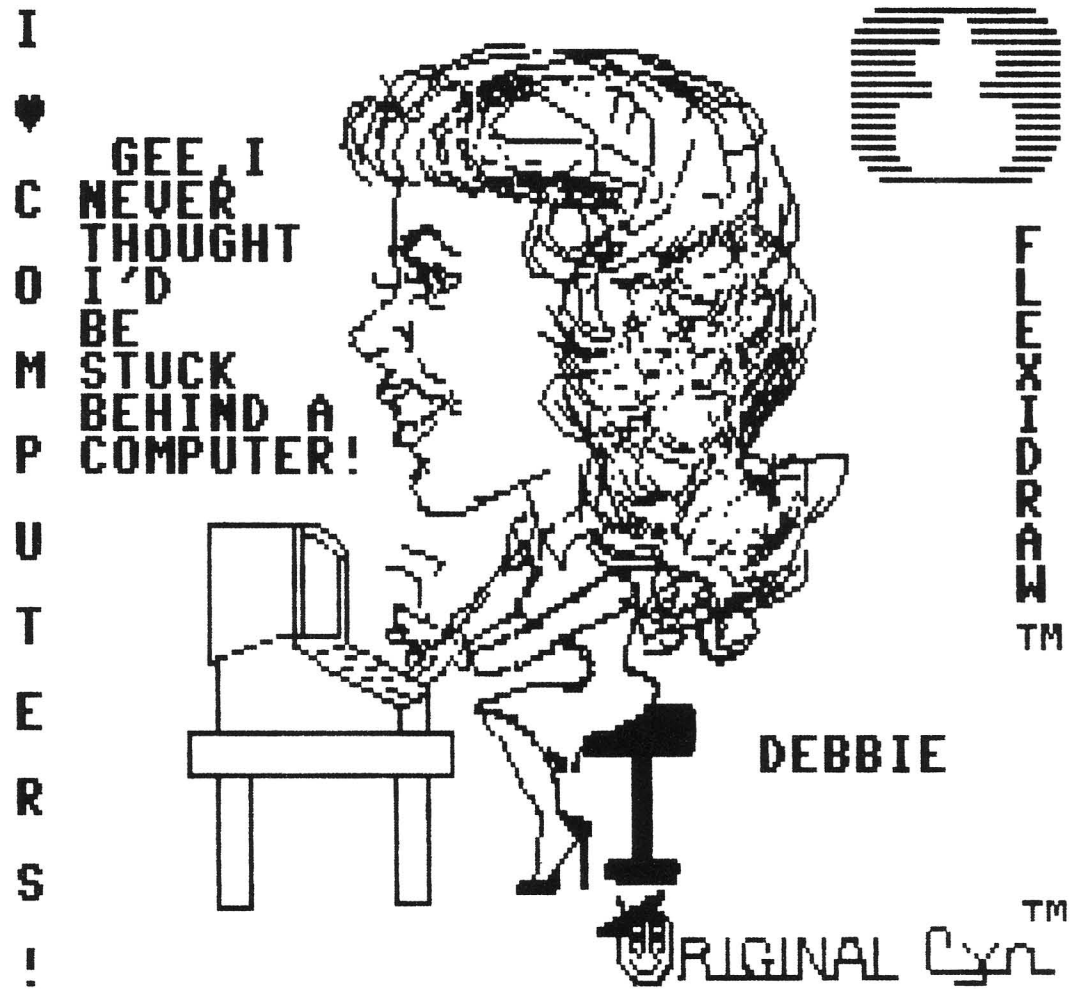
ISSUE 18 1984

The MIDNITE SOFTWARE GAZETTE

Includes The PAPER

A BI-MONTHLY JOURNAL OF NOTES, REVIEWS AND ARTICLES



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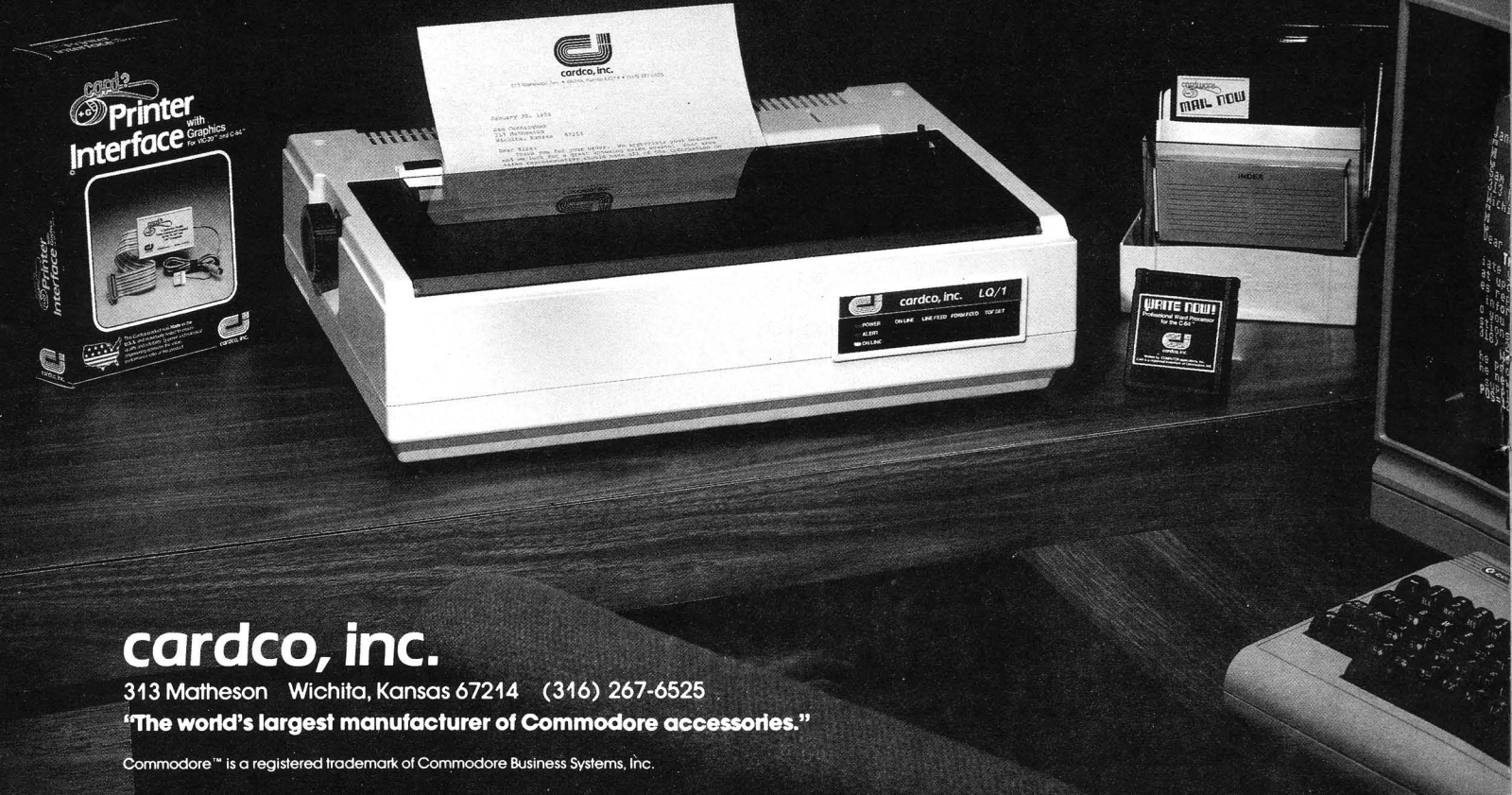

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THE MIDNITE XPRESS NOTES

Midnite Meanderings

by **Jim Strasma**

Welcome to Issue 18, and more reviews of Commodore products than we've ever published in one issue before. Here's hoping this overdose of product info will relieve any anxiety when Midnite 17 came out two weeks ago sans reviews. Similarly, we hope the overdose of notes and articles last time will tide you over until issue #19. What happened, of course, is that issue #17 was far too large to publish as one issue, and too late not to publish immediately. Since splitting each topic would have doubled the work and time delay, we combined issues #17 and #18 into one unit. Even then, we had so many reviews that we've now had to delay the other massive and needed project. Stay tuned for Midnite 19's complete index to every review published in the past TEN issues! No more searching through all those issues for that review of "Hex Embalmer 64"...

COMMODORE ANNOUNCEMENTS

As usual, Commodore made its most important announcements at the Hanover (Germany) Fair this April. Two new business machines with 256K of memory are coming eventually. The first is the **Hyperion**, now sold by Bytec-Comterm of Canada. Commodore may change it somewhat, but the Hyperion technology is now licensed to Commodore. It will be a very close copy of the IBM PC (as close as you can get to Mother without her permission), and sell for "less", possibly yet in 1984. The other newly announced machine was reportedly the long-rumored Z8000 machine, running Unix, and intended to be a very high end micro.

WHAT'S IN A NAME?

Oh, what a beautiful blooper! Did you enjoy our cover last issue? It was the first one we've ever published without a sleeping person (that's fine). And it was by subscriber Wayne Schmidt, as stated. But **Doodle** gets the honors as his sketching program, not **Flexidraw**. Our profuse apologies to City Software and Wayne Schmidt. In deciding how to atone for the switch, we considered labeling this month's cover as being by **Doodle**, but then we'd have had to apologize to Inkwell Systems, too. Both are excellent products, just using different tools. Buy the pair and make everybody's day.

COVER GIRL

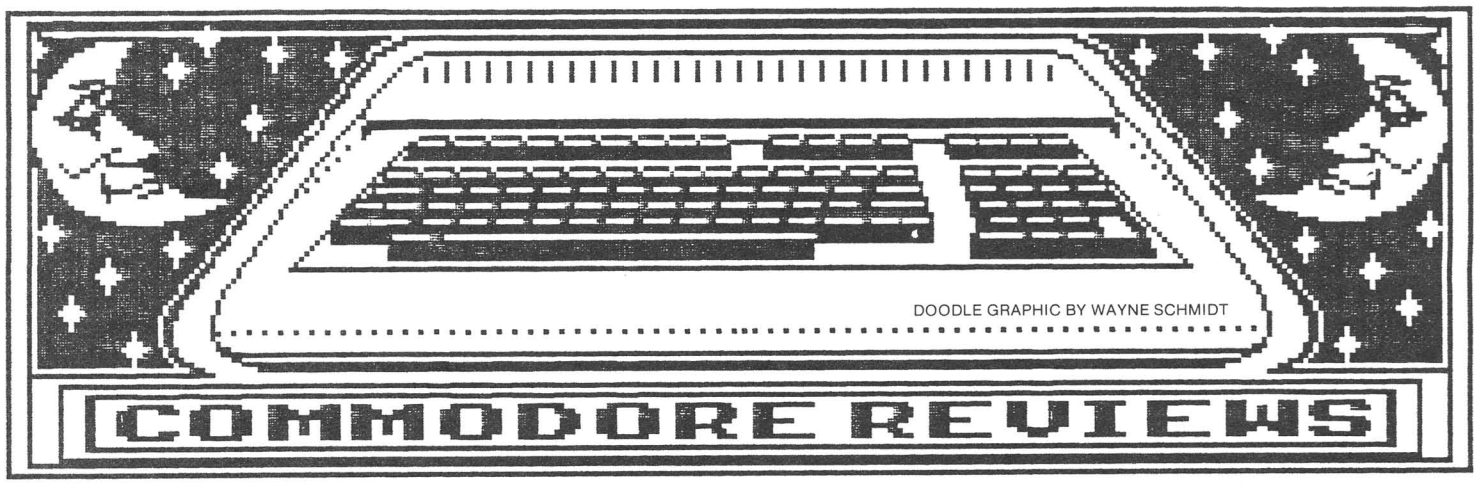
This month's cover is Debby Oldfield, our office manager. She's the friendly voice in our Mt. Zion office, who keeps track of all your subscriptions for us.

WE TRY HARDER DEPARTMENT

Also be nice to Continental Software and MSD--two companies that have gone way out of the way recently to respond to problems reported in Midnite reviews.

AND NOW IT'S YOUR TURN

Keep those reviews and other info coming! Midnite 19 will be out before you know it, but not before companies will release at least another 100 new products. Many hands make light work, and many ears mean nothing is missed. Also, any clubs wanting to see us on our summer travels should contact us soon (with the usual SASE please.) We plan to drive from Illinois to Maryland (the Eastern seaboard) and Toronto in May, and to Upstate New York in early August. Similarly, any readers passing through Central Illinois may want to drop in at JO's store (Micro-PACE Computers), just off I-74 at the Neil St. exit in Champaign, IL.



Book Reviews

AUDIO USER'S MANUAL: **Learn to use your computer**, for the **64**.
$22 cassette from Micro Instructional.

A voice recording that you listen to, not feed to your computer. Covers some of the things found in the User's Guide. There are also 3 simple programs, a check book program, a sort and a calculator. The first nasty surprise is that someone reads them to you, letter for letter, line for line. What do you do when the narrator says, "Quote...heart sign...quote...return" [meaning the CLR key, not a shifted S]? -Joe Allain

BASIC SUBROUTINES FOR COMMODORE COMPUTERS, by Eddie Adamis, for **all Commodore computers.**
paperback from Wiley Press, New York NY.

Really a collection of BASIC programs written in a refreshing, simple unadorned style, which happen to include some subroutines. Most deal with conversion from one unit to another, with a few sorts, statistics, math, etc. A good book for a beginner to learn BASIC; my beginning BASIC class has responded favorably to it, which confirms the author's belief that people learn faster when they see the machine DO SOMETHING. The only shortcoming is that entries are not checked to ensure validity; otherwise, it's a good beginner's tool. Recommended. -J. Paton Dellow

COMPUTER BUYER'S PROTECTION GUIDE, by L.J. Kutten, for **all computers.**
$13-19 paperback from Prentice-Hall, Englewood Cliffs NJ 07632. 1984.

Here's another "Everything You Want to Know" book! Does an excellent job of explaining the different types of hard/software available, with in-depth discussion of everything from where to buy to how to complain effectively. Uses legal terms and simple examples to discuss problems computer consumers may encounter. Although the legal opinions are helpful, the hobby opinions are no better than those of the average user. (The author says the VIC 20 is merely a game computer, and adding peripherals won't make it a personal computer.) If you are buying your first computer, this book would be a wise investment. It could also serve as an excellent computer consumers protection guide. -Mike Stout

THE COMPUTER PHONE BOOK, by Mike Cane, for **all computers.**
$10 paperback from Plume (New American Library).

A unique and excellent reference on telecommunicating. Starts out with equipment and programs needed, including simple explanations of key terms. Then describes available on-line systems, and gives tips on getting the most out of each. Standard control codes are thoroughly explained. Also shows example screens of typical connections. Includes an extensive description of CompuServe's CB simulator.

The heart of the book is a comprehensive and extensively cross-referenced directory of more than 400 systems and services. Only those BBSs likely to stay around are listed, and monthly updates are promised for $20 (term unknown). Highly recommended for any telecomputing enthusiast. -Paul Motise (On-Line, Rockville MD Users Group)

Update (see #11): ***ELEMENTARY BASIC: Learning to Program your Computer in BASIC with Sherlock Holmes,*** by Henry Ledgard and Andrew Singer, for **all computers.**
About $13 paperback from SRA (Science Research Associates) of IBM, Chicago IL.

Though the book is not so elementary as the authors imply, it does have a great deal to offer. What it boils down to is the difference between "learning about the tools" and "running the machine." Elementary BASIC expertly teaches you how to use programming tools in the most efficient manner. The authors have added explanations of Sherlock Holmes' logical processes in terms of the BASIC "tools." Their most important contribution is the explanation of "Top-Down Programming". Once I was made aware of the 5 different types of programming, I saw how sloppy my own methods were! The book is fun to read, especially if you're a Holmes fan. It really is quite easy to understand - after you've learned about programming - by showing you how to program properly. If you're going to do serious programming, buy it. -Joe Allain

Update (see #14): THE ELEMENTARY COMMODORE-64 by William Sanders, for **64.**
$15 spiral bound book from Datamost, 8943 Fullbright Av., Chatsworth CA 91311-2750 (213/709-1202). 2nd ed. 1983. 232p.

Teaches only in PETBASIC dialect, but rather effectively. Uses the "hands-on" approach to teaching. You'll need your 64 Programmer's Reference Guide handy, because Sanders constantly refers to its appendices. One negative word: there are a number of errata, most noticeably in the programs. -Joe Allain
[Send $1 to Com'Putoy Cult, Box 7776S, San Diego CA 92107, for Sander's corrections. -ED]

54 VISICALC MODELS: Finance, Statistics, Math., by Robert Flast, for **all computers.**
$16 paperback from Osborne/McGraw-Hill, 2600 10th St., Berkeley CA 94710. 1983.277p.

This book is based on another Osborne/McGraw-Hill book entitled Some Common BASIC Programs, by Lon Poole and Mary Borchers, adaptating the same programs to **VisiCalc.** Unfortunately, most of the adaptations ignore **VisiCalc**'s unique capabilities, and good **VisiCalc** programing is not really apparent. Some things are better left in BASIC. -J. Paton Dellow

GODEL, ESCHER, BACH, by Douglas Hofstadter.

Treats the subject of recursion in mathematical, artistic and musical aspects, and is highly recommended. Go out and find yourself a copy. -Mindy Skelton (8 Squared)

Update (see #15): I SPEAK BASIC TO MY VIC, by Aubrey Jones, for **VIC.**
paperback from Hayden Book Co., 50 Essex St., Rochelle Park NJ 07662.

A good book for 7th & 8th grades. They could have really shortened the book had they cut down the print size, and not reprinted the same information in the review chapter. It does explain the uses and very basic functions of the VIC well. It also includes the first lengthy explanation of the use of the function keys I've seen. It still does not give any specific examples of the types of special funtions that can be assigned to these keys and what they actually do. This book does not give any information beyond a course in BASIC I. -Cynthia Eimer

INSTANT FREEZE-DRIED COMPUTER PROGRAMMING IN BASIC, by Jerald Brown, for **all computers.**
$13 paperback from Dilithium Press?

Here's the book you've been waiting for! It's fun, easy to understand, clear, and concise! You'll notice two things right away. First, it's printed in two colors, black and red. The color is actually quite helpful (to show what's important). Second, it looks extremely busy, but the arrows, cartoons and graphics are all related to the text and provide a welcome break. Good as a companion to The Elementary Commodore 64. If you're learning Microsoft BASIC, buy it! -Joe Allain

THE NAKED COMPUTER, by John Gantz and Jack Rochester, for **all computers.**
$16 hardback from William Morrow, 105 Madison Av., New York NY 10016. 1983. 335 pages.

This is one of the most entertaining computer books ever. Unlike the horde of one idiot to another "here's what I've learned about my 64 since I got it 6 weeks ago" books, this one doesn't tell you how to use your computer at all. Rather it paints computerdom's short but highly varied history in a fascinating way. Think of it as the Guiness book of computer records, or perhaps the Liberace of data processing. Sample tidbits: "June 16, 1951: First programming error at the Bureau of the Census." and "The level of miniaturization in today's computer memory matches that of inscribing the Bible on the head of a pin." and "The paperless office will arrive at about the same time as the paperless toilet." Highly recommended.-JS

Update (see WPC): PROGRAMMING THE PET/CBM, by Rae West, for **CBM/PET.**
$27.95 postpaid paperback from Holford Enterprises, 6065 Roswell Rd., Suite 1398, Atlanta GA 30328 (404/951-4887).

Mrs. E. M. West reports for Rae West that the vastly better-bound British edition is now available in the U.S. Readers may order it from Mr. Schwartz of Holford Enterprises, 6065 Roswell Rd., Suite 1398, Atlanta GA 30328 (404/951-4887), at the same price as Compute previously charged for a less desirable U.S. edition, $27.95 postpaid. Both VIC and 64 books are also planned by Mr. West, and should be well worth waiting for. Anyone who has read our PET or CBM Guides and wanted volume two, simply must get West's book. It's everything we could have hoped to provide. (And we now have a deep appreciation of why it had to be self-published to be that good, Rae!) -JS

Update (see WPC): PROGRAMMING THE 6502, by Rodney Zaks, for **all 6502 computers.** $13+?
paperback from Sybex, 2020 Milvia St., Berkeley CA 94704.

Programming the 6502 by the famous Rodney Zaks! Thumbing through it and his companion book, 6502 Applications, I saw lots of diagrams, words printed in BIG letters, neat looking flow charts, and lots of programming examples. I couldn't wait to get home and start assembly language programming! How could I go wrong? So, I got home and sat down with those two books and quietly started to remove little clumps of hair from various areas of my body. I just couldn't decipher 6502 Assembly Language with those books. -Joe Allain

SECRETS OF BETTER BASIC, by Ernest E. Mau, for **all computers.**
$15 paperback from Hayden Book Co., 50 Essex St., Rochelle Park NJ 07662. 1983. 307p.

Approaches the subject in a rather academic manner, comparing Applesoft and various Microsoft versions of BASIC. Although dry reading, it does offer some useful programming insights, on how to structure programs to be faster and more satisfying, no matter which version of BASIC they use. - J. Paton Dellow

SPRITE GRAPHICS FOR THE COMMODORE 64, by Sally Greenwood Larsen, for **64.**
$16 paperback from Prentice-Hall/Micro Text, Englewood Cliffs NJ 07632. 1983.

REVIEW #1: Gives a good explanation of how to create sprites. There is a fairly smooth running sprite graphics sampler program that needs some slight correction. Extremely helpful for the beginning graphics designer. -Michael Voight

REVIEW #2: A well-written, easy to understand book that includes most all anyone would wish to know about designing sprites. An added bonus are the 25 sample sprite programs, many with color plates to show how they appear on the screen. I was pleased that the programs were printed in pica and boldface, so readers will not develop computer squint from typing them in. I recommend the book highly. -Elizabeth Kaspar

Update (see #15): THE USERS GUIDE TO COMMODORE 64 & VIC-20 COMPUTERS, SOFTWARE & PERIPHERALS, by Jim and Ellen Strasma for Consumer Guide, for **64** or **VIC.**
$5 spiral bound book from Publications Intl., 3841 W. Oakton, Skokie IL 60076. 1983. 80p.

This is 'the book' for the uninitiated beginner. It explains in good detail how to hook up the system, what every key does and how to use peripherals. Even those with some time on their machine will find something of value.

The software listing barely skims the surface of what's available. It does, however,

pose questions you should consider in purchasing programs, such as "does the program use a different port for peripheral communication?" (such as for a printer that connects to either the serial or user port). Recommended for those who found the 64 User Guide inadequate, but are not yet prepared to dig into the operating system or do serious programming. -Tom Lynch (SFVCUG User's Port)

USING THE COMMODORE 64 IN THE HOME, by Hank Librach and Bill Behrendt, for **64.**
$30 paperback and diskette from Prentice Hall, Englewood Cliffs NJ 07632. 1983. 102p.

This book is the shape of things to come. No more worries about what the funny Commodore graphic symbols in the coarsely printed 1525 listings mean--every program in this book is also copied onto a convenient 1541 diskette included in the (otherwise lofty) price. For most beginners, this will be the difference between learning and frustration.

Apart from the ease of testing the included programs, the book itself is well done, but limited in scope. Everything but the listings is well printed, and they are no worse than other 1525 listings. The book includes 20 programs, none of which will win any awards, and some of which hardly seem worth putting into a book (except as the learning devices they are.) Half of the 20 are simple games, and the rest are typical of public domain educational, utility and home programs offered by user groups. Even so, these programs, unlike user group offerings, include instructions, lists of variables and what they do, and line by line comments. Had my BASIC students written them for a grade, they'd receive a "B", largely due to failings in structure. Even so, a new user can learn much here. Recommended. -JS

VIC GAMES, by Nick Hampshire, for **VIC.**
$13 paperback from Hayden Book Co., 50 Essex St., Rochelle Park NJ 07662.

This is a collection of 36 programs, most of which run in the unexpanded VIC. The emphasis is obviously games but relevant techniques are discussed in detail such as sound, joy sticks, and High-res graphics. The program listings are very clear - even the cursor control characters are readable! The main portions of each program are described in terms of variables and function which invite a software hacker to make changes or utilize the ideas. There are no machine language programs since these would be outside the scope of the intended level of the book. I would recommend this book to those who want a well documented compilation of programs with examples of graphic and sound techniques. -Tom Lynch (SFVCUG User's Port)

VIC GRAPHICS, by Nick Hampshire, for **VIC.**
$13 paperback from Hayden Book Co., 50 Essex St., Rochelle Park NJ 07662.

REVIEW #1: This is the book Commodore should have packed with their **Super Expander.** While the Super Expander booklet tells you how to draw circles, squares, triangles and kangaroos, VIC Graphics has chapters on Hi-res graphics, graph plotting, video memory and 3D displays. Though written for advanced programmers, VIC Graphics doesn't leave the beginner behind and bewildered. The program is short and easy to run. My only complaints are that some progrms are very slow, and the book doesn't sit flat enough for easy typing (a problem with most computer books). Recommended for those who own a **Super Expander.** -John DeWilde

REVIEW #2: Intended for those who have the **VIC Super Expander** cartridge; makes extensive use of high resolution commands. Programs show graphic displays that range from moving shapes to 3-dimensional objects. There are even programs that give perspective, shading, and suppression of hidden lines. All program listings are set in very readable type with good annotation and explanation. Highly recommended for VIC owners who want to use high resolution in creating their own displays. -Tom Lynch (SFVCUG User's Port)

Update (see #14): THE VIC REVEALED, by Nick Hampshire, for **VIC.**
$13 paperback from Hayden Book Co., 50 Essex St., Rochelle Park NJ 07662.

