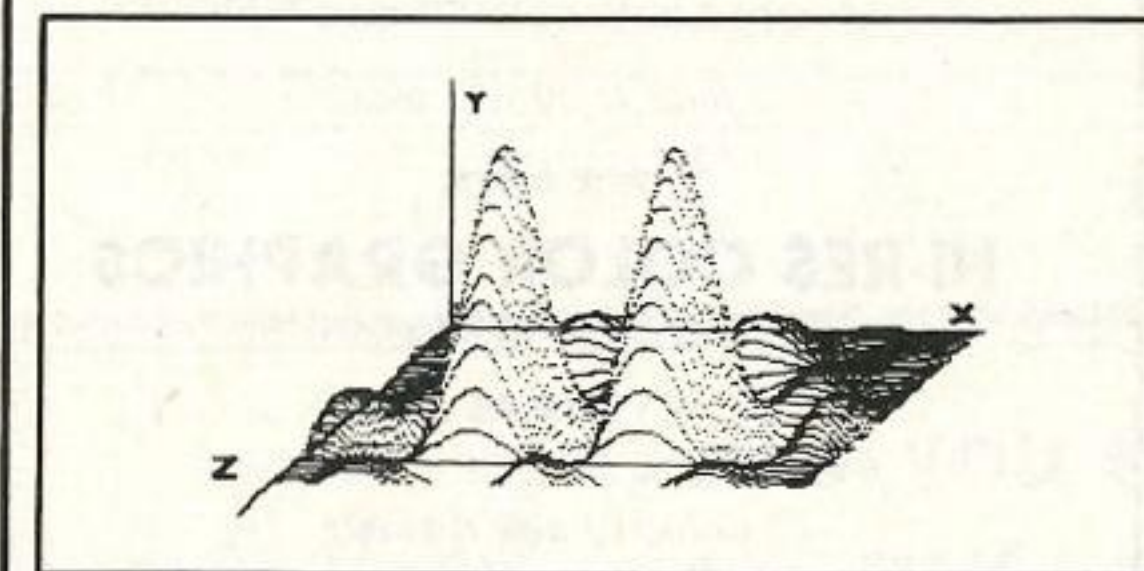
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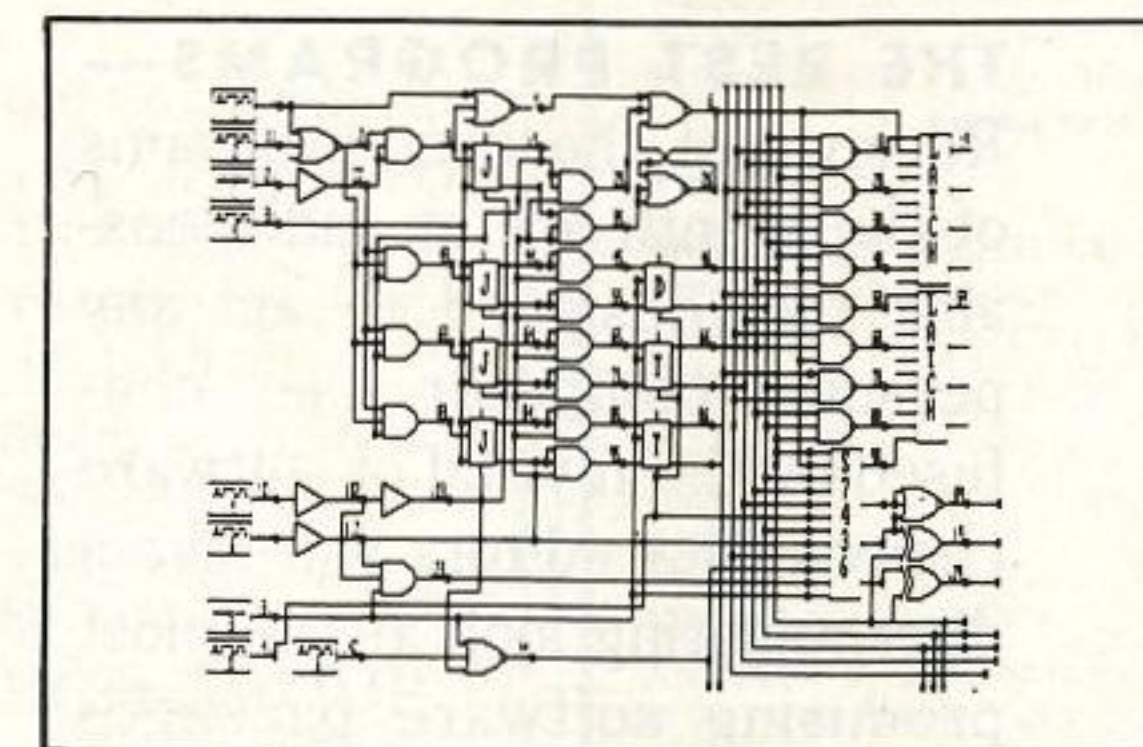