Nick Hampshire has been writing about Commodore computers since the PET was introduced in '78. His experience and insight into these products has produced another gem in the VIC Revealed - a very thorough description of VIC-20 hardware and software. An excellent alternative to Commodore's VIC Reference Guide. Discussion of software operating system is

thorough and complete - even the 'WEDGE' is covered with sample ML programs. Discusses 6561 VIC chip and 6522 VIA, including software description and sample routines. Also describes I/O connectors, keyboard, and complete schematics. I can highly recommend this book to any VIC owner. -Tom Lynch (SFVCUG User's Port)

THE VIC-20 CONNECTION, by James W. Coffron, for **VIC**

An excellent guide for the intermediate hacker, describing methods and including schematics for some "real world" projects. With the included manufacturers' spec sheets, the experienced hacker could learn to control or monitor electrical devices. Otherwise, the author recommends experimenting with a CMS I/O board.

Mr. Coffron begins by describing bit level Input/Output, binary weights and programming, tied together with ample listings and examples. Anyone familiar with breadboarding or prototyping techniques will understand the first 3 chapters. It also gets into hardware development and reasons for owning a home computer other than for games and word processing. Much of the book is devoted to voice synthesizers, because they're so complex; he even develops a home control and security system to include one. He covers interfacing techniques for "slow" devices that need more time than the VIC normally allows on the bus. A lot of design philosophy "how comes" are answered. I recommend it to VIC owners who know which end of a hot soldering iron to pick up. -Hank Mroczkowski (Hardcopy)

VIC 20 QUICK REFERENCE GUIDE, for **VIC**. Also available for **64**
$3 paperback from Wiley, New York NY.

A handy, four-fold, 6" x 11.5", plastic coated guide primarily for beginning programmers. Included are definitions, such as constant and string, and explanations of cursor and color control keys, basic operations, device numbers, printer commands, system commands, and BASIC statements, sound and music tables and screen memory maps. This will save the novice time and energy, and the definitions are easier to understand than those in the Users Guide. In my opinion, a handier size would be 5" X 8" index cards together on a ring, but that is a matter of personal choice. -Elizabeth Kaspar

Update (see #14): **VIC 20 USER GUIDE**, by Heilborn/Talbott, for **VIC**.
$16 paperback from Osborne/McGraw-Hill, 2600 10th St., Berkeley CA 94710. 1983. 250p.

I found the introduction very helpful for new VIC owners. It didn't go into enough detail on how to use the function keys. The chapters were well explained, with the aid of fairly well diagrammed examples showing how programs would look. The chapter on sound was a little too lengthy. Not enough detail was given to files. It has a very good appendix for troubleshooting problems and general reference. -Cynthia Eimer

YOUR FIRST BUSINESS COMPUTER, by Peter and Rainer Luedke, for **all computers.**
Paperback from Digital Press, Crosby Dr., Bedford MA 01730. 1983. 216p.

Aquaints the prospective business user with computers and their capabilities. Well written, easy to understand and approaches the subject from the historical prespective. Concentrates on hardware and is somewhat biased towards the traditional machines. Says very little about Commodore. A good general information book which offers many buyers' hints, on what to look for in acquiring a system, and a good source for general information, despite some oversights. Recommended. -J. Paton Dellow

YOUR COMMODORE 64, by John Heilborn and Ran Talbott, for **64**.
$15? paperback from Osborne/McGraw-Hill, 2600 Tenth St., Berkeley CA 94710. 1983. 464p.

A very useful book for both experienced and inexperienced 64 owners. It is what the owner's manual should have been, but wasn't. Goes from very basic BASIC through many of the more difficult aspects of 64 programming. Also gives a very detailed explanation of how to create sprite graphics, plus a great deal of information on sound creation and programming color. One of the most useful parts was the section showing how to create programs that use joysticks or paddle controllers. -Michael Voight

Accounting and Finance Programs:

THE ELECTRONIC CHECKBOOK C/D, $20 diskette for **64**.
Checkbook program from Timeworks, Box 321, Deerfield IL 60015. Compiled with PETspeed.

Offers search by check number, date, payee, category, or amount and then on another field. Items found can be analyzed as to average amount, etc. After entering over 800 items, I decided to do a search; in two searches, 15% of my payee entries had been magically changed. Timeworks claimed this bug was due to a change in the 1541 drive ROM, and offered to replace my diskette. Not bad support.

Data entry is time consuming - 10 seconds to write one check to diskette. Worse, with more than 800 items, a program backup can take 2 1/2 hours! Ridiculous! Interfaces with Timeworks' **Money Manager**, using your check and deposit data to provide tables and graphs comparing budget/actual amounts for a year for up to 16 categories; if used together, ALL transactions and expenses must be entered via **Electronic Checkbook**, because no manual entries are possible for the "actual" categories. These programs are useful, particularly when preparing taxes. A search through 800 items takes less than 2 minutes. -Jeff Lowenthal

Update (see #16): GENERAL LEDGER, Commodore Business Accounting System for the C-64, by Info-Designs. $60 diskette versions for **64** or **CBM**.
Accounting program from Commodore, 1200 Wilson Dr., West Chester PA 19380.

The system retains account balances, but cash and journal entries are erased after printing. The program generated beautiful reports, audit trails, journals, updates and financial statements - until our first sizable update resulted in a hangup during a G/L update! Several attempts to re-start the update just compounded the error. We returned to a backup disk and re-entered the data, with similar results. For this reason, **IT IS IMPERATIVE THAT AT LEAST 2 BACKUP DISKS ARE MAINTAINED FOR EACH DISK FILE.** A call to customer support srvices brought the suggestions: turn off the printer during update, start with a new diskette, or we had hardware problems. Printer suggestion still failed, and our equipment works with everything else. We're going to ask the dealer for a refund and return to our homemade BASIC programs for our business records. -Harold Stiffler

Update (#16): HOME ACCOUNTANT, by Robert Schoenburg et al. $80 diskette for **64**
Home budget and accounting program from Continental Software, 11223 S. Hindry Av., Los Angeles CA 90045 (213/417-3003). 132 column graphic printer required for some options. Unprotected. 90 day media warranty.

UPDATE #1: I've had nothing but problems.... The warranty could more appropriately be called "anti-warranty." -Patrick McNamara

UPDATE #2: Sent back to Continental. When called 5-6 times over a 3 month period, they kept saying they would send it out when ready. Dealer gave me another copy until own comes back. It runs, but got "out of memory error" in menu item #5. Unreliable, with bugs and horrible support, and no backup copy. I don't want it anymore. -George Keramidas

UPDATE #3: My copy contained 36 direct operational errors. One of the most unforgiveable was a missing "direct screen print" routine in one program. I was able to correct the errors and compile the programs using Cimarron's **DTL Compiler**. This copy has worked fine and fast for me for the last 3 months. When preparing to compile it, I found many BASIC statements that were not executable. -Jeffrey L. McClintick

UPDATE #4: My primary complaint is that it is SLOW. Reconciling the bank statement takes an astounding 1 min. 22 secs. per check, in addition to the time for data entry. As for the screen display, even modestly fast typist, will get ahead of the display. Further, the usual Commodore screen editing is not available. I made my **Home Accountant** crash by accidentally striking "P" (for PRINT) with the printer off line. -James Condon

COMPANY REPLY #1: First, **Home Accountant** is indeed slow, because it was a translation of the Apple version. Apple routines were kept intact so support technicians wouldn't have to learn new code. For every line of code for disk access on the Apple, the Commodore required 3, making the program do 3 times as much. Also, the 1541 disk drive is slower than the Apple's. The Apple version stores as much information in memory as it can.... Most disk I/O is done upon exiting the module. Unfortunately, the Commodore hardware did not allow us this luxury. There was not enough memory to store the program and the stored data from the disk. [With 64K available? -ED]

Unfortunately, trapping printer errors is one of the most difficult areas on the Commodore. If the printer is off line and accessed, no error is generated and cannot be trapped. -Jim Densmore, Continental Software

COMPANY REPLY #2: Backup disks may be made by using the **1541 Backup** program. Some deficiencies in the earlier versions have been corrected. The slow data entry and loss of characters has been corrected with a ten key buffer. There were 3 additional deficiencies in the earlier version. I am at a loss as to how Bill McDannell arrived at the "26 bugs in the current version."

The initial 90 day warranty, which includes replacement of any diskettes that become defective, is free. You may call customer support concerning the set-up of your system and hardware configuration ... or write our support department at any time. -Richard D. West, Continental Software

COMPANY RESPONSE #3: The reason a write-protect is not allowed on the program disk is that the Hardware Configuration info is stored there. Once this has been recorded, a write-protect tab may be placed on the disk. The current version "D" has been out since December and has been operating as it should. Owners who have not received the new disk may do so by contacting Continental's customer support dept. -Gary Kevorkian, Product Manager, Continental Software

Data Base Managers and Mail Lists:

ADAM-TRACE, diskette for **64.**
Genealogy filing system from Pantech Computer Systems, 1604 Walker Building, Salt Lake City UT 84111. REQUIRES PRINTER WITH COMPRESSED PRINT MODE. 90 day media warranty.

Not ready for release. The manual addendum specifically states to store all records on a separate data disk, but there are no provisions to re-read the data unless it is on the master disk, as data files are automatically loaded at program run time. I found the data entry and setup difficult to follow. Manual states that RETURNs will take you back to the main menu from anywhere but it doesn't always work. Designed primarily for LDS (Church of Latter Day Saints) members, with no provisions to bypass LDS information, although it can be stepped through quickly. Printouts are in LDS format.

Has potential to be a very good FILING system for family genealogists. With a printer that will handle compressed mode, it provides a very nice hardcopy printout. I'll still have to look further for a good genealogy program for Commodore equipment. Not recommended in its current condition. -Jerry Key

DIARY 64, cartridge for **64**
Data Manager from Handic Software, Box 42054, Vretensborgsvagen 8, 126 12 Stockholm SWEDEN. Requires CBM disk or datasette. Printer optional. No stated warranty.

This simple in-memory data manager makes an easy to use on-line calendar. It is also able to keep lists of phone numbers, print address labels, and do other home chores. Besides the obvious add, change, delete and print commands, it includes a useful search option, and a date handler. Those without a disk will especially like its being in cartridge form. The manual is brief, but probably adequate.

Obvious lacks include sorts and customized printouts, narrow entry lines and fixed format, as well as its inability to handle files that are too large to fit in memory at once. These lacks make it best suited for home use without a disk drive, and as an office calendar. More later. -JS

Update (see #12,16): DATABASE MANAGER, $100 diskette for **64.**
Data manager from Mirage Concepts, 2519 W. Shaw #106, Fresno CA 93711 (209/227-8369). DOS protected. 90 day media warranty. $5 backup diskette.

Manual is good, although don't bother with the tutorial unless you're a beginner or are having trouble. The menus with the manual's reference section should be adequate for most users. You can select color combinations, draw your form on the screen with simple commands, select records for review or edit, and print by any field with exact and 2 types of wild card matches. Any combination up to 70 characters is allowed.

Also included are disk commands, sorts and printouts. Sort indexes can be saved for later use. Printout options are: a list of data, a form printout, a report printout with column headings, or mail labels; only mail labels are not field-selectable. Also available are merging of files, creation of subfiles, creation of sequential output, and replacement of entire fields. -Larry Woolard

DATA-PAC, by D. Johnson, $35 diskette? for **64.**
Data file from Pacific Coast Software, 3220 S. Brea Canyon Rd., Diamond Bar CA 91765.

It will only store 100 records on a diskette, but it is reliable. -Robert Newcomb

Update (#14,16): DELPHI'S ORACLE , $125 diskette versions for **CBM, PET,** or **64**
Data manager from Batteries Included, 186 Queen St. West, Toronto ONT M5V 1Z1 CANADA (416/596-1405). Printer optional. Protected by dongle (64) or ROM (CBM/PET). Compatible with **Paperclip** word processor.

REVIEW #1 (of CBM version): We just received the latest CBM version (3.14). The manual has grown both in size, 220 pages, and in quality. It now resembles **Paperclip**'s manual, and is well cross referenced. The program itself has also been improved, offering better sorting and subsorting, and the ability to shift between ASCII and CBM printers. It also offers limited math (add, subtract, multiply and divide), but with only one intermediate variable. I am currently maintaining several hundred records on equipment maintenance, each 1,355 characters in length. If I forget to set my 8023 printer in advance, I get upper case and graphics; that's better than some programs which totally reset your printer despite your personal wishes. The **Oracle** is a revolution. I bought **SuperDos** for my 8050 to realize its potential. Highly recommended. -J.P. Dellow

REVIEW #2 (of 64 version): A fairly powerful file manager system, but not a true database, because it does not work between files (updating file from several others). Very good manual, and tutorial is a must for new users - plan on 3 4-hour sessions. (I had to remove the out-of-field comments in the sample first, before the tutorial would work, though). Excellent error handling; virtually impossible to crash. Can redesign database and read from a sequential file. Menu-driven, but no HELP menu. Report writer is fairly complicated, but very versatile; can print out reports in almost any format. You should probably set up "prompt cards" when learning this section. Mail list program is easy to set up. -Jayne Schiek

HOME FILE WRITER, $30 diskette for **64.**
Data manager creator from Dynatech Microsoftware, Niles IL. Backup diskette $15, or a backup + report generator diskette with future updates $50.

Allows you to design your own record format for a database and then converts your design into BASIC. The manual is friendly and walks you through each step of the rather complicated process. After choosing all the parameters of your database, you will automatically save the stand-alone program to a new disk. Within the first hour, I had produced a filing system for several thousand LP records. After a few entries, it became apparent my program was not as efficient as it could be. Since it was so easy to generate another, I did. Updates are easy to use, thanks to tutorials on the diskette.

A friend of mine saw this program in operation and bought a 64 and **Home File Writer** that day. He is now entering data for thousands of color transparencies into his new, automatically-written database. A newsletter with applications is planned, and my dealings with Dynatech have been most satisfactory. A very useful program. -Jeff Lowenthal

INFODISK, $90 diskette for **64.**
Data manager from Beaver Software Systems, Cabin John MD. DOS protected. 2 month media warranty for $20; after 6 months, replacement diskette is $40.

Database that offers many nice features such as screen formatting, varied field and record length, file sort, data calculation and more. Can have up to 180 fields per record, the standard 80 characters per field, and record limit up to the capacity of the 1541 diskette. User's manual is hard to follow and at times lacks clarity, and examples need to be more clear. Beginners will have a tough time using this program to its maximum potential. The replacement policy causes me not to recommend this database. -Mike Stout

INFOTAPE 64, cassette for **64.**
Data manager from Beaver Software Systems, Cabin John MD. Warranty as above.

Same as **Infodisk** with fewer options. Nice program and easy to learn. Recommended for users without a disk drive. -Mike Stout

INVENTORY 64, by Replica, Inc. Diskette for **64.**
Inventory management program from Computer Software Associates, 50 Teed Dr., Randolph MA 02368 (617/961-5700).

Provides for a file of 650 parts including reorder point, minimum order quantity, sales year-to-date, list price, location and vendor. Net cost is on an average cost basis. A well written manual describes the various program parts in detail after neglecting to mention the 'run' instruction to get started; it also gives limitations to data entry. Includes a nicely documented Print Screen feature to print on-screen displays. If you try to record more unit sales than you have in stock (inventory), the screen only briefly flashes an IN STOCK message and rejects your entry, but still prints the quantity on the screen so you think it has been accepted. It also isn't unusual for a negative balance to appear on inventory records temporarily - probably a minor program defect. -Harold Stiffler

MAIL NOW, by Steven & Shawn Faure & Greg Coggin. $40 diskette for **64.**
Mail list program from Cardco, Inc., 313 Mathewson, Wichita KS 67214. FORTH.

We used a preliminary manual. Provides a file of up to 600 addresses per diskette, which should meet the requirements of anyone who needs a simple address program. Provides a 2-character data entry for 'Category' and a 14 character 'Remark' entry. The various functions are quite adequate and easy to follow. Original label formats are available in an excellent print section, which has more options than you may need. The writers may want to modify the 'Delete' function to avoid deleting addresses prematurely or accidentally. A 'Write Now' function allows addresses to be read by Cardco's **Write Now!** word processor. Even without a manual, the screened instructions would make it possible to use this program with a little experimentation. We give this program good marks. -Harold Stiffler

Update (see #16): MAILPRO, by Steve Punter. $180 diskette for **64 and CBM**
254 character data manager from Pro-Line Software Ltd., 755 The Queensway East, Unit 8, Mississauga ONT L4Y 4C5 CANADA (416/273-6350). Requires ASCII or CBM printer. DOS protected; only **CBM** version includes spare diskette.

UPDATE #1: Creation is fast and easy. Unlimited sorting and subsorting, appears to have no "bugs" and is well conceived. For example, existing sequential data files from word processors and other programs may be merged with **MailPro** files and **MailPro** vice versa. Although designed primarily for mailing, has other uses, but no math functions. Various types of printouts and customized disk files can be created directly from **MailPro.** A very capable tool which accomplishes its goal with SPEED.

Initially I was unimpressed with **MailPro** compared to **Oracle**; however, **Mailpro,** although limited to 254 characters, allows fast and easy setting of default values for fields and allows LARGE BATCHES of information to be entered before saving it to disk. This greatly increases speed and convenience. So does the printout operation; there is almost no search delay; my 8023 hummed along at a full 150 characters per second (cps). Needs a "help" menu or similar provision. **MailPro** is not a "Turn-Key" program; it works like **WordPro,** but people who know how to run **WordPro** will find **MailPro** easy to learn. Highly recommended. -J. Paton Dellow

UPDATE #2: After carefully comparing all the available databases, JO decided to shift our subscriber data from painfully-slow but versatile **Silicon Office** to **MailPro.** Despite a manual worse than **WordPro**'s, it is a very fast and easy system to use for a simple but large application like our subscription list, because a mail list doesn't need the full screen formatting, math and huge records of full data managers. Its ability to instantly add up to 120 new subscribers, and merge them while you do other chores is especially helpful. Unfortunately, after entering 1100 records, it began inventing spurious extra copies of some records. Pro-Line was very helpful in salvaging our data, but offered no explanation other than a distaste for Elephant brand diskettes. Since the problem recurred on several occasions using backup diskettes of various brands, we don't think that was the problem. Fortunately, the rescued files have worked properly thus far, but we've switched to **Oracle** until we're sure. Any reader getting more than one Midnite as a result of the apparent bug is asked to please either return the spare or use it to recruit another subscriber. In any case, do let us know. -JS

THE MANAGER, by CMD. $50 diskette for **64**, $250 diskette for **CBM.**
Data manager from Commodore, 1200 Wilson Dr., West Chester PA 19380. Dongle protected.

CBM version UPDATE: I paid $50 for the SuperPET update that included a mail label option. Unfortunately, it would only print labels in lower case. Two months later and two phone calls to Canada still haven't gotten me the forthcoming correction. -David S. Brown

64 version REVIEW: The manual said I could have a 1500 character record! Since I had already read CMD's manual, I created a database for my pacemaker patients. Screen formatting was slightly different from the original, but still went smoothly. So did data entry. After I had about 30 patients in the file, I decided to generate a report - and I've hated **The Manager** ever since. What a chore! The screen is no help, the HELP screens parrot the book, and the book is the worst collection of gibberish I've ever encountered - the epitome of USER-HOSTILE! The only way I can get **The Manager**, 64 version, to print out my records is using Manipulate/Print in that order. As this results in an unformated "dump," it's a mess, but it's something. -James Condon

[Condon wrote later, saying Commodore sent him 40 more pages of instructions on the Report Generate function, and adds, "I'm beginning to see that **The Manager** is a very capable program indeed; fully documented, it might even be fun to use." But he then adds, "I'd like to complain about another weak area: Fix a File," and calls its disclaimer of documentation "unique in the annals of computerdom." -ED]

MCBASE, diskette or cassette for **VIC +8K.**
Data manager from McRyder Software, Brooklyn NY. Unprotected.

The program documentation - one sheet printed both sides - is surprisingly informative; it even covers program modifications for VIC's of greater memory and different printers. Using any print option produces documents with almost 2 inches of waisted space between records. Alpha or numeric sorting is provided; a nice feature but slow with large amounts of data. An easy to use program, I recommend it to people looking for a basic data manager. -Richard Grennan

NUMBER CRUNCHER STATISTICAL SYSTEM, $53 ppd. diskette or cassette for **64.**
Statistical package from Dr. Jerry L. Hintze, 865 East 400 North, Kaysville UT 84037 (801/546-0445). Printer optional.

This set of menu-driven programs allows the user to construct a data base (containing up to 3000 items) and to perform up to 15 different mathematical transformations and statistical comparisons of data. Easy to input and edit data. Can label variables, handle missing data, and save to diskette or cassette. Statistical procedures include univariate (mean, standard deviation, etc.) statistics, correlation and regression, multiple regression, t-tests, one-way analysis of variance, scatter plots, frequency tables and histograms, chi-square analysis, and others. Results are displayed to the screen, with optional printout for a permanent record.

Dr. Hintze has done a masterful job in creating a friendly, trouble-free and useful program to researchers in many fields. An excellent tutorial-style manual is included; I seldom needed to refer to it, because the prompts are very easily followed. Also includes

a sample data base. Dr. Hintze quickly answers user questions by either mail or phone. Highly recommended! -Michael B. Maron

PRACTIFILE, by Reilley. $55 diskette for **64**.
Data manager from Computer Software Associates, 50 Teed Dr., Randolph MA 02368.

Practifile was never meant for a single drive, especially not one as slow as a 1541. It usually takes a minimum of six swaps to do anything, and has twice so far tried to LOAD something called Disk File which is not in the directory. It keeps on returning File Not Found messages. If you try STOP, you can't start again because of File Not Opened messages. I really expected better. I now understand why you did not include it in the The Best VIC/Commodore Software book from Consumer Guide. -Herb Gross

STAT 64, cartridge for **64**
Statistics and graph programs from Handic Software, Box 42054, Vretensborgsvagen 8, 126 12 Stockholm SWEDEN. Requires CBM disk or datasette. Printer optional. No stated warranty.

Adds 19 plotting and calculating commands to BASIC. Does vertical and horizontal bar charts, plots 3871 points (or 200 by 300 points in hi-res), dumps the screen to a printer, sorts data, and calculates means, variance, standard deviation and so on. All of this is shown in a nifty demo that runs as soon as the cartridge is started. Since the demo is in BASIC, it may be studied to learn its methods. There is also a brief manual detailing the use of each command. More later. -JS

SUPERBASE 64, by Precision Software. $100 diskette for **64**
Data base from Precision Software, Park House, 4 Park Terrace, Worcest Park, SUrrey KT4 7JZ England (01-330 7166). Compatible with **Easy Script.**

The most sophisticated data base for the 64 (more sophisticated than **Oracle** because of its programming section, that lets you write your own programs, using a combination of BASIC and their own progrmming language. Uses free-form screen creation and designed to work directly with **Easy Script.** Documentation is good but not great, and because of its sophication, it's one of the hardest to use; once you've finally learned it, you'll love it. Still limited to diskette size, like almost all 64 data bases. -Marc Rosen

TOTL.INFOMASTER, $50 diskette for **64.**
Data manager from TOTL Software, P.O. Box 4742, Walnut Creek CA 94596.

TOTL's entry into data management uses 4 compiled BASIC programs (setup and entry, report generator, utility, and sort) to provide 100 fields per record, 2500 characters per record, 245 characters per field, 10 files per disk. The package works well together, and allows definition of field type (all caps, numeric, U/L). You can modify the data base after setup, report formats can be saved on disk, you get a video display (with horizontal scrolling) of report layout, you can use control breaks and you have many options. Well-done package and manual, with 3 drawbacks: you can't draw your form on the screen (to visualize it during creation), you have a long wait while alternately loading the three most-used modules, and it uses random files instead of relative files (few companies have been able to make random files behave reliably on Commodore computers). -Larry Woolard

Update (see #16): TOTL.LABEL 2.6, diskette for **64** or **VIC**
Mail list from Totl Software, P.O. Box 4742, Walnut Creek CA 94596 (415/943-7877). Printer optional, 80-column board optional.

Disk utilities are now available from within the program - especially useful if you forget what you named a file. The program also asks for your disk device number. You can now sort on any portion of the first line of the label and then suppress that line when printing, allowing much greater flexibility. You can now get an alpha and a zip code sort, or whatever you are clever enough to work out. Still lacks any categorization of labels or much selection of labels other than those you just entered or single labels. -Larry Woolard

Electronic Spreadsheets:

BUSICALC II, $50-90 diskette versions for **all Commodore computers.**
Electronic spreadsheet from Skyles Electric Works, 231 S. Whisman Rd., Suite E, Mountain View CA 94041 (415/965-1735).

REVIEW #1: It is better than **Busicalc I** and scrolls as fast as **Visicalc.** Most disk commands in their manual will cause a lockup or crash, though. Used in normal ways, it is okay. -Robert Newcomb

REVIEW #2: When Skyles came out with **Busicalc II,** he offered to upgrade anyone's **Busicalc I** for the difference in cost ($30), and the old disk or tape. -Francis Donovan

MULTIPLAN, by Microsoft. $100 diskette for **64.**
Electronic spreadsheet from HESware, 150 N. Hill Dr., Brisbane CA 94005.

REVIEW #1: More commands than **Visicalc** and has "Help" screens. You need 2 drives to run it, as certain commands access the program diskette. The manual (p.XXVI) has an instruction that doesn't work. If you are using two drives, always use 9,BUDGET to refer to the file BUDGET. Do not use their set-up instruction. -Robert Newcomb

REVIEW #2: Very complete, with a wide variety of special features, and many preprogrammed formulae to carry out almost any conceivable calculation on one or more cells, rows, columns, or a combination. However, it is not easy to learn. Even after 2 hours, I never did fully complete the first tutorial spreadsheet. Has 3 alternative ways to enter commands [menu driven, single mnemonic characters]. Has a most complete and detailed manual with both an extensive tutorial section and an excellent reference section, but creates a worksheet in such minute steps that I became quite frustrated. Its index is quite complete, the column itself large, glossy, and well designed. Once mastered, **Multiplan** would be the most useful of any I've seen. A good program; recommended to anyone who needs a spreadsheet for home or business. -Charlie Proctor (Montgomery Co. Commodore Computer Society, Silver Spring MD)

OMNICALC, $40 diskette for **64.**
Electronic spreadsheet from HES, 150 N. Hill Dr., Brisbane CA 94005. Includes **Calc 64** (spreadsheet) and **Plot 64** (graphics package that displays spreadsheet results.)