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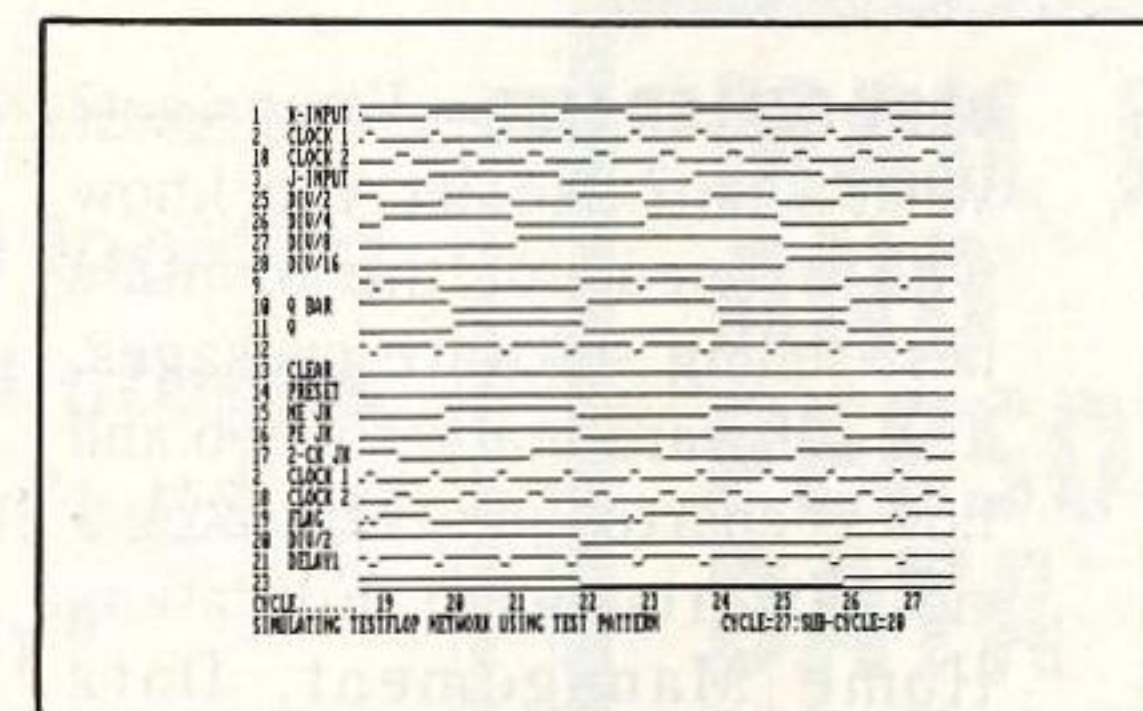