REVIEW #1: Fairly inexpensive and a good list of features, but no sort. Not the easiest to learn or use. Not menu driven, and commands aren't easy to remember; has help function, instead. Worse, each cell needs an "assumption type" - a hard-to-remember code from 00 thru 20 to tell what beast lives in that cell. The documentation is typical HES: small type crammed into as few pages as possible. A few letters of each line are missing on some pages. Some examples are wrong. It does have an index. I've seen worse, but not often. **Omnicalc** does not allow different columns to be different widths, nor can some columns contain integer data and others contain decimal numbers. The manual gives no information about the disk format of the data. -Valerie Kramer (SFVCUG Users Port)

REVIEW #2: A somewhat easier program to learn than **Multiplan,** although not nearly as simple as **Busicalc.** On the other hand, it is far more extensive than **Busicalc.** It is not menu-driven, but has a quickly accessed help screen with a reference list of all commands. As with **Multiplan,** there are 2 modes: command and cursor. Cursor mode is used to create the spreadsheet and move around in it once completed. Although **Omnicalc** has fewer pre-programmed formulae than **Multiplan,** it can do any calculation a typical user (other than a statistician) would need. Both allow for user defined formulae. The pocketbook manual has a number of typographical errors; it is, however, adequate both for learning the program and for reference. I favor **Omnicalc** over **Multiplan** primarily because it will do quite a satisfactory job at a much lesser cost. Both are good programs and can be recommended to anyone who needs spreadsheet capability either for home or business. -Charlie Proctor (Montgomery Co. Commodore Computer Society, Silver Spring MD)

Integrated Packages

MAGIC DESK I, $60 cartridge for **64**.
Text editor and data base from Commodore, 1200 Wison Dr., West Chester PA 19380.

REVIEW #1: Commodore's answer to the popular "picture menu" programs. You use a joystick or mouse to move the pointing finger to the option you select. Graphics are nice and fairly recognizable, such as the picture of the disk drive in use. The text editor is a bare bones version that lets you enter text and do basic editing, while making your screen look like a working typewriter. The filing option uses relative files to store your document. The functions, though quite limited, do work. The file option is painfully slow and difficult to use, with no list of document titles. You have to remember which file drawer, file folder, and entry number you used to store your document. Controlling the pointer with a joystick can be very difficult at times. Documentation is almost nonexistent. If you like graphics and can't file anything by a name, this will do the job, but there is better available for less. I doubt you'll use it more than once except to show "something neat" to your friends. -Larry Woolard

REVIEW #2: **Magic Desk** is perfect for that first month or so after you buy your first computer. without learning much of anything about the 64, you can put it to useful work. Even those who don't speak English will find it's picture menus as easy to use as Apple's MAC, and for a whole lot less.

After the first month? Every specific chore **Magic Desk** does is far better done by other readily available programs. After that month, you'll know enough to recognize something better when you see it. Recommended for new users. -JS

SUPERCLERK, Approx. $600 diskette for **CBM**.
Accounting, data base and word processor from Superclerk LTD., 129a Market St. Chorley, Lancashire, PR7 2SG, England. Requires 80 columns, disk and printer. Requires dongle in cassette port. Machine language. Free updates for 6 months.

If you're tired of loading different programs for one application, **Superclerk** is here! As with any commercial program, there are tradeoffs. Designed to be a "Turn Key" program for the uninitiated non-programer, it comes very close to succeeding - and it is FAST! Our review copy was a "ham-strung" pre-production (data files may periodically be erased). Most of the few "bugs" we found were minor and apparently are being corrected, along with the manual. **Superclerk** can supposedly be modified by the dealer, and any program errors are supposed to be corrected free of charge. How's that for a refreshing change! Although it is difficult to recommend a program that has been hamstrung for testing, **Superclerk** does do many things very well. An alternative program for those who want a fast but simple to run program with all the essentials but no frills. - J. Paton Dellow

Word Processors:

BANK STREET WRITER, $70 diskette for **64**.
Children's word processor from Broderbund, 17 Paul Dr., San Raphael CA 94903.

REVIEW #1: I now understand why you did not include **Bank Street Writer** in The Best VIC/Commodore Software book from Consumer Guide. [We hadn't tested it yet. -ED] If you want essentially a negative review on this product, I will be glad to write it.

Broderbund was funny to deal with. They sent me a brand new package containing two disks in exchange for my disk, though only the program was defective. While they were very nice, they never admitted any defect in the program, but did announce an improved version would be forthcoming that I could get for a nominal fee. -Herb Gross

REVIEW #2: It is fairly easy to use, but lacks many functions I like, such as underlining and highlighting. Also, some editing functions are difficult at first. -David S. Brown

COPY-WRITER, diskette for **64** (PET/CBM version also available.)
Word processor from CGRS Microtech, Box 102, Langhorne PA 19047. Requires CBM or PEdisk II drive. DOS-protected master disk. Allows creation of several unprotected daily use diskettes before self-destructing. No warranty.

This is the only word processor we've seen on the **64** that is able to do true 2-column formatted output on a single pass through the printer, although new competitors with this ability are expected. It is also one of the very few business programs that is able to use the ultra-fast PEdisk II disk drive properly. Note: You reportedly can't put a write protect tab on the master. -JS

CUT & PASTE, by Tim Mott et al. $50 diskette for **64**.
Simple word processor from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. Requires 1541. 90 day media warranty.

Much is made in the **Cut & Paste** cover blurbs about its author's role in developing the first user friendly software while at Xerox. **Cut & Paste** is reportedly the result, "the first practical extension of this technology for the home." Personally, it reminds me more of **Wordstar** than the **Xerox Star**, but it is undeniably easier to use than **Wordstar**, and also far less powerful, not to mention less expensive.

Who needs it? Consumer Reports wants a word processor with word wrap; **Cut & Paste** wraps not only words, but also lines, when doing so is necessary to keep one line of a paragraph from appearing alone on a page. It should also appeal to those with simple needs, such as the person who only gets out a typewriter once a month. The manual is almost useless, but that doesn't matter, because the program is almost as easy to use as claimed. Formatting options are extremely limited, but the intended user won't try anything harder than a Christmas letter and envelope anyway. As for printers, only success with the Card/? and Connection on the Banana, Prowriter, Epson, and Okidata dot matrix printers is claimed, with no reference to any letter-quality printer. Since there appears to be no way to place printer command codes within the text, don't plan on using anything fancy, like italics. All in all, it's similar to my Tandy 100 - a great way to write down my thoughts - but with a crucial difference. The Tandy can feed its output into another very powerful word processor that overcomes every weakness in the Tandy's options. **Cut & Paste**, on the other hand, is a stand-alone program. It doesn't claim compatibility with anything else (word processors, terminal programs, spelling checkers, mail lists, 80 column cards) - nothing. That will certainly keep me from using it regularly.

Overall, the concept is nice, but the product is too limited. The menu of commands is a bit harder to use than Cardco's keyboard overlays for **Write Now**, which sells at the same price on a far more convenient cartridge, with far more power. Unless you must have word wrap, and are willing to settle for no 80 column mode, and no choice of colors, pass **Cut & Paste** by. Not recommended. -JS

Update (see #16): EASY SPELL, $15-20 diskette for **64**.
Spelling checker from Commodore, 1200 Wilson Dr., West Chester PA 19380.

Includes 2 duplicate program diskettes and dictionary diskette. Checks spelling of your text against a 20,000 word dictionary, and can add your own words. You find yourself inserting and removing diskettes several times. Documentation is clear and very well presented. Will give you a count of words, paragraphs and sentences, and average length of words. It then lists words not recognized by the dictionary and highlights each. You can correct each misspelled word, but only add words into your user dictionary if you want to. You can print a word frequency report of all words used in text, and search for specific words, or by pattern matching, for words with certain letters in specific locations. Crossword puzzle enthusiasts please take note! When you run out to buy **Easy Script**, grab an **Easy Spell** as well! -Everett Best (CUGSL Newsletter)

KIDWRITER, $40? diskette for **64**.
Children's illustrated text editor from Spinnaker, 215 First St., Cambridge MA 02142. Unprotected. 30 day free replacement warranty.

A marvelous idea! Kids can combine preprogrammed background scenes with objects, letters and numbers to form illustrated pages for their own stories, which they then write

using a simple word processor. Colors of the objects and letters selected can be changed at will, as can their sizes within a limited range. After the story is illustrated and written, it can be saved to disk. No mention of a printer in the 10 page manual.

After a few minutes of instruction, my daughter (almost 6) jumped right in and produced a 5-page fantasy. She's quite proud of her effort, while becoming familiar with the computer keyboard. One of the best software products for youngsters I've seen, encouraging both creative expression and typing skills. I recommend it. -Jeff Lowenthal

Update (see #13,14,16): PAPERCLIP, $80 diskette for **64** or **CBM/PET**.
Word processor from Batteries Included, 71 McCaul St., Toronto ONT M5T 2X1 CANADA.

The most noticeable new feature of Version "C" for the **64** is the ability to view the screen in 80 columns. It's a great idea, but there are a few problems. When viewing, the screen is very hard to read on a monochrome monitor and almost impossible with a color TV. Because the 80 columns is created through bit-mapping, scrolling is slowed down considerably. The main use for this mode seems to be to show how the document will look on paper (margins, justification, etc.), but not to read the text. Secondly, you are not able to horizontally scroll in this mode. This becomes a problem when working with a document wider than 80 columns. Despite these shortcomings, the 80 column capability is a creative modification, and **Paperclip** still remains the most powerful word processor for the 64. Look for version "D" soon, which will support Batteries Included's own 80-column hardware expander. -Ross Garber and Barry Bransky

Update (see #10): RTC-4, $100 diskette versions for **CBM, and 64.**
Word processor from Richvale Telecommunications, 10610 Bayview Av., No. 18, Richmond Hill ONT CANADA. Requires dongle in cassette port. Machine language.

RTC-4 is an upgraded version of RTC's **Script 64** word processor, combined with a MODEM and mail list. It permits transfer of files from earlier versions. Appears to be a very capable, "bug free" tool, and offers some advantages to other programs. First is a 400 line text area. Secondly, RTC permits organized retrieval of designated portions of often-used large documents, but which need customized documents created (for example, using an attorney's master file of contract provisions to create a specific contract). The principal disadvantage is that it is as complicated to learn as **WordPro** and lacks adequate screen prompts. The company claims their mailing package turns **RTC-4** into a dynamite mailing package; unfortunately, the copy of **ScratchPad** sent for review did not run. Recommended. -J. Paton Dellow

SPELLPRO, by Jim Butterfield. $180 diskette for **CBM**; $130 diskette for **64**.
Spelling checker from Pro-Line Software Ltd., 755 The Queensway East, Unit 8, Mississauga ONT L4Y 4C5 CANADA (416/273-6350). Requires printer. DOS protected. Works with **WordPro.**

Will write a **WordPro** file, or print out suspect words. Permits editing of the suspect list. Then it reloads original file into **WordPro** with **Spellpro**'s file in "extra text," and uses "search and replace" to make corrections. Permits complete user access to the 80,000 word dictionary, certainly sufficient for most applications. No faster (or slower) than similar programs. Ability to make corrections to the original file, without having to reload **WordPro** would be a nice touch. Appears to be "bug" free and very simple to use. Pro-Line will replace failed disks for $20+. -J. Paton Dellow

TEXT MASTER 64, by Michael Willis. $40 diskette or cassette for **64** or **VIC+8K**
Word processor from Universal Systems, Box 126, Urbana IL 61801. Protected. Requires Datasette or 1541. Printer optional.

It's a very full-bodied little word processor. Unique feature: the current 3 lines of text (120 characters) are displayed in a window at top of screen. Actual text shows below the windowed 3 lines of text with no line numbers. Uses normal straightforward commands. When you end your paragraph, the RETURN key clears the text. It's a boon for cassette users to give them a taste of real word processing. Printer setup gives standard ASCII code and other normal printer selects. -Bob Wolters

TOTL.SPELLER 3.6, $35 diskette for **64** and **1541**.
Spelling checker from TOTL Software, Box 4742, Walnut Creek CA 94596. DOS protected. Backup disk $5. Compiled.

Includes 3 main programs: a utility, the spelling checker and a program to create the working dictionary diskette. Uses 3 dictionaries of words: a permanent dictionary of 10,000+ words (expandable to 24,000), a temporary dictionary, and a memory resident dictionary. The program does not appear to use any algorithm to break up words. The two-pass proofread option automatically reads through the file, building a list of "suspect" words. Then these words are highlighted. You can accept each as is, add it to the temporary dictionary, correct it, end, or call for HELP to check for similar words. The verify option works like the second pass of the proofread without building a list of "suspect" words. It took 15 minutes to proofread and slightly less to verify a 500 word document (slow!!!) -Larry Woolard

WRITE NOW 64, $50 cartridge for **64**.
New word processor from Cardco, 313 Mathewson, Wichita KS 67214 (316/267-6525). Compatible with **Mail Now**. CBM or ASCII printer (via serial bus) optional.

After brief testing, it's already my number two recommendation for word processing, and preferable even to number one (**Paperclip**) for those with limited skills or needs. It includes all the usual **Wordpro** features and reads **Wordpro** files, but is far easier to use than most of its competitors, including several for children. It also adds some powerful new features, including several HELP screens, option menus, true footnotes and the ability to mix graphic designs with text, both on the screen and in printouts. Like its best competitors, it includes a software 80-column display only on output, showing what you'll get on paper before printing. It also has true cut and paste ability, even allowing you to undo a delete. For users on a tight budget, it is quite happy with a cassette (making it THE choice for cassette systems). The only thing that didn't work was the joystick cursor control (since corrected). A matching **Mail Now** (see separate review) works with it to do mass mailings; other linking programs are also planned. Unfortunately, the files it reads are not just any old sequential file, but need to be specially organized. This, plus the lack of column and sorting abilities, and hardware 80 column compatibility will lead many serious users back to **Paperclip**. On the other hand, **Write Now** is flexible enough to handle most printers that can be connected via the serial bus and can read **Paperclip** files (though its format commands are quite different). Overall, **Write Now** is a real bargain, and highly recommended. -JS

Church Reviews

THE BOOK OF ACTS, $20 (less with other programs) diskette for **64.**
Bible study program from Magic Ministry, Zion Lutheran Church, Dauphin PA 17018. Requires CBM disk. Unprotected.

The third of Rev. Daniel Shutters' excellent Bible study programs, each of which combines serious content with excellent use of humor to maintain interest. This one seemed much more difficult to me than **Luke** and **Mark**; mistakes in **Acts** are less likely to be forgiven than in the others. On the other hand, Shutter's programming continues to improve, with more graphics and a helpful map of Paul's missionary destinations. For those inclined to cheat (such as a hurried reviewer), any chapter of Acts may be reviewed instantly with a simple GOTO the chapter number times 100, a good touch. Fortunately , you can LIST the program, so teachers can make up for the lack of an answer key by reading the listing. Keep them coming, Dan. Recommended. -JS

CHRISTMAS STORY 64, $17 diskette for **64.**
Christmas game from Joyful Computing Associates, Box 65, Bearsville, NY 12409. Unprotected.

This is a graphics game with three camels (designed with sprites) in a race for two or three players. They move based on answers to excellent multiple-choice questions covering the birth of Jesus. It has some sound when answers are given. However, I could not see whose turn it was on the screen when the next turn came. I would give it a 7 out of 10. -some user group newsletter (sorry! -ED)

Update (see #15): THE GOSPEL OF LUKE, $30 for **64.**
Gospel game from Magic Ministry, Zion Lutheran Church, Dauphin PA 17018. Unprotected.

This is a great game for all you Christians out there. I love it. **But,** it is very hard, considering the fact that you **have** to have a Bible with you! There's a few graphics, but you'll **love** the humor even without them. You might even form a club and take turns playing! -Casey Westerman, age 8

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Since this ad is the catalog, no response to inquiries will be made; however, documentation for any one program may be purchased separately for $2 postpaid (deductible from later order). Thank you.

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Computer-Assisted Instruction

ALF IN THE COLOR CAVES, by Joyce Hakansson et al. $35 cartridge for the **64**
Dodging game for ages 3-6 from Spinnaker, 215 First St., Cambridge Ma 02142. Requires joystick. 30 day free replacement warranty.

Alf is a pleasant, simple game that young children will enjoy. In it you direct a happy Q*bert-like critter through a series of tunnels from an upper cave to a lower one. On arrival, he dances to the cute tune that plays throughout. Complicating matters just enough are occasional angry eye critters that block Alf's path. Avoiding them teaches planning, timing, and other good things.

There is a pause option, and the screen will blank to protect the TV if your child runs off and forgets Alf. Although the baddies look mean, the worst they can do is bounce Alf back to the top tunnel and make him try again. No nightmares from playing this one. And when you tire of the game, try the activities listed in the manual; guaranteed to mess up the kitchen, but also likely to teach good things about color. Highly recommended. -JS

ARITHMAGIC, by Joanne Benton. $35 diskette for **64**.
3 math programs from Q.E.D., 29924 NE Stanton St., Box 12486, Portland OR 97212. Unprotected. 14 day free replacement warranty.

Diffy gives subtraction practice for grades 2-6. Tripuz provides 4-function arithmetic practice for grades 3-6. Magic Squares teaches discovery of magic squares patterns to grades 5-9. All 3 games have original enough concepts to really hold students' attention, beyond simple drill and practice. Our son pronounces them "pretty good." They seem to be as good a set of math programs as is currently available. The only weakness is lack of color -- the standard blue on blue is always hard to read. Recommended. -JS

BANK STREET WRITER, diskette for **64**.
Children's word processor from Broderbund. See under Business Reviews: Word Processors.

BASIC CONCEPTS OF ELECTRICITY SERIES 2: Introduction to Circuits, by George MacRae. Half of $17 CDN for 2 diskettes for **16K+ CBM/PET** or **64**. Electricity tutorial from Merlan Scientific Ltd., 247 Armstrong Av., Georgetown ONT L7G 4X6 CANADA. BASIC.

These menu-driven tutorial programs load in each part as needed, in upper-lower case. Presents adult level information at junior high level, yet is appropriate subject matter for a freshman Physical Science Intro course. When we loaded the lesson, we got a "test" instead, and had to guess what was going on. The drill option is very helpful once you already know your electricity principles. Just like a real quiz, the drill goes fast and when you give a wrong answer, displays a nice explanation with graphic illustrations and the formula you should have used. Has looseleaf manual. -Dave Schroeder & ES

BUBBLE BURST, by Joyce Hakansson et al. $35 cartridge for **64**.
Space invaders-like game for ages 4-8 from Spinnaker, 215 First St., Cambridge MA 02142. For 1-2 players. Requires joystick. 30 day free replacement warranty.

Bubble Burst is a pleasant, simple space invaders-like game that young children will enjoy. In it you aim bubbles at dive-bombing birds, as they try to disrupt your bubble bath by popping all the bubbles. A direct hit catches the offender in a bubble and floats it up and away. The supply of bubbles is limited, so use them sparingly. Like other arcade games, each hit earns points, success at one level leads to a new challenge at a higher level, and you will inevitably lose, even though it isn't a killing game.

Cute though this is, with its smiling sea serpent and colorful birds, I don't really see **Bubble Burst** as an educational product. It's more like Pee Wee Galaxians, and should be rated among arcade games. In that league, it's cute and far more wholesome than most, but of limited interest, due to its single game board and unvarying play action. -JS

CHATTERBEE, by Don't Ask Computer Software, Inc. $40 diskette for **64**
Spelling game from Tronix. See under Utility Reviews: Music and Sound Aids.

THE FACTORY: STRATEGIES IN PROBLEM SOLVING $49 diskette for **64.**
Assembly line simulation from Sunburst Communications, Pleasantville, NY, 10570. Grades 4-9, Reading level: grade 2.

Another excellent 3-part program with 3 skill levels from Sunburst and most deserving of the 1983 Learning Software Award; the graphics, sound and creativity all merit an A. Spatial perception, logic, and inductive reasoning are just a few of the skills this clever program teaches. The first program introduces the machines. In the second, the student designs an assembly line and predicts the final product. The third, and greatest delight, is challenging and fun for all who tried it, children and adults alike. You create an assembly line to make your product. This may take 3 machines in easy mode, up to as many as 8 in difficult mode. The teacher's guide comes in a durable, plastic binder with both a master and a backup diskette. Recommended, especially for gifted classes, grades 2-8. -Elizabeth Kaspar

FUNDAMENTALS OF MATHEMATICS, by Craig. 6 diskettes for **64.**
89 math lessons plus 620p. manual from Sterling Swift.

Designed to teach math skills to pass Texas State high school math competency exams. Manual consists mostly of exercises for grades 3-12 that can be copied and used as worksheets. Lessons cover a wide spectrum, from reading whole numbers to metric conversion to adding fractions to solving equations. The lack of good prompts was immediately obvious to someone with no computer experience. An introductory session on use of the computer would be essential. The only other problem was having the computer "freeze up" after rapid, repeated pressing of the space bar while going from one frame to another. When running these programs, we were reminded of glorified flash cards. Once the menu is loaded and run, the user picks a lesson, does that lesson, and is returned to the menu. Though graphing was listed in the menu, there was no lesson for it. In general, we still liked the lessons. If the teacher instructs the students in computer use and has access to a copy machine, this package could be useful. -Boyd Wilson & Mike Ertl

IN SEARCH OF THE MOST AMAZING THING, by Tom Snyder. $40 diskette for **64.**
Learning adventure game from Spinnaker, 215 First St, Cambridge MA 02142. Requires CBM disk and joystick. DOS-protected. 30 day free replacement warranty.

In this most involved learning adventure for ages 10+, you will learn many useful things, but also grow old and gray waiting on the program. This program seriously needs a hard disk and a compiler - a crying shame, because more effort has obviously gone into **Search** than any other educational game we've tested. The package even includes a 76 page storybook, plus a suitable manual. The program itself includes a variety of hi-res pictures, complete with varied activities, in several locales, leading to goals that are both interesting and wholesome.

Among the best teachings of **Search** are the value of money and how to trade for it, how to estimate distances, the notion that songs have value, and the crucial information that strangers aren't for shooting. In the course of the first stages, 1 or 2 youths learn to steer a jet pack and hot air balloon, barter with aliens, shop, and chat with sleepy oldtimers. The goal is a Holy grail-like object known as the "most amazing thing", said to be worth 2 free wishes to its finder. If the youth in your family have a lot more patience than I do, this could be the best program for them this year. But if they prefer lightning reflex games, an even more amazing thing might be seeing them still playing this after the first few hours. The saving grace is that the game can be saved and resumed later, as Jamie did after spending 3 hours just equipping the ship. Recommended, but only for patient youngsters. -JS

JUKEBOX, by Joyce Hakansson. $35 cartridge for **64**.
Hopping game for ages 8+ from Spinnaker, 215 First St, Cambridge MA 02142. For 1-2 players. Requires joystick. 30 day free replacement warranty.

Jukebox is a hopping game, barely related to **Q*bert**. Actually, it's more like the old puzzle in which you move pegs until only 1 is left. In **Jukebox**, the goal is to hop on all squares to turn them into gold records, without hopping yourself into a corner, while also keeping the music maker steadily fed with coins. As you play, you are entertained by good music, and bright detailed graphics in full color. Winning is no easy task; it takes several jumps to "grow" a record large enough to become gold - and only when it is randomly flashing. Even worse, you can't hop from a larger record to a smaller one, and must leave empty squares where the gold can "hatch." If you tire of the game, the manual includes notes about popular music of the past 60 years, and several games and projects to try related to music. Not bad for a $35 cartridge! Highly recommended. -JS

KIDWRITER, diskette for **64**.
Children's illustrated text editor from Spinnaker. See under Business Reviews: Word Processors.

MATH DUEL, Cassette for unexpanded **VIC**
Arithmetic game for early-middle elementary grades from Computer Software Associates, 50 Teed Dr., Randolph MA 02368. Unprotected. 90 day warranty.

Math Duel is a hangman type math game in which you have the choice of doing any of the four main arithmetic functions at one of three levels of difficulty. It makes good and colorful use of the VIC graphic characters, and includes random beeps as you play. However, it requires you to enter lengthy answers left to right, rather than digit by digit right to left as teachers prefer. Second, the delete key doesn't work to remove a faulty keypress, even prior to pressing RETURN, and three, it is easy to crash the program with an "out of memory" error, simply by giving a longer than usual answer. I also had to chuckle when it informed me after completing level three, that it was advancing me from level one to level two. I suppose I should also mention that the animation when you answer incorrectly is fancier than the reward for answering correctly, thus reinforcing the wrong goal. It's good that this program runs in an unexpanded VIC and tries to do so much, but until it can do what it does a bit better, I can't recommend it. -JS

RHYMES & RIDDLES, by Dr. & Mrs. Mark Cross. $35-40? diskette for **64**.
Phrase riddle game for ages 5-9 from Spinnaker, 215 First St., Cambridge MA 02142.

Rhymes & Riddles is a pleasant variation of the Hangman game. In it you guess which letters of the alphabet are used in phrases whose words are lined out on the screen (showing where letters and spaces go, but not which letters are used. That info appears when you guess correctly. Six misses and you're out; the computer will complete the phrase and show a sad face. Guess correctly, and a happy picture will appear, with appropriate music. Completing all 3 categores (nursery rhymes, riddles and famous sayings) will teach your child many good lines, both famous and funny. Jamie happily gave up Saturday morning cartoons to play it today. Recommended. -JS

SNOOPER TROOPS, Case #2: The Disappearing Dolphin, by Tom Snyder. $40 diskette for **64**.
Detective game for age 10+, from Spinnaker, 215 First St., Cambridge MA 02142. DOS-protected. 30 day free replacement warranty.