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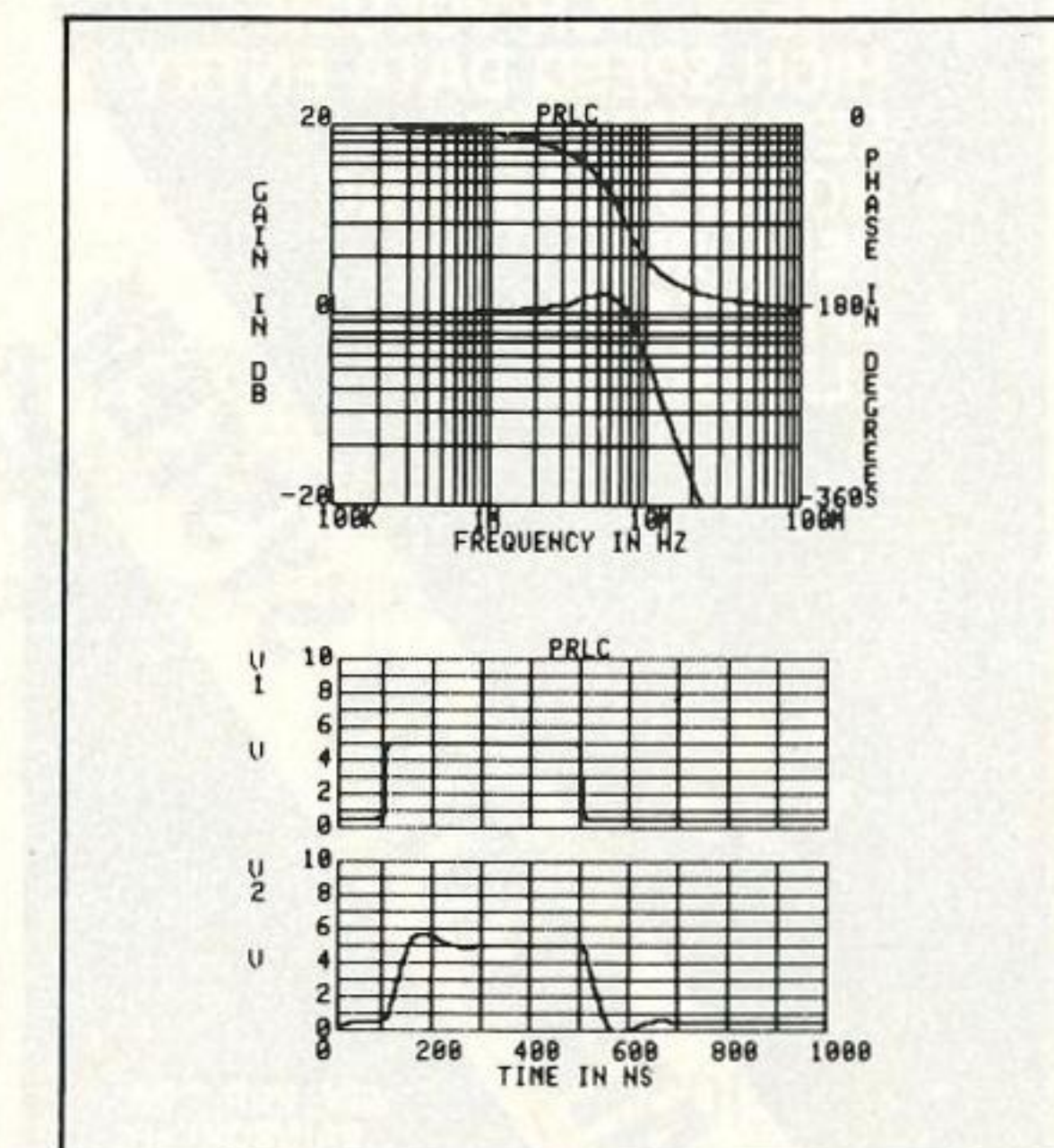
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