Snooper Troops is an excellent way for patient youths to enter the detective world. It is excellently laid out and crafted, with color, variety, suspense, and a wide variety of chores that advance one educational goal or another. But as in Spinnaker's other adventure for the 64, **Search** (see separate review), everything simply takes too long. I'd gladly settle for lo-res graphics instead of hi-res, for example, to get screen loading times of say a half-second, instead of a half minute! Also, by trying to make the same program fit several dissimilar brands of computer, things become harder to do than they need to be. For instance, you drive your car with a confusing pseudo-keypad made up of the ASDW & X keys, instead of using the joystick. Those without a way to back up this protected program should also know that it writes on the master diskette as you play, which

may lead to problems if your allignment doesn't match Spinnaker's drive exactly. Apart from these concerns, **Snooper Troops** is a fine achievement. Given enough patience, it should keep your youths busy for days. -JS

TINY TUTOR, cassette for unexpanded **VIC**
Arithmetic tester for preschool-grade 2 from Computer Software Associates, 50 Teed Dr., Randolph MA 02368. Unprotected. 90 day warranty.

Tiny Tutor is a simple and pleasant math tester for younger children. It shows only addition and subtraction, and at only one (easy) level. However, that is all its intended audience can handle, it seems bulletproof, and it is very easy to use. Answers may be changed until RETURN is pressed, and questions and answers are shown both in large letters and in little Smoky the Bear-like figures. There is also quite a display when the user does well, and a visibly less appealing display after a failure, although not enough so as to overwhelm anyone. The program get by entirely without words, making use by young children possible. About the only problem for class use is that the sounds are not optional, and eavesdroppers can tell from them how a classmate is doing. Quite an achievement for the unexpanded VIC. Recommended for use up to grade 1 or 2. -JS

TRAINS, by Interactive Picture Systems, Inc. $35-40? diskette for **64**.
Train simulation for ages 10-Adult from Spinnaker, 215 First St., Cambridge MA 02142.

This simulation of the economics of running a steam train in the old West is great fun - one of the best of the already highly-acclaimed Spinnaker products to date. As in a real-life railroad, it is important to stay on schedule, and to balance supplies of money, coal, wood, ore, oil, and so on. It's also important to find optimum routes and to respond quickly to messages you receive. The train itself is controlled entirely by the joystick. You have a choice of 8 different urban and rural routes to service. Each is detailed and accurately colored, though not as pretty as the animated scene that entertains you between routes (to a spritely tune, of course). This is the first Spinnaker program we've seen that appealed as much to me as to son Jamie, age 8. A real winner for everyone old enough to read. Highly recommended. -JS

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23 Matches ● Accounts ● Artillery ● Basic Loader ● Birds Demo ● Blackjack ● Bush Trail ● Calculart ● Camel ● Cards ● Checkbook ● Checkers ● Cirkeldemo ● Colour Wheel ● Craps ● Curs. Letter ● Dam Busters ● Data Search ● Data Sheet ● Dissambler ● Dragon ● Dupe ● Fish Inventory ● Fishing Forecast ● Guess T Number ● Handic ● Histogram ● I Feel Fine ● Installments ● Invest Calc ● Invintro ● Invprog ● Jumble ● Kinetic Art ● Light Show ● Loan Calculator ● Mail List ● Mail List Entry ● Mastermind ● Math Drill ● Math Quiz ● Math Tutor ● Menu Driver ● Monkey ● Moonlander ● Morse ● Nothing Can Go W ● Organ Keyboard ● Othello ● Pacman ● Pacman PT2 ● Patterns ● Piano ● Pinball ● Print My Program ● Programable Char ● Race ● Renumber 1.0 ● Samu ● Sir Duke ● Sound Demo ● Spies ● Super Vicmon ● Tape Counter ● The Muppet Show ● Traffic Signal ● Unit Convert ● Unscramble ● Vicbreak/Padl ● Wall Destroy ● Warfish ● Word Processor

VIC-20 COLLECTION #3
37159 Demo ● Acey Ducey Inst ● Acey Ducey Prog ● Address Book ● Air Inductor ● Alpha Key ● Astro-Tron ● Barncade ● Bio Printer ● Brain Teaser ● Color Falls ● Color Squares ● Color Trick ● Color Trick 2 ● Combat ● Contractions ● Countdown ● CW Keyboard ● Days Fiet. Dates ● Decibel Calc ● Decision Maker ● Dog Race Inst ● Dog Race Prog ● Dominoes EK+ ● Dynasquiral ● Exec ● Eye Puller ● Fantansyland ● Flash & Spell ● Flash Cards ● Flash Prompt ● Flight ● Flyer ● Ham Formulas ● Hijacker ● Jingle Bells ● Label Maker ● Lemonade Stand ● Lo Pass Filter ● Look ● Market Inst ● Market Prog ● Math Drill ● Maze ● Mazeman ● Memory ● Phone Directory ● Plow By Numbers ● Poker ● Print Using ● Quad Antenna ● RAM Test ● Reson. Freq. Formul. ● River Crossing ● Screen Fable ● Scroll ● Sequence ● Slot ● Snowflake Melt ● Soc St Rev ● Spelling Challen ● Super Boggle ● Super Demo ● Synonyms-Antonym ● Titration ● Vector Table ● VIC Mail ● Voltage Div ● Word Scrm Inst ● Word Scrm Prog ● Yagi ● Yehtzee

VIC-20 COLLECTION #4
16 Function Demo ● Accountant ● Add Column ● Add Fast ● Bar Graph ● Baseball 6K ● Char-Gen 4D6 ● Charger Inst ● Charger Prog ● Chemical Quiz ● Chief ● Correct Change ● Defuse ● Determinates ● Disk Doctor ● Disk U/R ● E-Brg ● Electronics 1 ● Energy Saver ● Fractions ● French Sentence ● Furnace Calc ● Gross Pay ● Guess-It ● Hangman ● Hi-Res Clock ● Int'l Finance ● Investment F.V. ● Investment File ● J/20 Recv/Tms ● Laser Control ● Log & Logo ● Marquee ● Math Flash ● Matrix Solver ● Memory Monitor ● Missile Math ● Moon Lander ● Mythology ● Noun & Verb Drill ● NPV & Irr-2 ● Pac-Man ● Person Test ● Poker ● Preschool ● Quad-Eq-Solv ● Railroad ● Rotate 8K ● Rounding ● RS232 ● RSR Disable ● Schulspel ● Sci-Fi Plot Gene ● Simple Scroll ● Sorter ● Speed Reading ● Spelling ● State Capitals ● Std Dev ● Tank Combat ● Tank & Lasers I ● Tank & Lasers P ● Trackmaster ● Triangle Solver ● Tunnel ● TV Test Patterns ● VIC Checkbook ● Weatherman ● Wipeout ● Word Scrambler

VIC-20 COLLECTION #5
Arksnuffel ● Arrows (Er Boxes) ● Autodelete Lines ● Big Letters 2 ● Biorhythm ● Calendar ● Capitals Intro ● Capitals P1 ● Capitals P2 ● Capitals P3 ● Capitals P4 ● Capitals Quiz ● Cash Flow ● Catalog Maker ● Cave Crawlers I ● Cave Crawlers P ● Change Disk Name ● Classics Quiz ● Concentration ● Decisions ● Dice Roller ● Disk Dissam ● Eater ● English/Metric ● Fallout ● Find Triangle ● Four in a Row ● Gas Milage ● Halyl ● Ham Contest Log ● Hexagon ● Hogan's Heroes ● How Many Boxes ● Keybeep ● Killer Robots ● Life Expectancy ● Long Division ● Loops ● Mathoff ● Mazeman 2 ● Metric/English ● Mauxx ● Missing Number ● New Disk ● Notone ● Olympic Theme ● Parts of Speech ● Pinball ● Plays ● Poly Roots ● Polyfit ● Prime # Finder ● Printer Test ● Road Rally ● Robots ● Screen Dump ● Space Trader ● Spades ● Spanish ● Stock Ticker ● Student Grades ● Sub Hunt ● Tank ● Temp Convert ● Typing Drill ● Utility Usage ● Vertical Msg ● VIC Communicator ● VIC Lissajous ● Wall Zap

VIC COLLECTION #6
3D-Maze ● A or An Quiz ● Alarm Quiz ● Alpha Sort Amortize ● Banner ● Big Six ● Bio Printer ● Breakout (J) Budget-Mgr ● Bumblebee ● Buzzword ● Cascades CBuff Peek ● CBuff Save ● Colour Pinball ● Computer Fix Coverage Predict ● Craps ● Crytogram ● Deepspace Density ● Easter Dates ● Electric Cost ● F.I.C.A. Tax Fast Sort ● FFT Calc. ● Firing Tank ● Freq. Coord. Geog Spell Game ● Guardian ● Hi-Res ● Job Jar L Pad Design ● Labrinth ● Letter Reco ● Marston City Rvd. Match the Number ● Math Dice ● Math Fact Drill Math Test ● Math Time ● Maze Maker ● Merry Christmas Millionaire ● Mosaic ● Multiply Tables ● National Parks Nicoma ● PCB Printer ● PI Network Desig ● Quartic Quiz ● R-S-P ● Rebound Hockey ● Revenge Inst. Revenge Prog. ● Rnd. Graphics ● Rolling Sticks ● Rom Aid Shopping List ● Simon ● Slide Voice ● Snoopy Hires Spelling Aid ● Stopwatch ● Sunrise/Sunset ● Sym T Atten Tennis 3 ● Too High-Too Low ● Typing Test ● Vectors Vehicle Cost ● VIC Orbit ● VIC Symphony ● Wumpus Inst. Wumpus Prog. ● Zero Formula

SEE US AT DAYTON BOOTH 386 & 387

CHELSEA SCIENCE SIMULATION PROJECT PROGRAMS, Cassettes or diskettes for **PET/CBM** or **64** with PET emulator; from Conduit, PO Box 388, Iowa City IA 52244 (319/353-5789). BASIC & DOS 1 (2040). Unprotected. 30 day replacement warranty.

General Note on Following Conduit Programs: When we requested 64 or VIC educational programs from this company, they sent us their PET/CBM offerings - all for DOS 1.0 (the old 2040 disk drives), with a note that they would all run on the 64 with the PET emulator. Three of our education reviewers tried these Chelsea Science Simulation Project programs on various machines, from the SuperPET to the PET to the 64 and got very mixed results on which programs would run on which machines. Elizabeth Kaspar could not make any of them run on PETs with 4040 disk drives - perhaps because the manual doesn't tell you how to convert them to DOS 2 (most schools should have converted even old machines to DOS 2 by now). Boyd Wilson also couldn't make them work properly on his SuperPET with 2031 until he removed several lines of strange peeks and pokes. If you want any version of these programs other than PET with DOS 1.0 (2040), be sure to specifically ask for extra help or instructions to convert to your computer and disk drive. Otherwise, none are recommended until corrected or updated, regardless of quality. -ES

COEXIST: Unite on Population Dynamics, by P. Murphy. Environmental biology simulation.

You compare the interaction between 2 species and their environment, and develop mathematical models to describe the observed results. Students should understand how a sigmoid growth curve works and know that if you have 2 boys and 3 apples, each boy can't have 2. It normally takes 1-2 hours to investigate the 7 suggested topics. Also included are 6 student manuals and a teacher's manual (which documents the program enough for you to make alterations). The program saves lots of manual calculations, and presents results in a somewhat readable vertical graph form, although a printout would have been helpful. The texts, though dry, are what make the program useful. Still, I wouldn't spend over 15 minutes on this program. Depending on cost, the program might be worth using in a high school biology class. -JS

ECOLOGICAL MODELING, by Reiners, Glanz and Cornish. Biology tutorial.

Includes teacher's manual and 2 user's manuals. As a computer program, this package is a total loss. It calculates and displays data about small-scale ecologies over time, given various starting conditions and variables. The calculations would be very tedious and far slower by hand. However, only the 2-3 graphs have any eye appeal; the rest is pure dull work. What should have been the saving grace of this package is its 3 printed manuals, but these too are unappealing - besides being typewritten rather than typeset, they are nearly unreadable. Consider this from paragraph 3: "This includes identification of interactions between components, or compartments, and representation of these couplings as transfer functions, or coefficients." No terms were previously defined, and wouldn't have helped understand the full concept, anyway. No age level is indicated. Not recommended. -JS

LINKOVER: Unit on genetic mapping, by P. Murphy. Genetic simulation.

You are offered 10 linked genes, and asked to specify 3. Genetic characteristics of the resulting offspring are then calculated and shown as a bar graph on the screen. Comes with a teacher's manual and 6 student manuals. When used as intended, it will follow 2 hours of class preparation, involve 3 hours at the computer, and 30 minutes of classtime afterwards (not all in one day.) That's a long time for anyone to stare at any single bar graph screen, but the program does save lots of manual calculations, and presents the results in a readable form, although a printout would have been helpful. The single brief program is well documented in the teacher's guide. If cheap enough, it might be worth using in a high school biology class. -JS

MATRIX ALGEBRA, by Thorp, Robson, Steward and Hobbs. Algebra tutorial.

This program was run on a SuperPET with a 2031 disk drive. Each lesson was supposed to load automatically when the user answered "yes" to "Do you want to go on

to the next lesson?" The program has good potential, locks out unacceptable entries and gives good prompts. I especially liked the way matrix multiplication was presented, although examples went a bit fast. The bad news is 1) the introduction had run-together words; 2) section 1 lesson 3 mixed directions from two frames, and misrepresented A.B.; and 3) every time I answered "yes" to go to the next lesson, I got an illegal quantity error. I would hate to pay money for this. -Boyd Wilson

SCATTER: Unit on [Nuclear] Particle Scattering, by John Harris. Physics tutorial.
This computerized version of a 1975 book experiment contains 3 simple experiments that try to interpret Rutherford's particle scattering idea. I question what application you would use it for and whether you couldn't understand the principle intuitively without the program. Also includes teacher's manual and 6 student manuals. -Dave Schroeder

Company Demo Diskettes:

JMH SOFTWARE DEMO DISK, for 64.
Contains 8 demo programs, all reviewed by Custer Whiteside.

ABC'S: Find the missing letter in a progression of 7, and get three separate clues if you miss; if you're right, watch the screen fill with colored stars. Fine idea for preschool and early primary, but after about 25 questions in a row, I had to turn off the computer to stop the program.

ADD CONCEPTS: for preschool through first grade, but uses words to give praise. Two levels (sums up to 5 or 10). Large numbers displayed. Each right answer adds one of five train cars to train. When full, it goes onto a trestle bridge off screen (looks sort of scary to me!) Not bad, but I've seen better.

FACT. TRINOMIAL: Factoring trinomials program for Algebra I. Choosing correct pair of factors gives 4 multiple choices for each of 10 problems. Each wrong answer you give is eliminated until you have to press the only remaining correct answer. Find missing term, or find factors. Good drill.

RACE CAR FACTS: For 2-4 players to handle add, subtract, multiply, divide or mixed problems using digits up to 100. First race car to solve 10 questions correctly gets the checkered flag. Gives correct answers when one player answers incorrectly. Unfortunately, both the problem is viewed only horizontally and the answer must be typed in from left to right. Only good for reinforcing mental calculations, from first through 4th grade perhaps.

ROCKET SPELL: A "cleaned-up" spelling hangman game with 10 word lists. must solve 5 word problems before you can stop. 8 wrong choices before rocket takes off or you are given the answer.

RULER FRACTIONS: Cute man with balloon calculates how far he must walk on a ruler (in halves or fourths) to let his balloon rise directly underneath a hoving spaceship. When correct, a purple beam picks him up and carries him off. One wrong answer lowers the spacecraft, while second and successive wrong answers drop a line and blink the correct numbers to press, but won't go on until you've pressed the right numbers. Must solve 10 problems. Cute for early primary grades. Would have to alter number of problems for younger students.

MICROGRAMS DEMO DISK, for 64.

Overall Evaluation: Micrograms has produced a fine collection of educational programs for the 64. -All reviewed by Custer Whiteside

AMERICAN INVENTORS. History tutorial for high school.

This novel review of famous American inventors would be a challenge to most high school students. A list of inventors are presented in the bottom third of the screen and a fact is shown above them, which the player then tries to match. Correct answers earn the player points, and at the end, a tally compares their score to the highest recorded score. As a past history teacher, I found this program very motivating.

BEGINNING GRAMMAR. Grammar practice for grades 3-6.

In this drill and practice, the student reads 3 sentences and types in the number of the incorrect sentence, while a mouse in a maze attempts to get to a piece of cheese (it was some what difficult to see the faint mouse on my color monitor.) Correct answers move it closer to the cheese; incorrect answers move it in a corner.

DUCKS. Math game for grades K-2.

This fun drill and practice math game could be used with several students at the same time due to the extra large print used in the displays. An adult should initially assist, for a few words are beyond this age child's reading ability. The program begins with a number of ducks appearing on the screen. The child types in the correct number and then a response of "yes or no" comes on the screen. The child has another chance to get the right number. After the correct answer has been given, the ducks fly off the screen one by one so the child can count them again.

MICROMAN. Math game for grades 3-5.

Addition and subtraction skills are reinforced and points are awarded. When the child earns over 500 points, the student can make Micromen lift weights. The weights weigh as much as the points earned. Wrong answers will take away points. A minor problem is that this game does not use the standard method of responding, right to left when computing math problems. The numbers are jumbled when they appear on the screen and then move to the correct position.

PROFESSOR SNEAD. Reading comprehension game for grades 5-8.

This colorful game could be used as drill and practice to improve reading speed and comprehension. The student is asked to select a speed, 1-5 (one being the slowest), and read a passage. The lines of text disappear from the screen at the chosen rate of speed. The student can choose to have the text repeated again, at another speed. Four multiple choice questions are then asked about the passage. Excellent introductory instructions help to make this a very user friendly program.

PUNCTUATION. 2-player grammar game for grades 3-6.

In this instructional game for two players, each player has a set of number keys or special function keys to press to indicate which line of sentences has punctuation errors. Points are earned by correctly identifying the errors first. Players can also lose points if they make a mistake. The player who punches in the correct number key the quickest and the most frequently within the 5-minute time limit is the winner.

SHARING SCIENCE. "3"-player science game for upper elementary.

This instructional game for two players has a goal of attaining 21 points. The third player is the computer. Selection of science topics is rotated between all three players. An excellent way to review a variety of basic science facts.

VOCABULARY CROSSWORD. Vocabulary puzzle for junior high-senior high.

Just as the title says, this is a crossword puzzle which is cross-referenced to a popular reading textbook. Definitions are given; and the student has a choice of

taking a guess, going on to the next word or seeing a list of the words used in the puzzle. The games run until all the words are used.

WARRIOR WORDS. Spelling game for junior high-senior high.

This spelling game requires rapid responses to a variety of screen displays. A city outline is presented on the bottom third of the screen. A large 'cloud' of words moves above, and start to flash just before they fall on the city. The player can protect the city by correctly spelling the flashing words before they hit anything.

WORD ZAPPER. Vocabulary game for upper middle school.

The student can select one of 4 presentation rates for words to be displayed on the screen. The object of the game is to correctly 'ZAP' misspelled words. At the fastest speed, termed 'IMPOSSIBLE', the words were very difficult to read and 'ZAP'. The second activity in the program is an electronic flash card game in which the words flash on briefly and then the player is requested to correctly type it.

Programming CAI

COMMODORE 64 TRAINING TAPE, $40 videocassette (Beta or VHS) for **64**.
Computer introduction from P.F Communications, 2727 N. Grove Industrial Dr., #101, Fresno CA 93727 (209/255-1600). Requires video cassette recorder (specify Beta or VHS format).

This 2 hour video of Jim Butterfield includes 14 sections, separated by title screens and Muzak. The lessons start from ground zero (how to get the computer out of the box), but progress rapidly and in an ecclectic manner, even touching on machine-language, CP/M and other advanced topics. As usual, Jim never seems to hurry, but manages to cram an amazing amount of accurate information into a few simple words; he suggests, for example, that when you load a program from tape, the computer turns off the screen "in order to watch the cassette more carefully." Though its brevity doesn't allow a full description of BASIC, nor a fair sampling of the wealth of products hinted at (**HES Writer** received nearly equal billing with **Paper Clip**), watching this tape is an excellent way for users at all levels to learn. For beginners and instructors, it is almost essential. Every user group should see it. The only suggestion I'd make is that it needs a printed manual of Jim's words, and annotations for further reference. Highly recommended. -JS

COMMODORE 64 TUTORIAL, diskette for **64**.
BASIC tutorial from Cyberia, 2330 Lincoln Way, Ames IA 50010.

When you first load it, you get a really nice graphic display of a two-choice menu, with music. No matter which choice you make, you're greeted by MORE MUSIC! The tutorial covers the 64 keyboard, and very elementary BASIC instruction. The keyboard display occasionally flashes at you, and the text waits for you to tell it you're finished before continuing. The same applies to the BASIC instructions, but they demonstrate the instruction by typing it on the upper half of the screen (with a little sound routine that emulates an electronic "tap" of the keyboard). It's very simplistic, but was designed for the person who needs that kind of help. -Joe Allain

INSIDE BASIC: KENTUCKY DERBY, $25 diskette for **64**.
Horse race game programming demo, from Sim Computer Products, 1100 E. Hector St, Whitemarsh PA 19428. Dongle in cassette port 1. No stated warranty.

Updated equivalent of the public domain horse race game that's been around forever, with better than usual graphics, but little game or educational value. The educational gimmick here is that the program can be listed, studied and changed, despite being dongled, and owners are reportedly able to get full program documentation by returning a survey card to the company. If it's no better than the info packed with the game, it will be entirely unsuitable for school use - flimsy loose sheets everywhere. As for using the listing as a programming example, it uses the packed (multiple statement) lines I forbid in my classroom, and has few if any explanatory REMark statements to show students what's going on. I can't imagine paying $25 for this game. Not recommended. -JS

Adventure Games

AZTEC ADVENTURE, by Paul Stephenson. $40 diskette for **64**.
HI-RES adventure with real-time animation from Datamost, 8943 Fullbright Av., Chatsworth CA 91311-2750. Requires 1541. DOS-protected, no backup available. No stated warranty.

REVIEW #1: You have a mobile man walking, crawling, jumping, running, and fighting in 8 levels of a pyramid in search of the Golden Idol, 8 rooms and up to 3 levels in each. Playing time can be many hours. Very good game. A good mixture of action and thought. -JO

REVIEW #2: This graphic adventure is a definite cut above others I've seen. Its play is much like that of an arcade game, except that no joystick is needed, and quick reflexes aren't enough to see you through. You will have to overcome both traps and predators to retrieve a treasure you seek. Although violence is part of the game, as in real life, wanton destruction earns no extra points.

Each of the many commands is a single keystroke; if you forget them, the pause option shows a full list (and also erases the screen, to keep you from cheating.) It has 8 levels, each with 8 rooms, and each room up to 3 stories tall; with each new game the whole temple is shuffled into one of 32 random arrangements. When you die (often), you can restart the same game, so map-making may still be useful. For those blind alleys, you have a door-maker (dynamite), and you have a fairly thick skull; falling dazes you only briefly.

After a couple of hours use, Jamie and I consider ourselves barely started in this game. He, at 8, considers it too hard for him to do alone. I, at 35, could say the same! Meanwhile, the graphics are good, the play action rapid for an adventure, and those who don't abandon it in frustration after 5 minutes will likely find **Aztec** good for many hours of adventuring. Recommended for skilled adventurers. -JS

THE BLADE OF BLACKPOOL, by Tim Wilson. $35 diskette for **64**.
Keyboard graphic adventure from Sirius, 10364 Rockingham Dr., Sacramento CA 95827. Protected. 30 day free replacement warranty.

Appears to be a converted Apple game, with its blessings and limitations. Object is to recover a magic sword. Each location has a medium resolution picture and description; text is all upper-case and hard to read. You chat as in an Infocom game, though not with as rich a vocabulary or sentence structure. Some help is offered. Scores improve if the game is completed quickly. You can save your game on a pre-formatted data disk, and cancel a line with the <C=> key. I prefer Infocom storylines and Epyx graphics. -JS

CARGO RUN, $50 diskette for **64**.
Graphic adventure from Progressive Peripherals & Software (PP&S), 6340 W. Mississippi Av., Lakewood CO 80226.

An adventure game, with hi-res graphics, set in 3 different locales. To rid the universe of inter-galactic no-goods menacing your galaxy, you must first hijack one of their spaceships, battle your way through the craft to liberate advanced weaponry plans, and escape. All combat is done in real-time. Your next mission, to defend your home planet, is a straight arcade game with dazzling graphics. The last section finds you in a souped up starship, taking the battle to the evil robot's home worlds. **Cargo Run** might take as long as 50 hours to complete. Games in progress may be saved to disk. Command vocabulary is most extensive. Has real-time laser battles. Manual presents scenario and hints. An excellent introduction for an adventure novice. -Colin Thompson (SFVCUG Users Port)

CASTLE WOLFENSTEIN, $30 diskette for **64**.
Adventure from Muse, 347 Charles St., Baltimore MD 21201. Unprotected.

A very popular Apple game, and likely to be a bestseller on the 64. Try to escape from a large building full of guards. You start out with a pistol, and gain other needed items, such as a uniform, keys and weapons, by either opening chests found in each room or by killing guards. Your goal is to get out, and also find the secret battle plans.

Morally, the game is a disaster. You cannot get out without killing human guards. But as an adventure, it's quite enjoyable - more complex than **Shamus** on the VIC, and almost as fast, except when changing rooms. There is little use of sound, except for brief snippets of real, though gutteral, speech. Includes the usual playing aids, such as keyboard and joystick control, standard or random room arrangements, and resume. Recommended for adults who enjoy killing games. -JS

CAVE OF ERODOM by M. A. Skelton. $10 diskette for **64**.
Tutorial adventure from Mindy Skelton, Box 76, Mt. Holly Springs PA 17065.