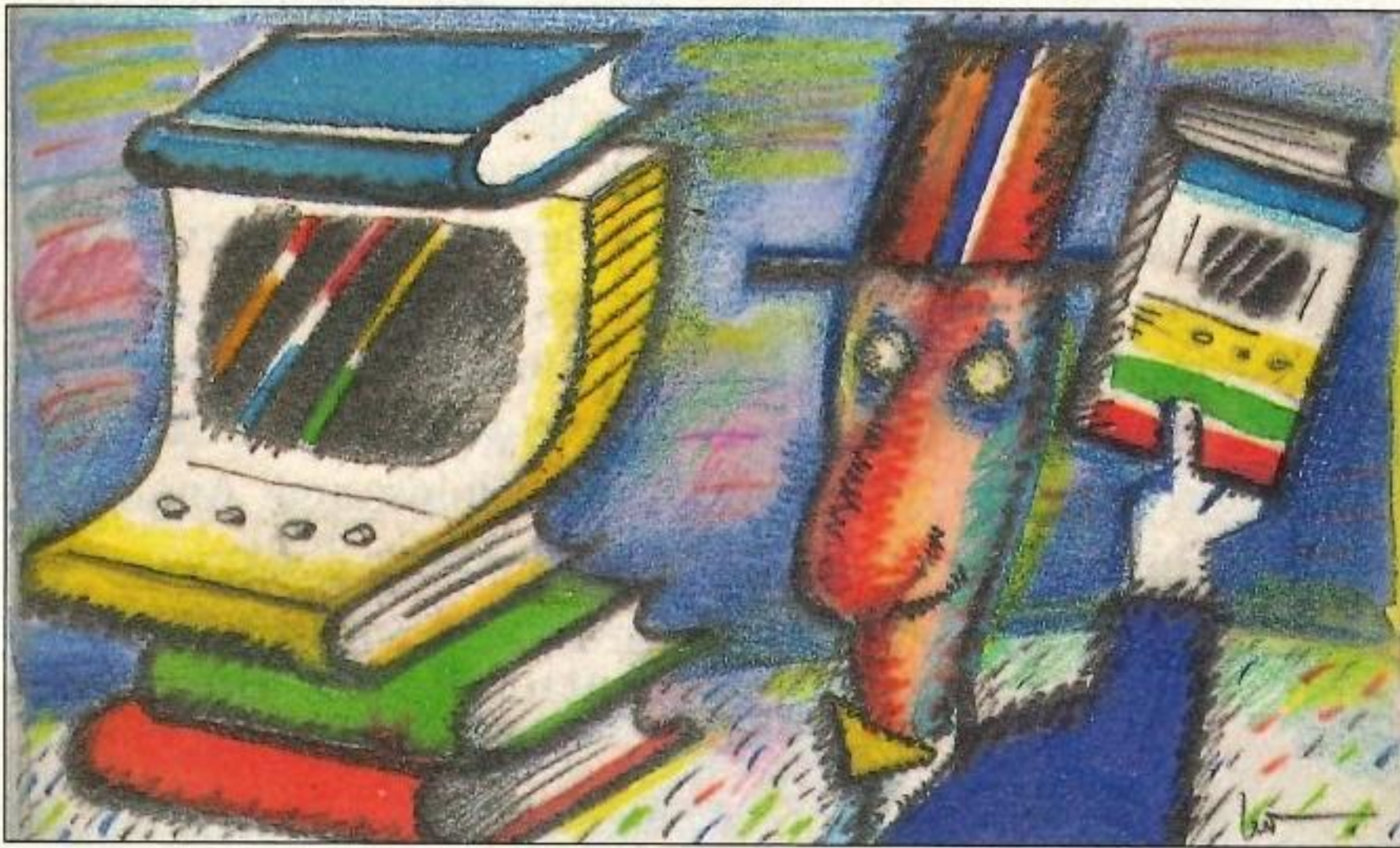
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BOY SCOUTS LEARN COMPUTING

IF WE RECALL OUR OLD *Boy Scout Handbook* correctly, boy scouts should be trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean and reverent. Now, they are also becoming computer literate. The Computer Merit Badge, first instituted in 1967, is being earned by dramatically increasing numbers of scouts, according to Boy Scout representative J.D. Owens. Over 13,000 scouts earned the badge in 1983, up from about 7000 in 1982. The requirements for the badge have recently been revised and are now "much more current and relevant to the state of computers today," says Owens.



MARTHA GRADISHER

To earn the badge, the scout must provide a brief history of computers, describe the major parts of a computer system, discuss possible uses of computers, discuss programming languages, solve a problem with a flow chart and create a computer program in any computer language.

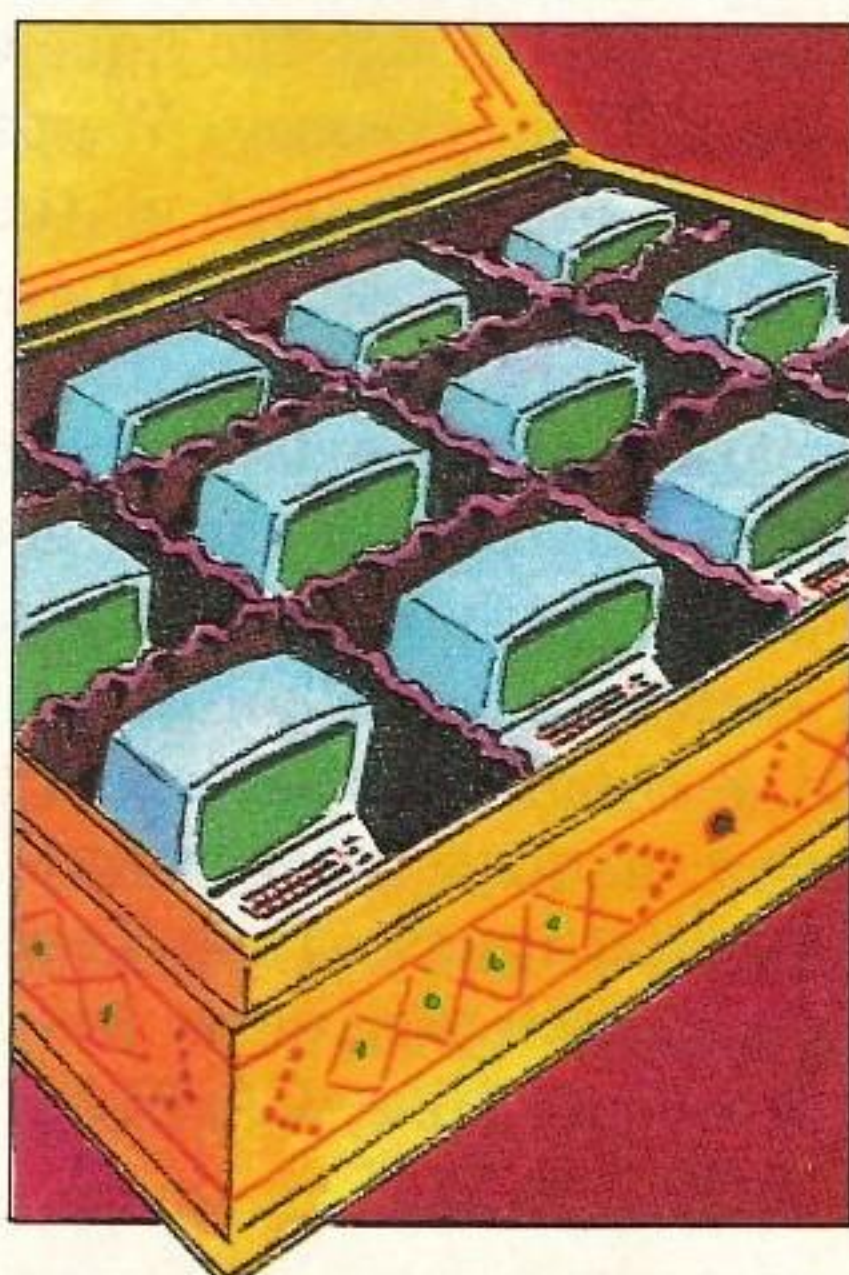
TAKE THE WORD CHALLENGE

HAYDEN SOFTWARE COMPANY has announced a national contest for consumers who purchase the company's new Word Challenge software package.