A tutorial adventure game for the budding explorer, with such standard features as finding seemingly worthless objects that have a value later. There are a few problems, however. Many objects an adventurer should take or read are so illegible on the screen they cannot be taken or read. Only after I fell into a bottomless pit could I read the DANGER sign. Worse, the program crashes every time I get to the snake pit. If these bugs could be fixed, **Cave of Erodom** could be a good adventure game. -Todd Hill

DRAGONRIDERS OF PERN, $35 diskette for **64**.
Graphic adventure from Epyx, 1043 Kiel Ct., Sunnyvale CA 94089. Joystick optional.

You won't understand what's going on unless you read Anne McCaffrey's book first. Once you know the characters, this is a great program and lots of fun to play. Kids will love to make the dragons burn the falling threads, while it takes an adult to deal with the computer characters. -Mark Hlavach

ENCHANTER, $40 diskette for **64**.
Magic adventure from Infocom, 55 Wheeler St., Cambridge MA 02138.

Against the better judgment of most of the circle of enchanters, you must stop the evil warlock before he destroys everything. Now all you have to do is memorize the magic spells you find ... and figure out when to use them without hurting yourself or stepping in anything. If you make the wrong move, you will unleash a most evil thing. If you fulfill your mission, you will not only be allowed to join the circle, but will win the right to risk your soul again! A very intriguing game, the first in a new series. -Art Kimball

GOTHMOG'S LAIR by S. A. Moore. $40 diskette for **64**.
Text adventure from Progressive Peripherals & Software (PP & S), 6340 W. Mississippi Av., Lakewood CO 80226. No joystick. DOS protected.

This adventure game includes several monsters, a haunted house, an underground mysterious world and the usual forrests and roads. Besides being fairly complex, I like the one element missing in other adventure games: sound. Although the sounds did not tax the capabilities of my 64, I did enjoy them. At times I grew impatient at the slow response time. The monsters would steal treasures I didn't possess, nor were they known. I would prefer a simple "OK" to a beep to tell me I have taken an object. Overall, I enjoyed this adventure and recommend it to all explorers. -Todd Hill

INFIDEL, $40 diskette for **64**.
Adventure from Infocom, 55 Wheeler St., Cambridge MA 02138

If you hadn't been so greedy, you might have brought your partner on this expedition. You have also made your native help mad at you, and now you're all alone. If you manage to find the pyramid, you must still get into it, and then decipher hieroglyphics to figure out where the treasure is. A little easier than most Infocom games, but still up to their usual high standards. Almost any command, no matter how complex, is understood. The ending is disappointing, but it is still a good game. -Art Kimball

Update (see #15): PLANETFALL, $40 diskette for **64.**
Science fiction adventure from Infocom, 55 Wheeler St., Cambridge MA 02138

REVIEW #1: Your spaceship is blown up, you're stranded on a completely strange planet, you're coming down with some disease, and must discover and fix what went wrong. You can feel living, breathing people around, but can't find them. The only intelligent(?) creature you've found is Floyd - an all-purpose robot, who prefers to play 'Hide & Seek' than answer questions. What you need is a key to this mystery ... and to that stupid locked closet. Be sure to 'save' your position frequently; there are lots of holes to fall in, not to mention the grues. -Art Kimball

REVIEW #2: As the lowliest ensign aboard a stellar patrol ship, your goal is to save a doomed planet. **Planetfall** accepts multi-word commands, and is Infocom's first full-fledged comedy. -Jerry Carter (CCC of Toledo)

Update (see #16): STARCROSS, by Infocom. $40 diskette for **64.**
Science fiction adventure from Commodore, 1200 Wilson Dr., West Chester PA 19380.

After wandering through space alone for months with no one to talk to except your somewhat surly computer, you finally find an asteroid(?) which might make you a millionaire! But much to your dismay, you seem to be alone on a dying world. You must begin repairing things immediately - and don't even speak the language! An ancient tribal chieftain, a bored and lonely spider, and a very busy maintenance mouse might help if.... Hours and hours of fun and frustration...another winner from Infocom. -Art Kimball

Update (see #16): SUSPENDED, by Infocom. $30-35 diskette for **64.**
Science fiction adventure from Commodore, 1200 Wilson Dr., West Chester PA 19380.

UPDATE #1: You have to play this game within a certain time span, or you die when some guys from the surface come down and disconnect you! It all adds up to a thrilling adventure that's unlike other "examine-at-your-leisure" text games. -Joe Allain

UPDATE #2: You must figure out where your robots are...get them headed in the right direction...and decipher their sometimes cryptic reports on what is wrong. A slightly different concept from Infocom. This time you can't move...you must order your robots to do all the work....not as easy as it sounds. Another winner from Infocom. -Art Kimball

SWAN BOAT, by M. A. Skelton. $10 diskette for **64.**
Adventure from Mindy Skelton, Box 76, Mt. Holly Springs PA 17065.

Allows the stronghearted to find the elusive **Swan Boat** that will take the adventurer to an isle over the sea where peace and happiness abound. **Swan Boat** is more complex and enjoyable than the other Skelton adventures. I didn't find the inventory peculiarities that surfaced in other Skelton adventures and found only a limited number of illegible words caused by poor contrast. Although not as extravagant as other adventure games I have played, still provides many hours of entertainment. -Todd Hill

Update (see #14,16): TELENGARD, $28 diskette/$23 cassette for **64.**
Adventure from Avalon Hill, 4517 Harford Rd., Baltimore MD 21214.

You must remember a great number of factors and their commands such as spells, qualities of monsters, and qualities of your character. Perhaps the most intimidating feature of this game is that it is played in real-time. If you're a beginner, get ready to be 'killed' a lot. A few of the problems are: an instruction manual (24 pp) that needs to be updated for the 64; the game's inability to save more than one character unless you put a 'sv' in front of the character's name; and the 'demo' mode described in the manual doesn't work. -Rich Westerman (The Hacker Rag)

TREK TROUBLE, by M. A. Skelton. $10 diskette for **64.**
Adventure from Mindy Skelton, P.O Box 76, Mt. Holly Springs PA 17065.

Based on the Star Trek series. Having been inadvertently beamed aboard an alien spacecraft the object is to find the communications room and call for help. Along the way you find untold treasures, robots, flying wargs (?) and computer simulations. Needs no mapping, because the game is a straight maze (you can move only forward or backward). While the game played well at times, taking inventory was a problem. Your objects were

only listed for about 3 seconds, some were illegible due to poor contrast (e.g. yellow letters on a white background), and some were incorrect. It sometimes included objects taken but later left, items never taken or initially given. -Todd Hill

ULTIMA II: **Revenge of the Enchantress**, by Lord British. $60 diskettes (2) and map for **64**. Dungeons and dragons-like fantasy adventure from Sierra On-Line, Sierra On-Line Building, Coarsegold CA 93614 (209/683-6858).

This two disk graphic adventure has been quite a hit on the Apple][system. Its author, "Lord British," has a devoted following of Dungeons & Dragons adventurers. **Ultima II** is a sequel to an earlier adventure not offered on the 64. In this version, you are a wanderer assigned to defeat a truly horrible power. As usual in D & D adventures, you start out weak and empty handed, and have to find weapons, armour and supplies as you travel, in addition to bartering and fighting with the natives, and solving problems along the way. The game covers all 9 planets of Sol, and 5 distinct time periods.

You have a choice of being one of several types of beings, and may divide up the points allotted your character among various attributes such as strength and wisdom. Then, with much swapping of diskettes, play begins. There are many commands of single keystrokes to learn, not all obvious (e.g., north is "@"). Fortunately, there is a quick reference card, with very tiny print, and a colorful cloth handkerchief map of the world to assist you during your travels.

After an hour each of play, Jamie got farther than I did, but we both got killed. In the process we learned you can only have one saved character per diskette, and should save the game often. The graphics were interesting and helpful, but not necessarily more fun than a good text-only adventure such as Infocom's. In summary, **Ultima II** is an excellent addition to the Commodore 64's library of capabilities, but not for the impatient. Recommended for serious adventurers. -JS

Arcade Games:

ALLEY-OOPS!, by Leonard Bertoni. $30 diskette for **64**.
Bowling-type game from Artworx, 150 N. Main St., Fairport NY 14450. Requires joystick. DOS-protected. 90 day free replacement warranty.

A bowler's nightmare...Space Invaders with strikes and spares. Try to score, not by throwing the ball, but by standing under strike and spare marks as they float down the screen. The ball is for shooting attacking racks of pins. Be sure to avoid dropping beer bottles and gum wads.

That's the good news. The bad news is that the joystick control is very sloppy; it's far too easy to go over a lane past the one wanted, and equally easy to be killed by a bottle or set of pins that are visually already off the screen. If the game had a legitimate point, I could put up with that, but it doesn't. You want bowling? Get a bowling simulation. You want Space Invaders? We have that, too. Together? A novelty item...no better than a pet rock, and will sustain your interest about the same length of time. Not recommended. -JS

ATTACK OF THE MUTANT CAMELS, by Jeff Minter. $25 diskette for **64**.
Shootout from Llamasoft (Hesware, 71 Park Lane, Brisbane CA 90066. 1-2 players.

REVIEW #1: You are in a rather small spaceship trying to kill a 6 camels trying to enter the earth sector. To weaken and finally destroy their shield, you have to fire at it repeatedly while the camel changes color 5 times, from yellow down to white, when you can finally destroy it. The camels move rather slowly at the beginning, but as you get higher, their lasers get very fast and dangerous. Your fast-moving spaceship is sometimes difficult to control. The rapid-fire is useful and the graphics are very good. At the top of the screen, a grid shows your location in relation to the camels. The game itself is rather boring, long, and at times extremely hard. -Janet Bidgood (DISKUSS)

REVIEW #2: AMC is probably one of the best arcade-type games for the 64. I quickly blasted forward in my small ship, and a large (90 foot) camel came into view on my scanner. After "repeated hits," the camel blinked, stretched its neck and disappeared. After

"de-stabilizing" 6 laser spitting beasties, I reached the Trans-Sector Hyperwarp. I avoided rockets, and promptly smashed up on the next level. The sound is great, the documentation is terrific, and the graphics are excellent. But this game is definitely not A.S.P.C.A. approved! -Andrew Cornwall Jr. (DISKUSS)

REVIEW #3: The player is given 4 ships to shoot down the mutant camel. Lots of shooting sounds with 31 levels of difficulty; scores are kept at the top of the screen. Graphics are quite well done in Hi Res. A very fast game and well worth the price. On a scale of 1 to 10 - I would rate it an 8. -Robbie Bowlby (DISKUSS)

AXIS ASSASSIN, by John Field. $35 diskette for **64**.
Alien shootout from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. Requires 1541 and joystick. DOS-protected. 90 day media warranty.

No, this isn't a WW II German adventure, despite the black-gloved hand fondling a joystick on the cover. It's a take off on the popular arcade game **Tempest**, in which lots of weird bugs crawl toward you from a pit (seen from a side view), while you run around the edge of the pit shooting at them. It's a fun game, if only for its blatant suspension of the laws of physics as you glide effortlessly around corners too sharp for any sports car.

Within the limits above, the game is very flexible, with a large supply of alternative board shapes from which to select, and lots of different bugs to zap. After you tire of the boards, there is reportedly a second combat mode in which you deal with a bigger bug, but the method to reach that mode (hitting SPACE when leaving a board) hasn't worked for us yet. Perhaps that is a reflection on us - the game claims to be for expert arcadians only. **Axis Assassin** has all the expected amenities: pause, demo mode, optional sound, and restart. I like everything about it but the name. It's the only **Tempest** I've seen on the 64, and it's well done. Recommended. -JS

BANDITS, $40 diskette for **64**.
Alien shootout from Sirius, 10364 Rockingham Dr., Sacramento CA 95827.

If you or one of your young ones enjoy **Space Invaders** and **Galaxian** type games, you'll want this one. Wave after wave of squadrons of bad guys swoop down to steal your fruits, which you shoot with your single gun, with many different screens to contend. Once you've begun, the action never ceases. Excellent action, sound, and graphics. -JO

BEACH-HEAD, by Bruce Carver. $30 diskette/cassette for **64**.
Sea war simulation from Access Software, 925 E. 900 South, Salt Lake City UT 84105. For 1 or 2 players. Requires joystick. Compiled and machine-language. DOS protected. No stated warranty.

REVIEW #1: This World War II action game is undoubtedly one of the best arcade-type programs available for the Commodore 64. Five screens of play, 4 difficulty levels to choose from (or watch the computer play itself), pause key. Excellent graphics and sound. On a scale of 1 to 10, a definite 10. Endless hours of fun and challenge. Highly recommended. -Sue O'Dwyer

REVIEW #2: A real winner from Access, that simulates a Pacific sea invasion! Imagine graphics as good as **Neutral Zone**, but with the variety and sustained interest of **Jupiter Jumpman**. In a hi-res overview of an island lagoon, you choose whether to invade via the front door or the hidden back door. In the latter, you'll catch the enemy napping and face less opposition, but must first maneuver your 10-ship fleet through mines and randomly-fired torpedoes. Once in the lagoon, attack the enemy fleet quickly. Then the scene shifts to the deck of your ship, under attack by enemy aircraft. Next, you must sink the enemy fleet in an artillery duel; aim for quick results, or expect to lose ships. In the next round, you must run a gamut of obstacles and enemy fire on a beach. Any that succeed will face the enemy fort, whose gun positions must be destroyed before they can fire back. After each tank gets through, the opposing forces are a bit more alert, and the challenge greater.

The game includes the usual mechanical aids: a demo mode, a way to start from any board, a pause feature, an optional record of the top 10 scores, various skill levels, and even a way to alter sound and colors. My only complaint is that practice scores can be recorded as real ones, and there's no obvious score advantage from playing at a higher than

beginner level. Apart from that, the game is about perfect. We have yet to win a game. Meanwhile, we are thoroughly enjoying the highly varied game play, stunning graphics and realistic (though unmusical) sounds. Highly recommended to all who like war games. -JS

REVIEW #3: Good luck!! We never beat it, even when just trying to get through without trying for high scores. Excellent sound and graphics (they even have the doppler effect). Recommended. -Rick Roberson

BLUE MAX, $35 diskette for **64**.
Air war simulation from Synapse, 5221 Central Av., Richmond CA 94804. Requires joystick. DOS protected. Media warranty.

Three-dimensional scrolling landscape flight simulator. In it, you fly a WW I bi-plane. The goal is to destroy 3 assigned targets in "enemy" territory, along with anything else handy, including buildings, bridges, boats, planes, and cars. Targets can be attacked from high altitude with bombs, or from low altitude by strafing. Hotshots can try to fly under bridges. Enemy planes and ground-based artillery shoot back, but are a smnall threat. If you hit your 3 prime targets, you can attack other targets in an enemy city.

Has choice of pilot or arcade-game controls for "up" and "down." Readouts show altitute, but practical guidance comes from the plane's shadow below. Both JO and our Jamie consider it their favorite "game of the week." Though a war game, it is state of the art and quite an achievement. Recommended. -JS

BUCK ROGERS: PLANET OF ZOOM, $40 cartridge for **64**.
Alien shootout from SEGA, 5555 Melrose Av., Los Angeles CA 90038. Joystick optional. 120 day replacement warranty.

After all the complaints about its printer and word processor, this game may be the best thing about Coleco's "Adam" computer. But no need to buy trouble to play **Zoom**; now it's available for the 64, and for a lot less than a second computer. **Planet of Zoom** is good, as space combat games go. It has 4 combinations of opponents and 5 skill levels (Sega calls it 4 screens, but the first 3 have the same background.) In it you steer between sets of poles, as in a ski slalom race, while shooting anything that moves, and avoiding return fire. If you survive, you attempt to shoot down a large ship. At low speed your fuel won't last until the Mother ship arrives. The game is reminiscent of **Gorf** on the VIC, but I prefer **Zoom**, if only for its somewhat more detailed graphics. **Zoom** also features fast, fairly smooth action, and a bit of good introductory music. It also has one of the better manuals I've seen for an arcade game. On the other hand, it lacks a demo mode, forces you to wait too long between games, and isn't as varied as many of the best recent games. I doubt if I'd pay full price for it, but would enjoy an occasional hour or so of play at a friend's. -JS

COHEN'S TOWERS, by Frank Cohen. $30 diskette for **64**.
Ladder game from Datamost. Requires 1541 and joystick. DOS-protected, no backup available. Cassette version also offered. No stated warranty.

A 3-level game for expert arcadians. The plot is simple enough; just wander through 3 buildings, picking up and dropping off packages like any other mail clerk. However, you are so continuously hampered by a murderous little dog and falling flower pots that neither of the testers ever got within a dozen packages of even the second building. Jamie and I felt the game inherently unfair, in that much of the time you are forced to remember to get off elevators at certain levels for no other reason than that a flower pot will zap you later if you don't. Officially, falling flower pots give enough audible warning to hop off the elevator when they approach - in practice, you'll often be stuck between sealed walls with nowhere to jump.

Despite the cute graphics, pleasant music and relaxing pace of the game, both of us were sufficiently upset by the apparent unfairness of the timing of the pots, and the incongruity of a friendly little dog being a killer, that we probably won't play this one much. For those who do (and this strikes us as a game that experts might like very much), there are also keys to be collected, a mail thief to foil, and a secretary to kiss, plus extra points for reaching certain locations, not to mention the excellent hi-res picture and starting music. -JS

CONGO BONGO, $40 cartridge for **64** or **VIC**.
Arcade game from SEGA, 5555 Melrose Av., Los Angeles CA 90038.

Obviously similar to the arcade version by the same people. Object of the game is to maneuver your hunter past cliffs, monkeys, waterfalls, rivers, turtles and pesty gorillas. Good play, but the graphics leave a lot to be desired. It's also over priced. -JO

COSMIC TUNNELS, by Tim Ferris. $35 diskette for **64**.
Shoot-em-up from Datamost, 8943 Fullbright Av., Chatsworth CA 91311-2750 (213/709-1202). Requires 1541 and joystick. DOS-protected, no backup available. No stated warranty.

Episode #4 in Capt. Sticky's adventures. In this space chase and shoot-em-up game you are to cleanse the tunnels to 4 asteroids of mines and hostile missile launchers, and retrieve several energy bars. There are 4 screens, with variations, and the usual weird opponents, i.e., space turkeys and electric lizards. Apart from being killed, the prime problem is limited energy, which is drained by most failures on your part. Aiding you are teleport spots, which make up for your relative slowness compared to your opponents.

After a slow start, Jamie thoroughly approves this game, and enjoys it often. The action is fast and varied, and the colors vibrant, even though neither the graphic detail or sound is particularly memorable, except in the title picture, which is an excellent hi-res cartoon. The only time we've found to pause is right after landing on an asteroid. Choosing which asteroid to visit by flying toward one on the hello screen is a nice touch, like the menus in more serious programs. Skilled arcadians should give this one a try. -JS

Update (see #16): **CROSSFIRE 64**, by Jay Sullivan. $30 cartridge for **VIC**; diskette or cassette for **64**. Alien-shootout from Sierra On-Line, Sierra On-Line Building, Coarsegold CA 93614. Keyboard or joystick. Pause option. Protected.

Music is fast-paced but interesting. 64 graphics are ordinary, but better than the VIC version. When baddies shoot, you must duck into alleys, and hope there's no...crossfire. Occasionally, you collect a prize or a fuel dump that appears. Nice game. -JS

DIGDUG, by Namco. $45 cartridge for **64**. VIC version also available.
Digging arcade from Atarisoft, Box 61657, Sunnyvale CA 94086. Requires joystick. 90 day replacement warranty.

It's a good thing **Dig Dug** is a famous arcade game. Otherwise, I'd have had an awful time figuring out how to play. For instance, F5 changes difficulty. But without play testing, is carrot level easier or harder than mushroom level? The game has no printed instructions, apart from a phrase on the box cover suggesting "**Dig Dug** digs fruits, vegetables and tunnels." As for the baddies, the cover suggests "blasting Pookas, and dropping rocks on fire-breathing Fygars." (Pressing FIRE does the former, and digging under a rock on the screen may do the latter, depending on timing.) Somehow, **Dig Dug** seems a bit dated to me--Pac Man without a preset maze. The colors are bright, and the sounds pleasant, but neither seems state of the art any more. Worse, joystick control was difficult, with the character frequently hanging up at the worst possible times. For $45, I expected much more. Not recommended. -JS

DINO EGGS, $35 diskette for **64**.
Arcade from Micro Fun.

A very imaginative arcade action game with 9 progressive levels of difficulty. Time warps take you back to the dinosaur age to rescue them from a 21st century measles attack. You must dig up dino eggs, avoid snakes and spiders and ten-ton Moms, and carry them back to the right time zone. Great game. -JO

JUICE, $35 diskette/$40 cartridge for **VIC** and **64**.
Q*bert-like arcade from Tronix, 8295 S. La Cienega Blvd., Inglewood CA 90301. DOS-protected. Machine language. No stated warranty.

REVIEW #1: This is a game to stick with. Machine language speed and smoothness makes this enjoyable, but the game's design is the real star. First, the game grids are

diagonally drawn on the screen. This makes for some mental adapting when using the joystick, since only the up, down, left, & right commands will be read (not the diagonal functions). The 3-D sprite graphics are really impressive, too. Your hero, Edison, must hop on each square of the grid in order to advance to the next screen, while avoiding gnomes bouncing their way to the other side of the grid. When Killerwatt appears, Edison must escape from him. This isn't easy on early screens, but on advanced levels, when you must hop on squares in the proper order, Killerwatt can become really aggravating! Has some of the best sound effects for any computer! Recommended. -Rich Westerman

REVIEW #2: Another Q*bert takeoff, with a hop-scotch slant. Somewhat better than **Mr. Cool**, and worse than **Over the Rainbow** (see separate reviews). Has 4 boards and user-selectable opponents. Briefly interesting, but not worth the retail price. Not recommended. -JS

KID GRID, $35 diskette for **64**.
Maze chase from Tronix, 8295 S. La Cienega Blvd., Inglewood CA 90301. DOS protected. Machine language.

I'm not too turned on by **Kid Grid**. The game's format is the much-used," complete the grid while avoiding the chasers." The animation and game construction is impressive. An opening menu lists the top ten scorers and allows you to choose skill levels. If you like fast-action arcade games, you'll probably love this, but not if you like more strategy. Recommended for PAC MAN fans. -Rich Westerman

KING'S RANSOM, $17 cassette for unexpanded **VIC**.
Hopping game from Nufekop, Box 156, Shady Cove OR 97539. Joystick optional. Unprotected. No stated warranty.

You are on a system of moving sidewalks with occasional potholes. Your task is to navigate them, much as one would the logs in **Frogger**, picking up gold and avoiding everything else. If you slip, you fall, possibly all the way into the Biblical lake of fire. The colors are bright, the flames detailed, and the sounds plentiful, if not memorable. As for the play, it is difficult enough to remain challenging, though not so hectic as to be upsetting. A regular player would score much higher than we did. Overall, a fine achievement within the limits of the unexpanded VICs. -JS

MATRIX, by Jeff Minter. $25 for **64**
Shoot-em-up "centipede" from Llamasoft (Hesware, 71 Park Lane, Brisbane CA 90066).

REVIEW #1: Very well documented, and like the arcade game **Centipede**, but includes "X" and "Y-Zappers," a "Snitch" (traitor), "Deflectors," and "Camels" But the game is accurately defined as "another space shoot-em-up game, with more dangers." I was displeased with it. -Andrew Cornwall Jr. (DISKUSS)

REVIEW #2: You are a small green spaceship shooting at a caterpillar, which splits up into pieces as you kill it. You can move anywhere, but be careful of vertical death rays. The higher you get, the more caterpillars you must kill. Graphics and sound are good, though sometimes you lose track of your man. A good game. -Janet Bidgood (DISKUSS)

REVIEW #3: A modified **Gridrunner**, with 20 levels and a ship shooting at you from the perimeter. Can be a very difficult game with many different zones; the first 6 are selectable. Scoring and sound are good. The action is very fast. Definitely for people with fast reflexes. -Robbie Bowlby (DISKUSS)

MINER 2049'er, by International Computer Group. $40 cartridge for **64**.
Ladder game from Reston Software, 11480 Sunset Hills Rd., Reston VA 22090 (800/336-0338). Joystick required.

Typical ladder game with 10 screen levels. You don't pick up boxes; instead you pick up mining implements like shovels and smash creatures when they're smiling at you until you've explored all walkways. I've never seen anyone reach the fifth level. -Mark Hlavach

MR. COOL, $30 diskette for **64**.
"Q*bert"-type arcade from Sierra On-Line, Sierra On-Line Building, Coarsegold CA 93614. DOS protected.

In a word, **Mr. Cool** isn't. It is a pathetic takeoff on **Q*bert**. In **Mr. Cool**, an ice cube has to hop from one line to another down a pyramid pattern on the screen, while dodging fireball sprites crossing from side to side. If you succeed, the next board adds bouncing blocks that also get in your way. The only interesting moment in the game is when the ice cube melts as you lose. Not recommended. -JS

MR. ROBOT AND HIS ROBOT FACTORY, by Ron Rosen. $35 diskette for **64**.
"Erector-set" arcade from Datamost, 20660 Fullbright Av., Chatsworth CA 91311-2750 (213/709-1202). Requires 1541 and joystick. DOS-protected, no backup available. No stated warranty.

This is one of the famed new "erector set" arcade games--after you tire of playing the author's game, you can build your own, using the same game elements, but arranging them according to your own preferences. This is a most important feature in the best recent games, and has made **Robot Factory** our favorite Datamost game. This programmable feature will quickly give users a strong appreciation for the work that goes into designing a good game board, and more importantly, act as a bridge into learning about logic and programming. With proper supervision, **Robot Factory** could even be useful in a class (by teaching students to create their own simulations.)

The game itself is a 22 board, 5 level chase game based very loosely on Pacman. Up to four bonfires chase our hero around treadmills, ladders, trampolines and so on as he collects dots. As expected, the occasional power pellet turns the tables and briefly lets him quench the flames. The standard boards are very well designed, and make for very enjoyable play. However, the real fun is in trying to better them, and design up to 26 personalized boards.

To design a board is a simple matter of maneuvering your character to a desired object via joystick, and picking it up with the FIRE button. Then it is placed as desired, and dropped or stretched into position with another touch of the FIRE button. Completed boards may be saved, erased, tested or edited.

It's hard to say enough good about ROBOT FACTORY. It is a vision into the future of arcade games, and certainly among the best games I've seen. Very highly recommended. -JS

NECROMANCER, diskette for **64**.
Arcade adventure from Synapse, 5221 Central Av., Richmond CA 94804. DOS-protected.

This newly arrived review program seems interesting, but will take a while to figure out. More later.-JS

OIL WELL, $30 diskette for **64**.
Arcade from Sierra On-Line, Sierra On-Line Building, Coarsegold CA 93614.

You must gather all the underground crude oil pellets with your fast drilling machine. Screens are made up of tunnels scattered with oil pellets. After avoiding the obstacles, you proceed to more difficult screens. After MANY hours of playing, I've only made it to the third screen. Good game! Death to the oozies! -JO

O'RILEY'S MINE, by Mark Riley. $25 diskette or cassette for **64**
Digging maze game from Datasoft, Inc., 9421 Winnetka Av.. Chatsworth CA 91311. Requires joystick.

In this maze, you have to pick up precious metals while creepy crawlies chase after you. You can block them by using dynamite, but rising water will eventually wash the blockage away. Water puts a time limit on things. The best strategy is to start digging from the bottom up to keep above the rising water. Each level gets progessively harder; I've been as high as level 6 without much practice. -Mark Hlavach

OVER THE RAINBOW, diskette for **64**.
"Q*bert"-type arcade from City Software, 735 W. Wisconsin Av., Milwaukee WI 53233.

You are a painter on a pile of white blocks. Your job is to paint them all, by hopping from one to another. Watch out for the two missing from the middle, and don't accidentally hop over the edge! Adding to your woes are large red falling gumdrops, a rabbit that erases your work behind you, and a witch and other meanies that chase you. Stop the rabbit by jumping on him, and avoid the witch by jumping on a cloud at the edge of the pile of blocks. (It will then rain on her.) Earn extra points by catching the small blue raindrops that sometimes bounce down from above. After completing the first pyramid, you go on to another smaller one, and then two others.

There is one great weakness - it doesn't read joysticks as accurately as most games. This means you occasionally end up going one place when you intended another. In turn, this means staying alive is much harder than you would expect. Apart from that, the game is excellent in every way. Recommended. -JS

PINBALL CONSTRUCTION SET by Bill Budge. $40 diskette for **64**.
Pinball simulation from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. 90 day media warranty.

REVIEW #1: Without a doubt, this is Electronic Art's best-known product, and deservedly so. **Pinball Construction Set** was the first well-known game to allow the user to "think God's thoughts after Him." No more cursing at the way the author designed the game to work. Think you can do better? Go ahead and try, it's easy. Just move your joystick to the part you want, and press FIRE to carry it wherever you like. Not enough flippers for your taste? Make some more. Not enough points when you hit the big bumper? Add a bunch. All done? Save a copy--a real copy that you can give all your friends, legally. They won't have to buy Pinball Construction Set to play either, but they may want to, because they'll probably think they can improve on your game...

Programmability makes all the difference in **PCS**. The World probably doesn't need another good pinball game for the 64; we have **Night Mission Pinball** and **David's Midnight Magic** already. But it does need lots more ways to teach people about logic and programming in a way that's fun. **PCS** is all of that, as well as a bridge to art. Like the best graphics programs, it has sketch and zoom modes for drawing in full color, allowing you to design exactly the game desired. That's an awful lot for one game, and even more for one as easy to use as Apple's new Mac computer. Highly recommended. -JS

REVIEW #2: Apple co-inventor Steven Jobs called it "the greatest program ever written for an 8-bit machine." You start with an empty playing field and a "tool kit" containing pinball parts -- bumpers, targets, flippers, etc. You move a small hand around the screen with a joystick (or trackball) to pick up and move parts anywhere on the playing field. A hammer and scissors move or modify walls and other playfield shapes, and a paint brush colors them. Use the magnifying glass for detailed work, or a screwdriver and pliers to hook up targets for scoring, sound effects, and bonuses. Then test your game until it plays the way you want it to. You can even make a game version that can be played without the **PCS** diskette! It's harder than you might think. -Bill Holt (WIPUG Newsletter)

Update (see #15): **RIVER CHASE**, by Tom McConnell. $25 diskette for **64**.
Steering game from Cyberia, 2330 Lincoln Way, Ames IA 50010. Protected. 2 sheet typed manual. Joystick required.

6 levels. Pause option. You only get 1 man and must use mines to trap the enemy, but he'll avoid them if possible. You can move up, down, left or right, but avoid traffic and natural obstacles. Slower than **River Rescue**, but still fun. When the very fine classical music stops, prepare to dock with a mother ship for fuel and mines, by passing under its pontoons. If you like steering games, you might like this, especially if speed isn't crucial. -Bill McDannell

ROUND ABOUT, by Douglass Ansell. $30 diskette or cassette for **64.**
Alien shootout from Datamost. Requires 1541. DOS-protected, no backup available. Joystick optional. No stated warranty.

A.E. for Valley Girls! Though it lacks the detailed graphics of the popular arcade game, **A.E.**, the play action of **Round About** is much the same--chains of things squirm about the screen and eventually run into and destroy you if you don't shoot them first. Jamie found it a most enjoyable game for brief play, and learned many of the new terms that flashed on the screen after victory at each level (although the educational value of knowing how to spell "awesomating" and similar Valley terms is debatable.) The colors are vibrant, the sounds pleasant, and the action well paced. Jamie reached level 18, with over 17,000 points, and plays it weekly. A cheerful little shoot-em-up that literate youth will enjoy. -JS

Update (see #16): **SHAMUS**, by Thornton and Mataga. $35 diskette for **VIC** or **64**
Maze chase from Synapse, 5221 Central Av., Richmond CA 94804. Protected. No pause.

The game offers 5 maps and 4 levels. Compared to the VIC version, **64 Shamus** is much easier at the bottom level, has slightly better graphics (though I prefer the ones on the VIC version), far fewer baddies per room at first, and is a horror to load. Most of the time it accuses you of theft, and pouts. One inovation is the pod room, in which you have to shoot a key through a moving keyhole in order to get in, then shoot a dozen or so baddies to get through. 38 rooms per level. Shoot the shadow to temporarily freeze him. We're told the answer to the maze is at the bottom of the bottom level. We wouldn't know -- no one here has completed the first level yet. Stick with the VIC version. -JS

Update (see #16): **SNAKMAN**, $20 diskette for **64.**
Maze chase from Tech 2 Software (Microdigital), Box 1110, Webster NY 14580. Protected. Machine Language.

UPDATE #1: This is the first time I've seen a game LOSE sophistication when going from the VIC to the 64! My 8 year old and my 6 year old really enjoy it, though, and prefer it to **Pacakuda.** As for me, ho-hum. -Rich Westerman

UPDATE #2: A grid layout similar to the VIC version, about half the size of the arcade version; the 64's large characters are easier to see. It has good sound and is fast. My only complaint is the "snakman" continues to move after the joystick is released until the direction changes or it runs into a wall. I would rank it 8 out of 10. -T. Lynch

SUPERCYCLES $32 diskette? for **64.**
Dodging game from Pioneer Software.

REVIEW #1: The commands may be confusing to a beginner (printed in upper and lower case) and the game is stupid, with poor documentation. -Andrew Cornwall Jr. (DISKUSS)

REVIEW #2: You are a yellow bike trying to dodge blue bikes by having them run into your shield. It gives no instructions, the blue cars are hard to see, and it gives you no warning when you change levels. The graphics are good, the sound is fair. It is a rather good game. -Janet Bidgood (DISKUSS)

REVIEW #3: This is a slower **Gridrunner**-style arcade game. Graphics are not very spectacular. The player has only one life. Sound is very dull with only a bell and shot sound, and the drone of the motorcycle. We could only get to the second level. On a scale of 1 to 10 we would rate this as a 6.5. -Robbie Bowlby (DISKUSS)

Update (see #16): **ZEPPELIN RESCUE**, $20 cassette or $25 diskette for **64.**
Rescue game from Computer Software Associates, 50 Teed Dr., Randolph MA 02368.

This game requires much practice and precision. The object is to rescue people with your SLOW-moving zeppelin without bumping into buildings or "acid rain clouds" or running out of fuel. It was so hard, I soon gave up even on the "easy" screen with no clouds! John, age 15, says it is the most difficult game he's tried, much harder than **Jumpman**, but great fun once you learn how to maneuver. Steve, 14, and Kevin, 13, agree, adding that it's challenging, exciting, with terrific graphics (cityscapes), but oh, those delicate joystick movements! Teens love it, but it's not a game for the impatient or the young (or old) with poor motor skills. -Elizabeth Kaspar

Strategy and Simulation Games:

ARCHON, $40 diskette for **64**.
Arcade chess game, by Anne Westfall et al, from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. Requires 1541 and joystick. 90 day media warranty.

REVIEW #1: Plays like chess game until you land on a player. Then the screen goes to a battle field, and pawns must physically fight with either clubs (up or down) or swords (left and right); bishops fire rapid balls at multi-angles which pawns cannot avoid except by clubbing them to death from the rear. The chess pieces have different life spans at different positions on the board, delineated by different background colors. You're never playing the same game twice. Worth every penny of the price. Recommended! -Bob Wolters

REVIEW #2: As a non-game player, it's the best one I've seen! -Marc Rosen

REVIEW #3: Inspired by the monster chess sequence in the movie Star Wars, **Archon** is a worthy addition to the world of strategy games. Designed to fight off boredom while rewarding planning, it succeeds admirably. It's also surprisingly easy to use, with most actions requiring nothing more than a touch of the joystick. Naturally, the computer can play too, and a demo mode is included, as is a pause option. As usual for Electronic Arts, the manual is brief, well done, and sufficient. Recommended. -JS

ATTACK OF THE PHANTOM KARATE DEVILS, $35 diskette for **64**.
Karate simulation from Phantom Software, 116-A 8th St., suite 155, Manhattan Beach CA 90266 (213/379-86869. Requires joystick.

You play against a computer-generated karate expert, using kicks and punches, numb-chucks, etc. It has truly superb sprite graphics. Limited appeal unless you're into the martial arts; then it's THE game for you, because moves are as realistic as possible, with truly superb sprite graphics controlled by a joystick. The pictures on the packaging are quite close the actual computer screen images. You fight through multi-screen levels. It gives the whole concept of games a new meaning. -Bob Wolters

BOWLING, by Bob Baker. $2 diskette for **64** or **PET**.
Bowling simulation from Baker Enterprises, 15 Windsor Dr., Atco NJ 21214. Unprotected. No stated warranty.

Here's one for toddlers; like other favored toys for that age range, extremely simple controls trigger all the action and skill has nothing to do with the results. This game includes an accurate display of a bowling lane and score card, with proper record-keeping, but its play is too random to appeal to older children and adults. Older users will prefer to study its listing for new techniques usable in other programs. -JS

CHESSMATE 64, diskette for **64**.
2-person chess game board from Viking Software.

Not a chess game that offers a computer as an opponent, but rather a video display of a chessboard and pieces for two people to play. For all the Fischers and Spasskys interested in keeping a record of chess moves or wanting to play book or end games, **Chessmate** will be appealing. However, for recreational play, it is less tedious to move a real chess piece than to continually enter location codes of "FROM WHERE?" to "TO WHERE?" A joystick-controlled icon would improve this greatly. **Chessmate 64** also allows illegal moves, which I consider a disadvantage. Recommended for chess enthusiasts with an eye for "en passant" only and not for the weekend pawn-pusher. -Todd Hill

Update (see #14,16): **CRUSH, CRUMBLE AND CHOMP!**, $30 cassette for **VIC**; diskette for **64**.
Strategy game from Epyx, 1043 Kiel Ct., Sunnyvale CA 94089. 30 day media warranty.

By design the game is slow moving, but it takes time to get used to the controls, and even then, you can never tell what those pesky humans will do next! The game can involve some rather hefty strategy, but if you're not inclined that way, it's just as much fun to go around and stomp those puny, squirmy pink things into the ground! -Joe Allain

EAGLES, by Robert Raymond. $40 diskette for **64**.
Aerial dogfight simulation for 1-20 players, from SSI, 883 Stierlin Rd., Bldg "A", Mountain View CA 94043. DOS-protected. 30 day media warranty.

Like **Blue Max** (see separate review), **Eagles** is a WW I air combat simulator. But unlike that competitor, **Eagles** doesn't feel a bit like flying; it is an automated board game, not a flight simulator. As in the best SSI tradition, everything about the game is selectable, and the manual includes all the historical background and lists of options and alternatives anyone could want. But after seeing **Blue Max**, forget it! Strategy doesn't make much sense within the cockpit of a single plane; SSI's skills are better matched to their large board games of entire armies. Unless you only want to learn about planes, without any sensation of flight, pass this one by. -JS

GAME TIME, diskette for **64**.
Chess clock from Nufekop Software, Box 156, Shady Cove OR 97539-0156.

A nice digitalized version of chess clocks found at tournaments. The primary advantage of **Game Time** over a chess clock is that players can save moves and notes on diskette. For chess masters with plenty of room by their computer, this works well, but it might become bothersome hauling it all to a tournament or a friend's house. -Todd Hill

GERMANY 1985, by Roger Keating. $60 diskette for **64**.
WW III simulation for 1-2 players, from SSI, 883 Stierlin Rd., Bldg "A", Mountain View CA 94043. DOS-protected. 30 day media warranty.

I am personally repelled by the thought of making the end of the world into a board game, but understand the need of our military to simulate even that awful event to better plot ways around it. Similarly, I can appreciate people wanting to participate in similar simulations as a way of better appreciating the reality of our present danger. Unfortunately, I do not see this simulation as enhancing either of these goals, primarily due to its assuming a rough parity of strength between NATO and Warsaw Pact forces in Germany without going nuclear. I have long been told (and just verified with a subscriber on his way to serve in our NATO forces in Germany) that since NATO hasn't a snowball's chance in July against a conventional Russian invasion of Germany, NATO military strategy is based on first use of nuclear weapons if an invasion occurs. I also have to wonder at what kind of people market a game about a horrible war and date it next year.

For those willing to suspend disbelief by pretending we are far better equipped with conventional arms than we are, and that it doesn't matter if the world ends in twelve months, **GERMANY 1985** is the usual ultra-detailed SSI strategic simulation, complete with game board, and options enough to satisfy anyone, excellently assisted as usual by the computer. Not recommended. -JS

KEN USTON'S PROFESSIONAL BLACKJACK, $70 diskette for **64**.
Blackjack simulation from Screenplay, P.O. Box 3558, Chapel Hill NC 27514.

I wish I'd had this blackjack program before I lost money when I was in Las Vegas! Not only is it an excellent game, but it also teaches you basic or advanced strategy and card counting. You can play at just about any casino in Vegas or Atlantic City, with actual rules of that casino, covering things such as cards played up or down, number of splits or pairs, odds and house percentages. This is clearly the most realistic and educational blackjack program I've seen, but the price seems excessive. -Marc Rosen

MINNESOTA FAT'S POOL CHALLENGE, by N. Strange. $35 cartridge for **64** or **VIC?**
Pool simulation from HESWare, 71 Park Lane, Brisbane CA 90066. Joystick optional.

Is good, works well, and sets proper angulations of cue ball with the joystick, to generate proper return angle. -Bob Wolters

M.U.L.E., $40 diskette for **64**.
Economic simulation game from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. 90 day media warranty.

REVIEW #1: This is a game of colonization. It is always a 4-player game (it supplements you with automated opponents.) The common goal is that the colony will survive

and prosper. The personal goal is that you will survive and prosper more.

Electronic Arts added many features and twists that make this not only a very enjoyable game, but also a fascinating study in the economics of supply and demand. Random acts of fate can be expected, but they aren't as random as you first thought. Fate will always be positive for the 4th. place player, while the winning player will never get lucky. This is without a doubt the most fascinating and captivating multi-player game I have played, and the documentation is not only detailed and easy to use, but also entertaining to read. -Randy Chase (Northwest Users Guide)

REVIEW #2: Definitely for those who thrive on economic simulations. Personally, bartering is something I hate, and there's little else TO do in **MULE**. The time delays seemed eternal, and the play hopelessly confusing without more study than I considered the game worth. Neither Jamie nor I was a bit sad to see it go. Not recommended. -JS

OIL BARONS, $53 diskette, game board and playing pieces for **64**.
Oil speculation simulation from Epyx, 1043 Kiel Ct., Sunnyvale CA 94089. DOS-protected. 30 day media warranty.

Pity rich meanie J.R. Ewing; nobody understood his problems--until now. In **Oil Barons**, 1-8 players compete for oil wealth by buying up oil rights to various kinds of land, exploring it, and drilling for oil when test results are favorable. A game can reportedly take from a couple of hours to months (using the save game feature, of course.)

Technically, this is a computer-assisted board game. Players mark their land and explorations on a large 20 by 30 inch full-color game board durable enough for use by kids. The computer then handles all finances and game happenings. There are several ways to play the game, so it won't become old hat very soon. You might, however, get old and gray waiting for things to happen. The graphics shown when exploring and drilling are quite cute, but seem to take too long to play themselves out. Too bad they aren't optional.

The auction of drilling spots is a high point of the game. The computer makes up enough dummy companies that even a single player will have to bid fairly to get any land. Because of the extensive economic simulation involved, this would be a very good game for a class setting, perhaps in a junior high or older economics or geology class, with students divided into 8 teams. Otherwise, $53 is a high enough price that you'd better first get your family's promise to play it regularly. -JS

POOL, by John Krause. $18 diskette or $15 cassette for **64** or **VIC**.
Pool simulation from Abacus, P.O. Box 7211, Grand Rapids MI 49510. Unprotected. 90 day media warranty.

This program is the first pool program I've seen worth mentioning. As in public domain versions, you aim the cue ball and watch the computer move it and other balls. But there the resemblance ends. In this version, you are encouraged to learn proper aiming techniques for real pool games by moving a spotter around the edge of the table. You also have full control of the force of the shot, and of the location of the cue ball after a scratch. Balls move and slow realistically when struck, accompanied by appropriate noises (which unfortunately never quite shut off.) Other options include "instant replay" and "take back last move". The one thing the game does not do is keep score. Making sure the "8" ball isn't sunk out of turn, or a player doesn't take an unearned extra turn is entirely up to the players. Jamie and I found the game quite enjoyable. This is an excellent way to learn proper aiming in pool. Recommended. -JS

SLALOM!, $30 diskette for **64**.
Excellent skiing simulation from Tronix, 8295 S. La Cienega Blvd., Inglewood CA 90301.

You must maneuver your skier down the slalom course, avoiding gate flags, rocks, bumps and holes. You also have options to go down the hill at different speeds with the fastest just about impossible. The graphics are well done. You have to see this game on a large TV to appreciate the excellent use of animation. Not addicting and only does one activity, but well worth the price for occasional play. -JO

STRIP POKER, $30 diskette for **64.**
Strip poker simulation from Artworx Software Co., 150 N. Main St., Fairport NY 14450.

If you've only been able to play strip poker by yourself, now you can play Strip Poker on your computer with a "hi-res" data file. Poker play isn't that great, but you probably didn't buy this program for that kind of action. I wouldn't let my kids play it for obvious reasons. Artworx says more data diskettes will be available providing a variety of new women and men to play against. This program does amaze me. -JO

TRAIN DISPATCHER, $28 cassette or diskette for **64.**
Railroad simulation from Signal Computer Consultants, Ltd., 470 Streets Run Road, Pittsburgh, PA 15236 (412) 885-6200).

A very realistic computer simulation of a modern computerized Centralized Traffic Control office from which railroad traffic is controlled, with 5 levels of play. The dispatcher has to contend with work crews in various track sections and allowable train crew working time as he attempts to get his trains moving over the 150 mile territory during his operating shift. The program provides all the necessary displays for operating the railroad-work crew times, train crew times, train location, system status, etc.

This is a Grade AAAAA program for those who like to mix railroading and computers. The only problem I encountered was due to my CIE interface. I worked my way around that and have enjoyed many hours of dispatching. There should be no problems with the normal 64 disk drive. -Philip Medley

WORMS?, $35 diskette for **64.**
Snake game from Electronic Arts, 2755 Campus Dr., San Mateo CA 94403. 90 day media warranty.

In this unusual game your goal is to train from 1 to 4 worms to capture territory by following instructions you give them in advance. As they travel, the worms leave colorful trails and make various noises. The lucky worm that completes the last trail to a point on the screen wins that point. The unlucky worms that go for the same last trail at once both die, for lack of a way out.

Like **Moondust**, which it slightly resembles, **Worms?** can either be played as a serious game (for 1 to 4 players), or it may simply be tinkered with and enjoyed for the beauty of the patterns that develop in the course of a game. There are also some automated options: worms that are taught by the computer through the course of the game, worms that move at random, and a demo worm loaded from disk. If, during a game, you develop an especially wise worm, you may likewise preserve it for another day by storing it to disk.

As usual for Electronic Arts, the package is colorful, and the instructions clear and brief. Like other good games, it is quickly learned, but slowly mastered, and playable by a wide variety of ages. Better yet, it is one of the very few computer games that don't involve either killing of chasing, and one of the even smaller group of games that help teach the concepts of logic and programming. Recommended. -JS

Disk or Cassette Drives and Supplies

DISKBANK, $3.50-$11 box for **all diskettes.**
Disk storage box from Amary Sales Corp, 2251 Grant Rd., Los Altos CA 94022.

My all time favorite method of storing diskettes. They are plastic interconnecting drawers that slide together easily (but hard to separate again). The more that are connected, the sturdier the system is. I have 60 units connected; it would not be too usable with less than 10. Each drawer holds 10 diskettes. It pulls out, then turns to the side so the retaining gate can fall forward (no need to bend the disks to see them). Highly recommended for those with over 100 diskettes. -Len Lindsay

DISK-O-MATE, $50 pilot light, error buzzer, and write protect for **4040.**
From Optimized Data Systems, Box 595, Placentia CA 92670.

This accessory for the 4040 has not yet been fully tested, but does exist and appears useful for any Commodore owner with a 4040 or 2040 disk drive. Having a power-on light is quite useful, and the ability to set the drive to be write-protected even when no write protect tab is on the diskette can be very useful, especially when the system is used by less skilled workers. It also will install without soldering, a definite plus.

Two initial concerns are that it is a separate small box, which will have to be handled whenever the drive is moved, and that the error buzzer reportedly does not shut off until the error status is checked. A short but noticeable beep would be preferable. More later.-JS

Update (see #15): **MSD DISK DRIVE**, $400 disk drive for **all Commodore computers.**
Single disk storage device from MSD, Inc., 11105 Shady Trail, Suite 104, Dallas TX 75229.

UPDATE #1: Since our first review appeared, we've heard regularly from MSD, received a loaner drive for review (see below), and welcomed them as a new subscriber. They really seem interested in correcting earlier problems, some of which may have been the result of changes in ownership when we first wrote, and others of which were early bugs, since fixed. We tested the MSD single drive over Christmas, and agree with others that the MSD drive is very well made, reliable, and marginally (20%) faster than a 1541 in serial mode. Since we had no DOS-protected software with us, we didn't test for compatibility. MSD says that with its new version 2.5 ROMs, most pograms work except the few that modify DOS itself (these include **SYSRES, The Clone Machine,** and Electronics Arts products. Other programs that readers suggested don't work, such as **Zork I**, should work with the current ROMs, according to MSD. Readers also report the single drive's IEEE-488 interface works. (Reported problems appear due to MSD's CIE interface, which uses some 64 memory, and thus conflicts with many protected programs. Phantom interfaces such as the Bus Card, which bank themselves in and out of memory as needed, are compatible with more programs, as reported below.)

We can now happily say the MSD is a good alternative to the 1541, although Commodore's newly-announced faster drives should also be considered, if and when they appear. The MSD's are an especially good choice if you have both a PET and a 64 or VIC. However, as with anything mechanical, buy through a dealer able to provide guidance and repair as needed. They should be available everywhere by now.-JS

UPDATE #2: It initializes faster than the 1541. If a disk loads badly on a 1541 because of read errors, it will usually load better on the MSD. -Robert Newcomb

MSD DUAL DISK DRIVE SD-2, $700 disk drive for **all Commodore computers.**
Dual disk storage device from MSD, Inc., 11105 Shady Trail, Suite 104, Dallas TX 75229. Limited 180-day warranty.

REVIEW #1: I love my SD-2 dual drive! The lickety-split backup time alone is worth the price of the drive. The SD-2 is a beautiful product, rating a 10. But the CIE IEEE-488 interface has not been friendly to me; though it speeds up disk operations by a factor of at least 4 or 5, it disables my favorite programs! -James Condon

REVIEW #2: Small increase (less than 10%) in speed - serial bus load and save times seem the same as the 1541's. No utilities disk is included. Did not read files from a disk formatted by the VIC with a 1541. BASIC programs that don't specify DEVICE 8 and DRIVE 0 may have to be modified to specify DRIVE 0. -Earl Hammer
[Put a formatted 'scratch' diskette in drive 1 to prevent most such errors. -JS]

REVIEW #3: Our MSD dual disk has just arrived for 30 day evaluation, and already several people have lined up hoping to buy it at the end of the 30 days. Our initial impression is quite favorable--it is far more compact than our 4040, and a bit faster (18 seconds to header, and 115 seconds to backup.) It works very well with the Bus Card IEEE-488 interface on a fair percentage of DOS-protected software, and on a bit more via the serial bus. However, we do note that the most heavily protected products (**Clone Machine, Jolly Roger, Canada AM,** Electronic Arts and Datamost products, and **Sys Res**) do not work with it. Short of licensing Commodore's DOS, MSD will probably never be able to remedy this completely, especially as the protection game goes on to ever more unreasonable heights, and new companies appear daily. On the other hand, for those with one 1541, the MSD dual makes an excellent second (and third) drive, able to handle most needs with far more flair than the 1541 (which you can use with remaining programs).