Word Challenge is an adaption of the popular Boggle board game. The object is to find as many words as possible embedded in a matrix of letters that the com-

puter has randomly generated on the screen. Hayden's Word Challenge will involve a puzzle similar to the actual game. Contest forms can be found inside the Word Challenge package itself. The Challenge runs from July 1 through October 31.

Hayden is offering a \$10,000 grand prize to whoever achieves the best results on the puzzle. The runner-up will win a prize of \$3000.



A CHOCO-BYTE OF DELIGHT

NOW THERE IS A PERSONAL computer so appealing you may want to take a bite out of it. It comes from Long Grove Confectionery Co. (Long Grove, Ill.) and it's made of solid chocolate. The 3" by 5" by 4" novelty is priced at \$9.95 and comes in a box with a computer print-out motif. The direct order number is (312) 634-9007.

ANDREA BARUFFI

"EAT TO WIN" NUTRITION SOFTWARE

"EAT TO WIN," THE BEST-selling book by sports nutritionist Dr. Robert Haas, will soon be available as an interactive software program from the Genra Group, a national office automation retail chain.

"To my knowledge, this is the first time a best-selling book has been adapted to a software product," says Genra president William C. Jackson, Jr. "While it's customary to make a movie from a best-selling book, 'Eat To Win' with its many formulas and computations for nutrition and exercise lends itself perfectly to computer software adaptation."

Dr. Haas' book has been a fixture on *The New York Times Book Review* best-

seller list and recently released its 12th printing. The author used a personal computer to develop many of the regimens in the book. Dr. Haas is a consultant to many sports stars, including Martina Navratilova, currently the top ranked female tennis player in the world.

"This program isn't just for the sports-minded person," Dr. Haas says. "It's equally important for today's business executive who must stay healthy in the face of high stress, long hours and irregular habits."

The program will allow the user to custom design a comprehensive nutritional plan based on the techniques Dr. Haas used in the book.

For information: Steve Lee, GSD&M Public Relations, 7610 Stemmons, 6th Floor, Dallas, TX 75247; (214) 634-8810.

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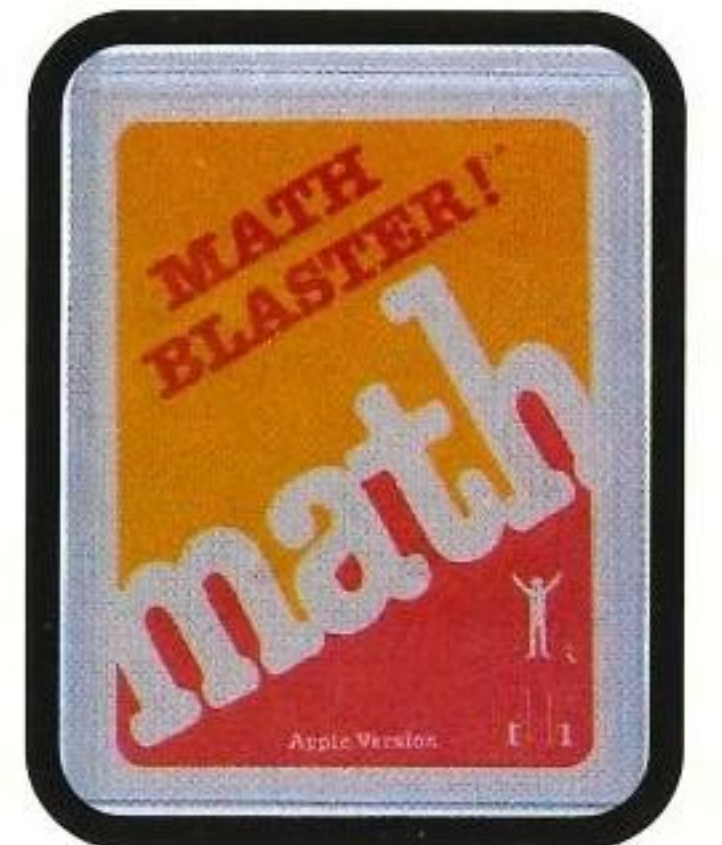