We've not yet uncovered one excellent feature rumored to be on the MSD dual, a way to make one drive unit 8 and the other unit 9. And thus far, our main negative comment is that one of the serial bus ports is too close to the IEEE-488 port for them both to be used at once without fiercely bending the IEEE cable. We'd also wondered whether it would be more like the 4040's DOS or the 1541's, since the two differ. After having a bit of trouble reading and writing disks from a properly-alligned 1541 with it, and none with those from a 4040, we'll guess it is more like the 4040, but we hope to check that with MSD, and say more after full testing. For now, with the 4040 reportedly cancelled, the MSD dual disk is a must purchase for serious business users of the 64, and every user group will want either it or a 4040 handy for their disk library. Recommended. -JS

SUPER DOS, $80 ROM chips for **8050** disk drive.
Disk Operating System from Commodore, 1200 Wilson Dr., West Chester PA 19380.

SuperDos upgrades the 8050 disk drive to DOS 2.7 to create larger relative files, up to the capacity of the disk (500K - 2052 blocks). However, **SuperDos** is not the same as the 8250. If you try to run an 8050-formatted disk in an 8250 drive, you get an error on the first try **SuperDos** runs 8050 disks unchanged; no additional copying is necessary, as it would be with an 8250. The manual is the same one that comes with the 8250, is not especially accurate, and does not explain anything about **SuperDos.** But I am very happy with my modified drive. It's as reliable as an anvil, and the next best thing to an 8250. Highly recommended. -J. Paton Dellow

Interfaces

Update (see #15): **BUSCARD**, $199 interface, monitor & 4.0 BASIC for **64.**
Serial to IEEE-488 interface From Batteries Included, 186 Queen St. West, Toronto ONT M5V 1Z1 CANADA.

UPDATE #1: The best product around for PET/64'ers - leaves interpod, links, cards far behind. Batteries Included is also tops - sent revised ROMS promptly and on trust as swap for old ROMs. Long may they thrive. -Paul Blair

UPDATE #2: It's a great product, but neither version supported the RS-232 port, so most term software didn't work, including **Smart 64 Term, Commterm, Speedterm 2, Superterm** and **Easycom.** The problem was corrected with the release of v 1.3 ROMs. -Steve Shubitz

UPDATE #3: Works with COMAL 0.14, **Easy Script** and most cartridges. The parallel port was not documented enough in the manual for me to get the Micro World Electronix parallel printer interface to work. The IEEE slot is an edge connector just like on the PET/CBM computers. You can mix IEEE and serial devices. Recommended. -Len Lindsay

UPDATE #4: Bus Card II is now shipping. There's no update policy for owners of original Bus Cards, but Batteries Included says that there's no reason to trade up anyway; the new version reportedly works on some DOS-protected software the first version couldn't, but fails on other programs the first version succeeded with. The main reason for the change was to make the product easier and cheaper to build. Other important differences are that the new version will work even if you don't install the included wire inside the 64 (but not on as many programs as if you DO install it). Second, the pass-through cartridge slot is now on the side of the card rather than the top, making the unit easier to use with an expansion motherboard. Still very highly recommended for use with any IEEE-488 drive, including both Commodore and MSD disks. -JS

Update (see #14): **THE CONNECTION**, by Tymac Controls. $119 interface for **64** or **VIC**.
Parallel printer interface from Micro-ware Distributing, 1342 B Rt.23, Butler NJ 07405 (201/838-9027). Printer specific, with EPROM.

UPDATE #1: Is everything claimed in your reviews - but doesn't go far enough. Will provide mnenomics instead of the Commodore graphics, automatic performation-skip to eliminate the annoyance of perforations (or page end) across a listing, and a left margin for punching notebook holes. Printer specific with a replaceable EPROM. User's guide is a little disappointing (very generalized), but adequate. Support from the distributor is outstanding. Be sure not to change connections with the power on! -Edmund F. White

UPDATE #2: Based on excellent reviews in the Midnite, I purchased this interface. It does everything as advertised, but not until I spent a frustrating few days working out some problems. There are 2 toggle switches concealed under the label in the extreme lower right hand corner:

Switch #1: closed (to left) is Emulation mode; open is Translation mode.
Switch #2: closed is Secondary address 0-7; open is secondary address 0&7.

The other problem was getting correspondence mode from within **Easyscript**. Now the system works perfectly. The 2K buffer frees up the computer much sooner than before. Very highly recommended. -Arnold Solof

INTERFACE CABLE: 6 pin DIN plug to 6 pin DIN plug, by Pfantone. $7 interface for **VIC** or **64**.
Serial bus cable from Warren Radio, 800 S.W. Jefferson, Peoria IL.

This 6 foot cable is reasonably priced, and unlike Commodore's own, shielded (though Warren's Fran Donovan reports there's nothing at the computer for the shield to tap into.) Its 6 foot length is generous, compared to the 3 or so on the standard ones, and shouldn't tax the driving power of the computer. (Fran reports he's tested the 64 with cables up to 35 feet long, and yes, he will sell them if needed.) This is another of those obvious products that many people need but no one seemed to offer until now. Highly recommended. -JS

Joysticks

POWER STICK, $10 joystick for **64** or **VIC**.
Game controller from Amiga (distributed by Midstate Distributors, Springfield IL).

Without a doubt the smallest joystick around. Has small stick, fire buttons on both sides of the base (great for left handers), rounded bottom which fits in the palm of your hand. It really seems to have the advertised 16 contact points, because it has great diagonal control. However, it isn't self-centering; I kept hitting the walls in **Shamus**. The two fire buttons make it great for left handers. Recommended. -John DeWilde

POINT MASTER, $14.20 joystick for **64** or **VIC**.
Game controller from Discwasher, Chicago IL.

At first I was delighted with **Point Master**. It was light, fit my hand well and I liked its action, though some thought it "spongy." Then my first one stopped working and was exchanged. The second and third ones cracked at the base of the handle when my wife made a quick right hand turn playing **Radar Rat Race**. May be useful with some business programs to move cursor, but useless on games. NOT recommended. -John DeWilde

Light Pens

See reviews under **Utility Reviews: Graphic Aids**

Motherboards

GOLDEN RAM 24K EXPANSION, motherboard for **VIC**.
Memory expansion from Voice World.

It does what the ad claims. I chose it over the 27K RAMAX mainly because of the large button for RESET. I don't like either one's little switches! I made a tool by filing a plastic stirrer to use on the switches. Very prompt shipment; well packed. -Bill Boose

Update (see WPC): OPTIMIZED DATA SYSTEMS MEMORY EXPANDER, $129-259 for **all PET/CBM 2001s**.
Memory expander from Optimized Data Systems, Box 595, Placentia CA 92670. Kit form or pre-assembled.

If you're on a tight budget, this system is well worth it. I've found at least three 2001 PETs for under $100. Add BASIC 2.0 and the Optimized memory board, and you have an excellent, inexpensive computer. Besides adding more RAM, you can even write protect a block of RAM. Block 3 of the board can hold ROM devices, such as 2716s or 2732s used for many utility ROMs (i.e., the TOOLKIT). Buy the assembled version if you're not into kits. In less than a half hour, I had it installed and working, with the step by step instructions. Although the board is placed on the memory expansion port on the outside of the 2001, it is not in the way. A real bargain; I highly recommend it. -JO

Networking Systems:

VIC-SWITCH, $149 interface for up to 8 **64**'s or **VIC**'s.
Networking system for 1-8 computers from AB Computers, 252 Bethlehem Pike, Colmar PA 18915.

One of the best ways to network the 64, making it useful to schools and other learning environments. Allows up to 8 VICs or 64s to access a single disk drive (serial only at the moment). Works just fine with 1541 and both single and double MSD drives. Caution: since the MSD disk drive locates the disk DOS in a different location and uses different code, some DOS protected programs might not load properly off the drive. -Joe Rotello

Printers and Printer Supplies

Update (#14): 1526 PRINTER, $300-375 printer for **64** or **VIC**.
Dot matrix impact printer from Commodore, 1200 Wilson Dr., West Chester 19380. 80-column, bidirectional. Accepts 10" wide paper.

REVIEW #1: Commodore at last seems to have found a competitive printer. The 1526 is, on initial examination, a viable alternative to the Gemini. It offers descenders, operates at a reasonable speed, and has very good quality print, and its price compares very favorably with the Gemini 10X plus interface. -Randy Chase (Northwest Users Guide)

REVIEW #2: The character font is an 8x8 matrix with true descenders. Another important feature is the adjustable friction/sprocket feed mechanism which allow the use of both computer forms and plain paper. Included with the printer are two carbon-film

ribbons. It can print the entire PET chracter set. The 1526 does not directly support underlining, italics, subscripts, superscripts and high-res graphics. You can, however, emulate some of these functions by using overprinting and the custom-defined character. The 1526 does allow you to print expanded characters, which in turn can also be expanded. You can also set the spacing between lines and the number of lines per page. The most unique thing about the 1526 is its built-in ability o accept format commands for both strings and numeric fields. The 1526 was well worth the wait.

MPS-801 MATRIX PRINTER, $230-250 printer for **64** or **VIC**.
Dot matrix printer from Commodore, 1200 Wilson Dr., West Chester 19380.

REVIEW #1: Replacement for the 1525 printer. Performance, technical features and styling represent excellent value for the money. Key features are: 6x7 dot matrix impact printhead, prints all PET graphic characters, double-width and reverse characters, dot addressable graphics (480 col.), unidirectional 50 cps print speed, 5 linefeeds per second, adjustable tractor feed (4.5-10") and snap-in ribbon cassette. Print quality is only fair, because of the limited number of dots and no "descenders." Documentation is very clear and concise, and doesn't presume much computer literacy. I worked all the starting examples and sample programs, and could only find one (minor) error. Since the printer connector is on the back right below the paper slot, the printer cable can interfere with paper feeding from below the printer, which has caused several paper jams in my setup. The MPS-801 seems to be a good entry-level printer in the Commodore tradition. Recommended for those who want a lot of useable printing power for the money. -Joe Jurca

REVIEW #2: You can't beat the price, and you don't need an interface. However, it doesn't have descenders, it's only 50cps, and is quite loud. Only consider the 801 if budget is the primary factor in your decision. -Randy Chase (Northwest Users Guide)

DIABLO 620, $799 printer for **all computers.**
Letter quality printer from Diablo.

The printer produces good copy at 25 cps - fast enough for all I want to do. The element is easy to change, and the printer is fairly easy to set up with the ADA-1450. It has a heavy bar for doing precision subscripts, underlining, etc. My only complaint that is the ribbon can tangle if not installed properly. No tractor feed option. -Mike Crews

Update (see #13): GEMINI 10 PRINTER, about $300 printer for **all computers.**

A very good value, even if patch code required. Delight to use, flexible. -Paul Blair

GEMINI 10X, under $400 printer for **all computers.**

The more attractive features include a 120 character-per-second printing speed, a user-replaceable print head (good for 100,000,000 impressions), and a $2 Underwood typewriter ribbon. 8K buffer available as a plug-in; and it makes lemonade on hot days. -Mike Apsey (Journal/20)

OLIVETTI INK JET PRINTER, $400 printer for **all** computers.
Dot matrix printer from Quill Corp., Lincolnshire IL.

I've heard about these for years, but never seen one until today - the very fast, very quiet, very high-quality ink jet printer. For only $400? Well, anyway it's fairly quiet. On the other hand, the speed is only 60 cps, and the quality is limited by the matrix being only 5 by 7 dots. There's also the matter of the ink smudging on the paper, and also an unpleasant burnt smell which pervades the room after use.

These faults will limit its use to situations where noise is a major problem, quality need only be moderate, and ventilation is available. In those situations, it could well be an excellent buy, not only for its low price, but also for its ability to use both roll and pin-feed paper, the extreme ease and cleanliness with which the ink cartridge is changed, and its ability to do bit-mapped graphics. -JS

Other

Update (see #12,14): DATA 20 VIDEOPAK 80, about $160 cartridge for **64.**
80-column board from Data 20, 23011 Moulton Parkway, Laguna Hills CA 92653

A plug-in cartridge, using 4K of the 64's RAM, gives your Commodore 64 the ability to support an 80-column video screen. You also get auto-repeat on all keys. The 64's function keys switch between upper and lower case modes, erase to the end of a line or the screen, and dump the screen to an RS-232 printer. Moreover, you never lose your cursor when a program executes, and your screen doesn't go blank during data storage/retrieval operations (LOAD,SAVE, etc.). Data 20's **Wordmanager** and a very nice mail list comes with **Videopak 80.** On the minus side, **Videopak** completely re-maps the 64's screen memory, so screen POKEs are unpredictable. You must use a monitor, and only get a monochrome image. If you add cursor control characters in BASIC PRINT statements after typing a program line, the entire line must be re-typed. The cartridge case is well-constructed but large and probably won't fit into the new multi-slot expanders. And even if you don't SYS into **Videopak**'s 80-column mode, you still lose 4K of RAM when the cartridge is plugged in and get a seriously degraded 40-column screen image. You can SYS into a 40-column mode with much better resolution, but it truncates program lines at 40 columns -- so don't plug in **Videopak** unless you intend to use the 80-column mode. -Andy Skelton (8 Squared)

Update (see #14): DATA-20 Z-80 VIDEO PAK, $300 cartridge for **64.**
Z-80/80-column board from Data 20, 23011 Moulton Parkway, Laguna Hills CA 92653

This cartridge provides an 80-column display, and uses a CP/M-like operating system called SB-80. Produced by Lifeboat Associates, SB-80 does NOT include an assembler or debugger. This means you cannot write your own programs. Data-20 states that Lifeboat Associates has "hundreds" of programs for this system, but, after 1 letter and 2 phone calls to Lifeboat, I have received nothing! Comes with a simple word-processor and a database program, which look promising, but were not yet complete. Documentation consists of two sheets of paper! Basically, Data-20 says, "If you want to learn CP/M, buy a book!"

Warning: This cartridge will not work with the earliest Commodre 64 models; I had to buy a new 6510 chip. The people at Data-20 were unusually helpful in getting my system running. They are tops in customer assistance, but unfortunately don't have much of a product. The absence of ASM and DDT is inexcusable. It is certainly great to have an 80-column display, but, at present, the Data-20 **Z-80 Video Pak** is over-priced and under-supported. Not recommended. -Charles T. Kowal

CARDKEY 1, $40 for **64** or **VIC.**
Auxilliary numeric keyboard from Cardco, 313 Mathewson, Wichita KS 67214 (316/267-6525).

This programmable 16-key auxillary numeric keyboard plugs into a joystick port. Designed to give the **64** a way to do fast calculations, by adding these keys: 0-9, period, enter, and four math functions. A tape program instructs the keypad to produce any character when a key is struck. As a keyboard, it works well enough, but lacks the rollover of the regular keyboard that lets you hit two keys at once.

Owners may order a small $10 plug-in module that connects the keypad directly into the usual keyboard connector (not tested.) Although you must open the 64's case to install it, this is an essential option for most users, because very few protected programs will work with the software-only version. Recommended for those who do lots of calculations. -JS

PEWTER COMPUTER TIE TAC, $0.90-2.00 (depending on quantity) for **computer freaks.**
Computer jewelry from L. Hilmoe & Sons, 9419 Caddy Ln., Caledonia WI 53108

Out of the sea of junk sent daily to every user group in the land comes one gem; Hilmoe & Sons manufacture certified lead-free pewter jewelry, and have developed a line of Commodore pins suitable for lapel, tie or coat. The ones I like best are a realistic reproduction of a diskette and of the VIC/64. Hilmoe suggests these would make great money makers for a user group, and I agree. They are attractive, discreet (no one has yet commented on my wearing them after two months of use), and unmistakable. They could easily be used as badges for meetings or special events. For $50 extra, Hilmoe will make custom designs for your group. Highly recommended. -JS

Assemblers

Update (see #16): COMMODORE ASSEMBLER PACKAGE, for **CBM/PET** or **64.**

The assembler file has a bad bug in its macro handling section. A patch has been devised and tested - works OK now. We're preparing a completely revised version, with improved screens and hardcopy format, and may even provide choice of object file or binary file output. Editor is being reworked to include 'scroll', and 'lmove' and 'lcopy' commands. Monitors are being reworked (with help from F.A. Cochrane of South Carolina) to fix bugs (especially in 'walk') and permit operations on RAM under ROM. -Paul Blair, 35 Calder Cres., Holder, A.C.T. 2611, Australia

High-Level Languages

Update (see #16): COMAL 0.14, $20 diskette for **64.**
Structured language from COMAL User's Group (Len Lindsay), 5501 Groveland Terrace, Madison WI 53716. Unprotected.

REVIEW #1: After 3 weeks with COMAL, I am very impressed with its power and ease of use. The COMAL Handbook ($18 from Reston) is well written and easy to follow. It does, however, include commands not implemented on the 0.14 disk. There are also a couple of petty annoyances in COMAL. COMAL requires a space after some commands. COMAL does not allow multiple command lines. We also lose GOSUB and GOTO <line #>, [but] GOTO <label> is implemented. ENHANCED BASIC allows the programmer the option of kludging programs. COMAL is, to say the least, a very good programming language. -Keith Grigg (Hardcopy)

REVIEW #2: The disk is fantastic! It has a faster structured BASIC, high level commands for sprites, complete hi-res "LOGO" TURTLE graphics comands, input error checking, and more. This language has a large following through the COMAL Users Group, and has been available for the older (but still good!) Commodore 4032 and 8032. -Tom Lynch (The Users Port)

Update (see #16): **KMMM PASCAL**, $100 diskette for **64.**
Structured language compiler from AB Computers, 252 Bethlehem Pike, Colmar PA 18915. Dongle-protected. No stated warranty. Printer or IEEE-488 interface optional.

On documentation: It says one thing at the beginning, something else in the upgrade section, and something else again in the "errata" file on the disk. For a beginning programmer, this was a disaster. When a syntax error was indicated I didn't know where to look for assistance.

On speed: As a bench mark, I ran 3 tests using the same algorithm for generating all prime numbers less than 1000. It took 29 seconds in BASIC, 5 seconds on the class IBM (that uses the interpreted P system, and 3 seconds with **KMMM Pascal.**

On Top-down programming: Pascal is THE language that lends itself most readily to top-down programming, because it can be refined gradually. In fact, Pascal program development works very well when working from an outline.

Any variable used in a function or procedure is local, unless you specifically designate as global. It is true that all variables must be defined before compiling the program, but in program development they can usually be ignored until the end. Develop your program then execute the syntax checker to point out your undeclared variables. However, the syntax checker is probably the only good thing about the editor. [Your professor has taught you the proper approach for adapting the Pascal language into a top-down programming style - good for programming in any computer language. -ES]

With **Easyscript:** I have been using **Easyscript** for program development and the KMMM editor for touch-ups. Really, **Easyscript** makes editing Pascal source easier than on the

IBM with their $600 UCSD package. I have heard that Abacus Software's **Zoom Pascal** is written by the same people as **KMMM Pascal.** If the only differences are that **Zoom Pascal**'s editor doesn't have the syntax checker and sells for only $35, then the Zoom version would be a better buy if you have **Easyscript.**

On IEEE parallel interfaces: I have a 4040 drive and the C64-link. To use Pascal it is necessary to relocate the IEEE routines; when relocated to some areas, **KMMM Pascal** didn't work at all, and in other areas only small programs would work. I finally had to dissassemble the programs to modify them! The C64-link sometimes hangs-up if the $A000-BFFF block is switched out (which both the editor and compiler do). Modifications would not be possible with the DOS-protected Zoom version. -John W. Schaad

THE LAST ONE, by D.J. 'AI' Systems Ltd. $100 diskette versions for **64** or **PET/CBM.** Application program generator from Blue Sky Software, 26 Springdale Rd., Cherry Hill NJ 08003. Requires 1541. Printer optional. DOS protected (despite claims to the contrary in the manual,) but allows the user to make 5 copies. No warranty.

REVIEW #1: This is a program to write programs. It asks you questions about the program you wish to write, and uses your answers to compose the desired program in BASIC. If you don't know how to flowchart a program or find it hard to see a program as a series of sub-assemblies, then you'd better learn that skill before you invest in this software. If, however, you have a some understanding of program structure, then this utility can be not only useful, but more fun than a game. **The Last One** makes the fullest and most efficient use of PETBASIC. You can even make changes after the program has already been created, or if drastic changes are needed, you can run it thorough **The Last One** again until you end up with your desired program. -Rich Westerman (The Hacker Rag)

REVIEW #2: Rarely has a product been so heavily flogged as **The Last One.** It was first announced two years ago through a truly lavish advertising campaign as "the last one" (program) you'd ever need to buy for the CBM/PET. After awkward delivey delays, and a dose of reality as to its capabilities, much of the world forgot about this once-famous program. 'AI' Systems, in turn, also seemed to forget about the world. Though I've written them on 2 occasions, I've never received a reply.

When you first use **T.L.O.** for the 64, prepare to sit a while and read the sizeable wirebound manual. Prior to first use, you must create a working copy of the program to make sure your working disk will be compatible with your drive. This is a good idea, but takes a fair amount of time, especially if you also make the recommended separate HELP diskette. More later. -JS

Low-Level Languages

Update (see #16): COMMODORE CP/M 2.2, $50-60 cartridge or diskette for **64.** CP/M operating system from Commodore, 1200 Wilson Dr., West Chester PA 19380.

This is a full-featured CP/M at an irresistible price. It includes the usual utilities: ASM, DDT, etc. The documentation consists of a 240-page book. I have not seen any software for this version of CP/M except on Compuserve's CBM Information Network. The main limitation of Commodore **CP/M** is that it uses the regular 40-column screen, which makes it unsuitable for "serious" word-processing. As an introduction to CP/M, Commodore's version is unbeatable, but let's hope for more software. Recommended. -Charles T. Kowal

Magazine Reviews

See also the User Group Notes from Issue 17 for other newsletters.

AHOY!, edited by Ben Bova, $15-20 magazine for **64** or **VIC**.
Monthly magazine from Ion Publishing, New York City, NY.

REVIEW #1: A new magazine devoted to 64/VIC (making it the hands-down winner in the lame-name competition). The editor is Ben Bova, who has been known to us science fiction fans for a long time, lately as the editor of Omni (the National Inquirer of science magazines). My initial impressions are mixed. While it has several interesting utilities you can type in, it has almost nothing else to recommend it. The 'news' is several months old (making it ancient history in this genre), and the articles have a 'clumsy' style. Hats off to the software reviewer, though; believe it or not, there are well-written, unfavorable reviews of software here. I'll wait for a few more issues before passing final judgment. -Rich Westerman (The Hacker Rag)

REVIEW #2: What would members like to know about a new magazine? How about subscription rates? Ah, there it is on the first page: "Subscription rate: 12 issues for $15 and 24 issues for $28." So, sign me up. Where's the subscription card? Here it is ... but it says, "Send me 12 issues of **AHOY!** for $19.95 or 24 issues for $37.95" - a $4.95+ jump from the front of the magazine to the back!

As for content, one article was entitled, "An Interview with Protecto's Bill Badser," the Barrington IL outfit that advertises the "84K Commodore 64" for $99.50 (Software savings applied). The interview read like a 3 page ad for Protecto Enterprises. I could excuse that if the 10 following pages weren't all full page ads for ... you guessed it ... Protecto Enterprizes. The articles themselves are not too bad. Listings are at the back a la Gazette. I personally prefer seeing something like 10 CRSR RT versus CRCRCRCRCRCR ... as they have done. Not so good. -John Sherpinskas (Peeks & Pokes)

REVIEW #3: Generally 5 or fewer program listings, most in BASIC. The bulk of the magazine is reviews and news, interviews, and articles. I like Ahoy quite a bit. It's more readily available than most magazines for the 64. If you already get Compute's Gazette and want something unique, go for Ahoy. On the other hand, if much of the Gazette seems obscure to you, RUN is a better choice. -Andy Skelton (8 Squared)

THE CLONE NEWSLETTER, $18 newsletter, for **64**.
Bimonthly newsletter for **The Clone** program from Micro-Ware, Box 198, Butler NJ 07405.

"Dedicated to frustrated disk users", this newsletter is intended to support users of the **Clone Machine** with **Unguard**, a Microware product that copies diskettes, including many that are DOS-protected. The 8 page premiere issue includes some Commodore news, impressions of the 1541 drive, Micro-Ware product announcements, bug fixes, and letters - but nothing worth $18 a year. It also tells how to copy two DOS-protected programs, and how to add simple DOS protection to your own programs. Then there is the tantalizing hint that their own diskettes can be copied, and user rumors that how to do it will be om issue #2. I hope so. Since both **Easy Script** and **Fort Apocalypse** could be copied using **Unguard** sans directions, I'm not sure who needs the first issue. But I do approve Microware's providing regular support, even if some information is likely to be abused. -JS

COMPUTE'S GAZETTE, Disk Edition, $8/month or $70/year diskette for **64** or **VIC**.
Monthly diskette of program listings from Compute!, Box 5406, Greensboro NC 27403.

REVIEW #1: My first impression is very favorable. It seems well set up and easy to use for VIC and 64 users. They use a menu prompt system. -Rodney Weeks

REVIEW #2: The menu system seems to work well. Having the programs already typed in is a great blessing, but I did not appreciate finding advertisements among the programs. Readers' fears about DOS protection on the diskette were apparently overblown. -JS

Update (see #15): CONSUMER REPORTS

UPDATE #1: I've been subscribing to Consumer Reports since 1968 and was horrified to see what they've done in their computer reviews. CR responses to my letters were rather interesting. One letter was answered with a dull form letter. When I wrote in the second letter, "I always thought Consumer Reports was mature enough to wait until working products could be purchased from retail outlets before devoting space to them in your valuable pages," I got a prompt reply indicating they were assured the Adam would be out when the review was run and had already laid out the space when they discovered the Adam wasn't ready. Keep up the pressure on CU; they may see the light yet.... -Douglas Quine

Update (see #12+): MIDNITE/PAPER, $23 year for all Commodore computers.
Bimonthly magazine from Midnite Software, 635 Maple, Mt. Zion IL 62549.