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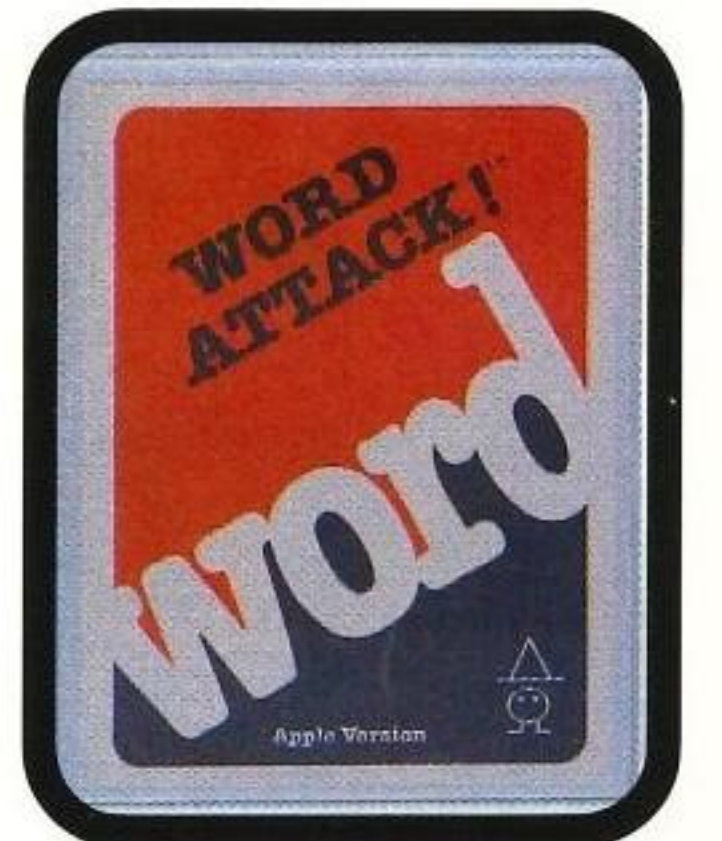


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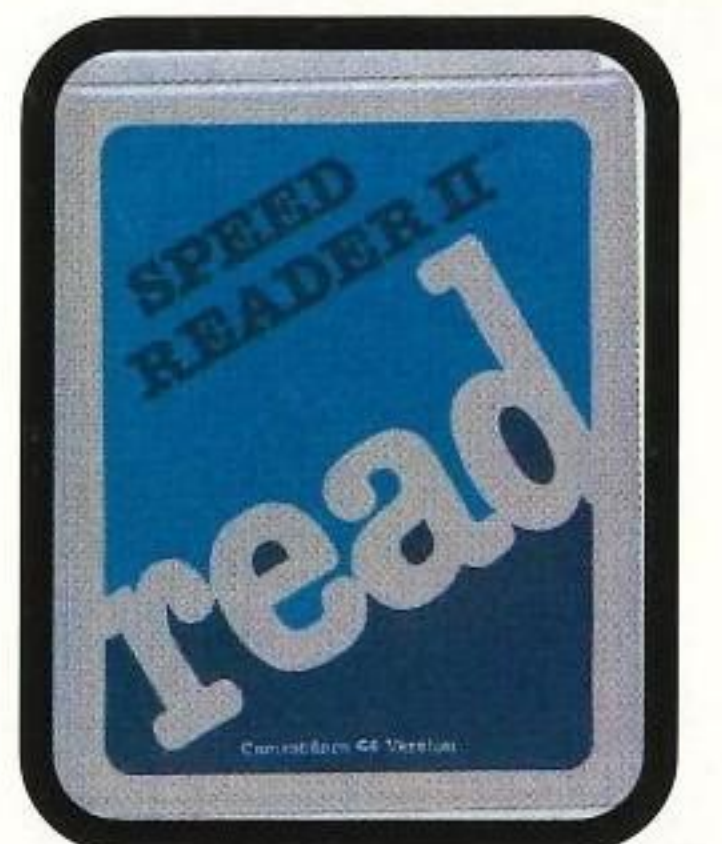


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