UPDATE #1: Originally a user group publication. The oldest Commodore-oriented mag. Absolutely, delightfully unique. No gloss or color. Not much advertising. The most candid (often scathing) product reviews you'll ever read. The only mag that actively warns readers away from bad products and companies. Independent, gutsy, and indispensible for users who want facts, not hype. Rarely found outside of computer stores. -8 Squared

UPDATE #2: I have mentioned to many of you that the Midnite is one of the only unbiased (I don't mean opinions but commercial bent!) journals that caters only to Commodore products. It consists of notes, reviews, and articles gathered largely from user groups such as ours. They also have the inside view of Commodore and lambast some of their idiotic policies (from our point of view!). The bi-monthly periodical has virtually no turnkey programs but instead a wealth of information about hardware and software on PET, CBM, VIC 20, and 64 computers. I think so highly of them they are getting a free ad in this month's User Port! -Tom Lynch (SFVCUG User's Port)

RUN, $20/year magazine, for 64 or VIC.
Monthly independent journal from Wayne Green Inc., 80 Pine St., Peterborough NH 03458.

REVIEW #1: The newest 64/VIC oriented magazine has a great pedigree, coming from the people who publish Microcomputing. After looking at the first issue, however, I'm less than impressed. The type-in programs are all warmed-over public domain stuff. I was glad to see that Jim Strasma has a Q&A column, but all the questions he answers are reprinted verbatim from the November issue of Midnite! [That only lasted through RUN #2. How else do you get reader questons for a not yet published magazine? -JS] Q&A columns are kind of ludicrous, anyway, since the lead time on magazines makes a question received in January not answered until April or May. When I run into a programming/hardware problem, waiting 2-3 months for an answer is out of the question. -Rich Westerman (The Hacker Rag)
[Agreed. Both RUN & Midnite readers can save time by including a SASE with questions. -JS]

REVIEW #2: A slick publication with many ads. RUN is clearly directed at the same audience as Compute's Gazette. What sets RUN apart? First, the programs I tried actually work. Second, they seem more exciting and closer to arcade quality. Third, by my standards, RUN's writers seem to have a better grasp of the English language. Fourth, the format of RUN's programs is very easy to follow, although you have to turn the magazine on its side to copy them. If you subscribe to only 1 computer magazine, you would problably do better with RUN than with any other. -Mark Richardson (Silver Springs MD UG newsletter)

REVIEW #3: Though the first issue struck us as a bit too brassy and self-congratulatory, we've observed steady improvement. Two monthly features are especially helpful: Strasma's "Commodore Clinic" and "Magic". RUN is oriented toward less experienced users. Most programs are in BASIC. RUN may be more appropriate for a large proportion of 64 users than Compute's Gazette (Mindy disagrees). -Andy Skelton (8 Squared)

Update (see #12+): The TRANSACTOR, $15 year for all Commodore computers.
Bimonthly magazine from CMD, 500 Steeles Av., Milton ONT L9T 3P7 CANADA (416/876-4741).

Volume #4, issue #5 of the Transactor will be of interest to the more advanced. It contains COMPLETE memory maps for the 64 and VIC. All ROM and KERNAL routines are now easily referenced. There are even grid-type screen memory maps! The Transactor is required reading for serious hackers. -Rich Westerman (The Hacker's Rag)

Update (see #14): Newsnet, $15 minimum per month for **all Commodore computers**

Newsnet is on my out list this week, for showing an amazing lack of computerization for a computer utility. First, bills are always 3 months late, and do not show past payments, nor do they accept credit cards like other information utilities, making it essential but difficult to write a monthly check. Second, when the system is down, they don't say so, but simply claim "invalid ID", making you wonder if your latest payment was lost. Third, **Newsnet** insists on a carriage return after every 80-130 characters, making it hard to easily download its text into a real word processor; all of those I use place a RETURN only at the end of a paragraph, and pressing out the spares is a slow tedious process. On the other hand, NEWSNET does still have timely info, and does automatically call your attention to stories of interest. -JS

TELSTAR 64, by Carl Moser. $40 cartridge for **64.**
Terminal program from Eastern House Software, 3239 Linda Dr., Winston-Salem NC 27106. Full 60 day warranty.

Telstar 64 is the 64 version of Moser's **STCP** for CBM and PET computers, reviewed favorably in the Whole PET Catalog. It is a product I've been wanting, because I use **STCP** on the CBM to communicate with my Tandy 100. Like **STCP**, it is among the most powerful terminal programs available, with the expected options, but easier to learn and use than most. Having it in cartridge form is especially convenient - no diskettes to swap and no worries about DOS protection killing your 1541. Another very good feature is its ability to automatically tokenize a BASIC program as it is received and stored to disk. This allows sharing programs with owners of other brands of computers, and having them run with few if any changes once loaded, so long as the program received uses only standard BASIC. Other notable features include a full info status line, full cursor editing (in line mode), filtering of troublesome characters, an alarm clock, and a brief but effective manual.

Unfortunately like **STCP, Telstar 64** is unable to receive files from my Tandy 100 reliably at 1200 baud. The trouble could be in the Tandy, but the competing program, **Superterm** works well at 1200 baud. Fortunately, this won't bother those who use Commodore's 1600 and 1650 MODEMs. One other small complaint is that the CTRL key isn't used as itself - **Telstar** substitutes the LEFT-ARROW key. It also lacks both the Punter and Vidtex download protocols for uploading and downloading files. Even so, because it is the only completely cartridge-based terminal I've tested, and both capable and comfortable to use, I expect it to be my primary terminal for daily use. It is also a real bargain. Recommended. -JS

Update (see #15): VIDTEX, $40 diskette for **64.**
Terminal program from CompuServe, Box 20212, Columbus OH 43220. Unprotected.

REVIEW #1: Probably the best terminal program for general use on the 64. Combines very advanced standard features like RAM capture and printer dump. Also does some things other terminal programs don't, like graphics and auto log on with response to questions. The only problem is that the up and download and the graphics work only with **Compuserve.** If you spend any time on Compuserve, this is the terminal program for you. At $40, it's worth having if you use a MODEM at all. -Keith Peterson

REVIEW #2: I've successfully downloaded programs from CompuServe SIGs and Public Access. A 32K buffer makes downloading information easier and faster than reading it all or making notes while the charges mount. When the buffer is full, the program sends a Control S to the host while saving to disk, so you don't miss anything. When you display the buffer, text scrolls by almost too quickly to read, but output can be paused. It has adequate documentation, except for sections on creating an auto log on, and explaining edited and unedited saves to disk. Easy to use and excellent with CompuServe and bbs's, though I use Punter's program for downloading on Commodore boards. -Jeff Lowenthal

BASKETBALL STATS, diskette for **64.**
Basketball statistics from Midwest Software, Box 214, Farmington MI 48024. DOS-protected. 1 backup available for $4. 30 day free replacement warranty.

This basketball statistical aid package comes complete with three programs: customizer, stat aid, and league totals. Customizer will be used only once each year, at the beginning of the season. It allows you to personalize all reports with the team name, coach's name and season year. Statistics will be defined, the team roster will be entered, and the master control files established.

Stat Aid is the main statistical program. It is used to enter game statistics and produce summary reports for single games, season totals, and the team win-loss record. League Totals is a bonus program. It allows the coach to print a statistical summary of player performance in league games only. Eleven statistics are already in the package. You may add up to 4 more, or delete any you don't wish to use. If you want to get serious about your stats, then **Basketball Stats** is the package for you. -Tommy Zurkammer

FOOTBALL SCOUT, diskette for **64.**
Football statistics from Midwest Software, Box 214, Farmington MI 48024. DOS-protected, 1 backup available for $4. 30 day free replacement warranty.

This football statistics package includes two programs. Customizer is used only at the beginning of the season. It allows you to define formations and backfield sets, in line with your scouting system. A llist of teams to scout will be defined. All of this information will be saved in a file.

Football Scout, the second program, handles the statistical chores of the system. It is used to enter detailed information about the teams you've scouted. It also manipulates your data and produces printed reports showing the tendencies your opponents have displayed in given situations. This package is somewhat complicated, but I do think it could be useful. -Tommy Zurkammer

LEAGUE BOWL, $145 diskette versions for **PET/CBM, 64** or **29K VIC.**
Bowling league statistics record keeper from Briley Software, Box 2913, Livermore, CA. 94550. Requires CBM disk drive (DOS 1) and printer. Unprotected and backup permitted registered owners. Free upgrades for 1 year.

For those who like the extra money paid to a Bowling League Secretary, here is something to make the job easier. **League Bowl** provides a weekly printout of all calculations for handicaps, averages; it also allows for schedule changes, substitutions, lane schedules, even locker assignments! It can handle every variation of the rules my bowling expert knew. The 64 version runs smoothly and colorfully. The only difficulties encountered were: 1) sometimes numbers could not be quite formatted on the 40 column screen, 2) the program breaks out on disk errors, and 3) having entered a ladies league, it insisted all statistics referred to men.

Should be a good planning tool, plus act as a check on the accuracy of manual records. Unfortunately, most leagues insist on wall size posters for their records display, and stubbornly refuse to accept **League Bowl's** 8 1/2" X 11" substitutions. All in all, a very good and flexible program which checks for valid entries. The normal dislaimer of warranty is also thankfully absent. Recommended. - J. Paton Dellow

Computer Aids

HANDI-PAC, $35 cartridge for **64**.
Public domain utilities from Computer Outlet, Mission Gorge CA.

Programs include the Wedge, Tiny Aid and Supermon, as well as UNNEW, a speed control, a checksum for typing in Compute's Gazette programs, and a file copy able to handle machine language programs. I hope you use and enjoy this program as much as I do. It will enhance your computing and ease your fingers. -Tony Payne (Comm'putoy Cult).

STOP THIEF, by David Fillmore. $40 EPROM for 8032.
Computer security "lock" from Infosystems Limited, Box 2001, Sackville NB E0A 3C0. Plugs into $E000 socket in place of usual ROM.

Lately we've been hearing about a new invention that will make stereo's and other electronic gadgets unusable by thieves, by requiring a user-set password to be entered after any loss of power. This chip does the same for your computer every time you turn it on. To use a program you must type in a password you specify when ordering the chip. The chip also displays the name and address of its true owner each time it is started, making a stolen unit very hard to sell. The protection is limited, but certainly enough to foil most thieves and fences. It may also cut the risk of unauthorized users using your computer to view, alter, or copy data while you are out of the room.

Actually, any machine-language programmer could have written this program, but none of us did, and the convenience of getting a custom-programmed ROM makes it well worth its cost. Thanks again, to reader Jim Lewis, who gave one to us and another to JO for Christmas. Definitely recommended to all who use a PET or CBM in a sensitive location. -JS

Disk Aids:

First, an editorial word to software companies: Please don't rush out to buy and defeat the following **copy programs**. This is simply the visible tip of an iceberg of newly-available copying techniques. It's time to learn from the Apple world - they've been all through the protection route without visible success. Considering all the disk problems caused by DOS protection, this would be a good time to return to other methods: either non-protection, cartridges, or dongles. -JS

CANADA ARCHIVE MAKER, by David Fillmore. $42ppd. diskette for **64**.
Backup program from Skylight Software, 22 Miller St., Belfast ME 04915. Requires 1541 disk drive. DOS protected. No stated warranty.

Those 64 owners who have heard about the **Jolly Roger** program (see review below), have first been elated that a program finally exists that can backup some DOS-protected diskettes, and then disappointed that it only works on a 4032 or 8032 computer with 4040 dual drive, and that only dealers and schools may buy it. Now the author has another program, similar to **Backup 1541** on Commodore's **Disk Bonus Pack**, but able to overcome some disk errors. According to Canadian supplier Gerrit Moleman, of Marshview Software, Sackville NB, it will handle all but DOS errors 20, 27 & 29, and is superior to other commercial copy programs, including the early copy of **Jolly Roger** reviewed below.

After brief use, I prefer **Jolly Roger** because of the advantages the 4040 disk drive provides. First, **Jolly Roger** on a 4040 is 3 times as fast as **Canada AM** on a 1541. Second, you start **Jolly Roger** and walk off whereas, with **Canada AM**, you must swap 4 disk swaps in the middle. Otherwise, my only complaints about **Canada AM** are that there is no beep to alert me when a change of diskettes is needed, and that pressing SPACE aborts the copy

(using a key like STOP instead, is less likely to be accidentally touched). On the other hand, **Canada AM** is itself far easier to use than **The Clone Machine** - just pop diskettes in and out as requested and forget the rest.

I was put off by one inconsistency - it won't copy itself (implying it's all right to make an archival copy of other protected commercial software, but not to make a copy of the program we sell..). In comparison, **Jolly Roger** allows copies, but includes owner information in all copies to discourage illegal copying. It's also unfortunate, but probably necessary, that both **Canada AM** and **Jolly Roger** lock out listings and program changes. I'd like to see how they did some things, but letting me do that would eliminate their defense against illegal copies of their program. Overall, **Canada AM** is a very useful program, one that users will bless and software vendors will curse and try to foil. It is quite powerful, possibly the best users can now buy. More powerful tools exist, but are not available. Recommended for all 64 owners without a CBM/PET and 4040 disk drive. -JS

THE CLONE MACHINE, $50 diskette for **64**.
Backup copy program from Micro-Ware Distributing, 1342B Rt. 23, Butler NJ 07405. DOS protected. 90 day media warranty.

REVIEW #1: Designed to circumvent disk protection schemes. Menu driven and relatively easy-to-use, will copy whole disks and single files, will allow directory and disk ID changes. Primarily intended for seasoned hackers, with simple options for us key kidders. With this diskette and a good assembler package anything can be copied with minimal programming skills. The disk copy portion is easy to use and effective, but slow when set up for single disk. Will allow use of up to four drives. This is a "must have" for archival use only. -Charlie Strusz

REVIEW #2: The Clone Machine is the only program able to analyze a diskette for errors, and create errors on demand. I find it useful almost daily. However, it isn't for beginners. Using it is similar to using a machine language monitor - equally powerful and confusing. As with **Canada AM**, I was put off by the fact that it is unwilling to successfully copy itself (i.e., you can make an archival copy of other protected commercial software, but not make a copy of the program we sell). On the other hand, this may be rectified, according to MicroWare's **Clone Newsletter** (see separate review elsewhere). Recommended for skilled 64 users. -JS

JOLLY ROGER, by David Fillmore. $50 diskette for **PET** or **CBM** with **4040** disk only.
Backup copy program from Infosystems Ltd., Sackville NB. Only dealers and schools may order. Unprotected.

When a Midnite reader recently asked how to protect his software from copying, I advised him not to do anything fancy, because programs like **Jolly Roger** exist. Most copy-protected disks we have would yield to it. Further, it is so easy to use that anyone can run it. Unlike most such programs, it is also honest enough to copy itself, relying on a continuous display of the buyer's name and address on the screen to keep users honest. The only complaints I have are that it's slower than some disk recovery programs, and I don't care for the limiting of sales to dealers and schools; that's like keeping everyone out of the hen house except foxes.

Jolly Roger is a very effective and easy to use product. It will surely be misused, despite efforts by the sellers to avoid that, but is still a needed corrective to the dozens of companies still selling DOS-protected products without a backup copy. Recommended to all who are willing to only use it for legitimate backups. -JS

SUPERCOPY 64, by Richvale Telecommunications. $35 diskette for **64**.
Single drive copy program from Blue Sky Software, 26 Springdale Rd., Cherry Hill NJ 08003. Requires 1541. DOS-protected, no backup available. Anti-warranty.

Super Copy 64 is a fast 1541 copy program that works quite well, but it can't copy itself or any other protected software, and you buy it entirely at your own risk. The claimed 7 minutes per 1541 diskette is about right, and a vast improvement over Commodore's "1541 Backup." The program also includes **Copy-all 64** features, a device number changer, and a speed checker, all easily controlled from a menu. If **Super Copy 64** weren't sold "as is" without a backup, I'd recommend it to those without access to a dual drive. -JS

Graphic Aids:

Update (see #15): CARDRITER LIGHT PEN, $40 light pen & diskette for **64** or **VIC.**
Drawing aid from Cardco, 313 Mathewson, Wichita KS 67214 (316/267-6525).

Cardco offers this light pen as an alternative to the keyboard for simple operations such as choosing an option on a menu - tiring the user's arm instead of his or her fingers. Comes with a program that gives you a good understanding of how a light pen works and a nice little mailing list program. Unless you like playing TIC-TAC-TOE, look elsewhere for a good light pen, until the package gets better software! -Mike Stout

Update (see #16): COLOR 80, v1.0, by RTC. $40 diskette for **1701 monitor.**
80-column display from Blue Sky Software, 26 Springdale Rd., Cherry Hill NJ 08003.

I imported a copy - tried it on everything (TV's, monitors) - no good. When I complained to RTC, they told me v1.1 was much better (but made no offer to trade up) and that it worked best on a black/white screen. So much for **color** 80 - B/W 80 would be a better name. Does **not** work with the Commodore assembler - the main reason I bought it. -Paul Blair, Australia

Update (#15): DOODLE, by Omni Unlimited.
Drawing aid from City Software, 735 W. Wisconsin Av., Milwaukee WI 53233.

One of the biggest improvements in **Doodle 2** is the CIRCLES mode. You can now draw circles and ovals of any size very easily. **Doodle** offers you a selection of printers, including the 1525, Epson, Gemini, Prowriter, and Okidata. Another big improvement is that they have made the function commands much more consistent between modes. In the original, you had to exit SKETCH to ERASE. In **Doodle 2,** the two are combined, allowing for corrections with a single keystroke. A third significant change is in ZOOM mode. In **Doodle 1,** all paper colors were lo-res and not visible in ZOOM. With **Doodle 2,** colors are not only visible, but can be bit-mapped, though you are limited to one combination of 2 colors for each lo-res block.

Using color also uncovers a limitation: when you make a hard copy, **Doodle** prints all "paint" as black and leaves all "paper" white. Now I do 2 versions of many pictures; one in color, and one for the printer. The keyword with **Doodle** is patience. A full-screen color picture with detail can take up to 4 hours. -Bob Woods (Northwest Users Guide)
[NOTE: The cover of Midnite #17, illustrative headers for the Notes and Articles sections, and other Wayne Schmidt drawings, were really done with **Doodle**, not **Flexidraw.** These excellent drawings should have received proper honor - our apologies all around. -ED]

EDUMATE LIGHT PEN, $35 diskette/$30 cassette and light pen for **64.**
Drawing aid from Futurehouse, Box 3470, Chapel Hill NC 27514. No stated warranty.

REVIEW #1: For those with limited funds and limited requirements for precision, this is a very usable light pen. As with **Flexidraw**, I could write my name with it on the screen, but the characters came out much less accurately, and were made up of much larger dots, as though I'd written with a Flair pen instead of a ball point. The software is also much more limited than **Flexidraw**'s, lacking several of the drawing aids. However, it is a good tool for ordinary use, in the sense that not everyone needs a bicycle with a Reynolds 531 frame. Recommended for those on a tight budget who want to use a light pen instead of a joystick drawing program like **Doodle.** -JS

REVIEW #2: It works! Included on diskette version is 3D tic-tac-toe game using light pen, and a musical program (which I could not get to work!). Also included is a light pen operated DOS which allows you to do such things as initializing a diskette or deleting disk files/programs using the light pen. Technical info is given for using the light pen in your own programs but you better already know a bit about what you're doing if you hope to use it quickly. -John Jamison

FLEXIDRAW, $150 light pen and drawing software for **64**.
Drawing aid from Inkwell Systems, 7760 B. Vickers St., San Diego CA 92111. Requires CBM disk drive. Graphic printer optional. Unprotected.

REVIEW #1: By far the most interesting new product I've seen for the 64 lately, and a hit at every user group meeting at which I've shown it across the country. Amazingly, its lines have been completely accurate on every one of the dozen or more TV's and monitors I've tested. Among 64 light pens, it has no real competitor in precision, due largely to its using a photo-diode circuit instead of the more common photo-transistor. Compared to other excellent graphics packages **Doodle** and **Koala Pad**, it is of at least equal overall quality, and easier for me to use. For instance, prior to a newly developed add-on called **Pen Palette** (see review below), it could only draw in black and white, unlike **Doodle**'s full color capability. On the other hand, it can easily print its results on any of several graphic printers, unlike the **Koala Pad**. Apart from those differences, and its price, choosing between these 3 excellent products will depend largely on whether you prefer to draw with a pen, a joystick, or a graphics tablet. All 3 include nearly every desirable aid to drawing available. With my background in art, I prefer **Flexidraw** above all other graphics packages. Even Jamie, who first preferred **Doodle**, now chooses **Flexidraw** most of the time. Though he still can't draw a straight line easily, he now knows how to use the built-in features to do that for him, and the 60 power magnified ZOOM mode to repair mis-drawn lines. Our cover this issue #18 was done with **Flexidraw** (but not the cover of #17, as erroneously marked). Very highly recommended. -JS

REVIEW #2: If you read carefully, the manual is easy to understand, except for the Hi-res section. Younger children will enjoy drawing with it, but will need help understanding the terms and what the different modes do. GOOD POINTS: Can load hi-res mode. Has sprites and motion. Can save, load and print drawings. The 16x8 and 8x8 grids are very useful for drawing straight lines. Zoom mode is very interesting - it mades your picture 64 times larger. Has a good variety of modes. Rubber band effect is fun. BAD POINTS: My arm gets very tired, and the pen can get away from you. Won't always draw the exact line you want. A very good product. Recommended. -Cari Roberson (age 13)

GRAPHICS ASSISTANT, $80 by Charles Hickey, $80 diskette for **64**.
Graphic aid from Rainbow Computer Corp., 490 Lancaster Av., Frazer PA 19355.

One of the most versatile graphics programs for the 64, it includes line, bar, and pie charts. Line charts may have up to 200 points, bar charts up to 30, and any number of pie segments--any total of 30 columns by 16 rows. This is more than most 64 programs offer. Also, line charts may be overlaid on bar graphs. Both horizontal and vertical titles may be set. The charts are not as fancy of those of **Chartpak 64**; bars are solid rather than a choice of 24 kinds of dots or cross-hatching, but printed copies may be in either of two sizes. The manual, in a durable vinyl binder, is clear and easy to follow. It is an integrated part of "The Assistant Series." The printers supported are Epson MX80, Okidata 92, and the 1525. -Elizabeth Kaspar

Update (see #15): **KOALA PAD**, $90 diskette & graphic tablet for **VIC** or **64**.
Drawing and painting aid from Koala Technologies, 3100 Patrick Henry Dr., Santa Clara CA 95050. DOS protected. 90-day repair/replacement warranty.

UPDATE #1: Allright! Small touch-pad tablet hooks into joystick port. The 64 version includes software on diskette called Koala Painter which has to be the neatest high-res program to be had. Draw, color, enlarge or paint...circles, squares, boxes or whatever you design with the touch of the stylus and a button. 16 commands for your creations, 8 different brushes and 16 different colors with 16 different patterns. You can create what you like and save it to the disk to view later. Also a 'swap' command which allows you to work with two pictures in memory at the same time interchanging parts of each. Now my three year old fights me to use the computer!

But even though **Koala Pad** is advertised as having such varied uses as a joystick or other program control tool, very little is included for us novices to figure out how to make them work. The VIC version includes software allowing you to program a dancing bear. Cute, but limited. -John Jamison

UPDATE #2: The tablet itself is about 6 inches square, has a pressure sensitive plate, and attaches to the computer via the joystick port 1. One may use the accompanying plastic pencil or his finger! You never use the keyboard. What can you do with it? There is a graphics menu, with about 16 or 20 pictures to which you "point" on the tablet to work in that particular mode. You return to the menu by pressing a button on the tablet, and select by pressing twice! There is a color panel to choose your colors. Depending on what you select, you can draw rectangles and circles of varying sizes and thicknesses at various locations in a variety of colors. You can fill in blocks of colors, draw straight lines between points, angles, and you can erase! A nice feature is a set of pre-drawn characters, animals and such. These can be "picked up" and "placed" in your picture by way of the menu and the tablet! It's super. I can tell you one thing - that's the next item on my wish list! -Daniel Overton

UPDATE #3: **Koala Painter** (formerly Micro Illustrator) comes with the tablet. The program is FANTASTIC. You can interface the PAD with your own programs with some effort. Routines to READ the **Koala Pad** from COMAL will be published in the COMAL TODAY newsletter. The PAD merely returns two values, as if two paddles were plugged into the port. The two buttons match the joystick left and right values. The PAD seems to be accurate most of the time, with a spurious point return once in awhile. To be absolutely accurate, simply read the port twice and make sure the value is the same. **Koala Painter** demo program seemed extremely accurate at ALL times. A color monitor or TV is almost required to take advantage of Koala Painter. Highly recommended. -Len Lindsay

PAINT MAGIC, by Mark Riley. $50 diskette for 64.
Drawing program from Datamost, 8943 Fullbright Av., Chatsworth CA 91311-2750 (213-709-1202). Requires 1541 and joystick. DOS-protected, backup $5. Lifetime free replacement warranty.

Paint Magic just has to be an excellent drawing program, if only because of the excellent pictures produced on it to grace the cover screen of most Datamost games, not to mention the nearly a dozen excellent sample drawings included with the program. Like **Doodle** (see separate update), it is a joystick drawing program. Unlike **Doodle**, it is color only, and shows all its options on a single command screen, with all options continuously available throughout the program. In other respects the two programs seem similar--both offering a full set of useful commands covering nearly all the usual drawing needs.

I've not used our newly-arrived copy of **Paint Magic** enough to rate it as better or worse than the other excellent drawing programs reviewed this time (**Doodle, Koala Pad** and **Flexidraw/Pen Palette.**) However, I can confidently recommend it as a good product, and commend its makers for its ease of use. Unlike nearly all of its competitors, it makes drawing adjacent lines different colors an easy and intuitive process. As for complaints, I found the drawing cursor distracting in zoom mode, but quickly learned how to switch it off. Next, the otherwise helpful brief manual neglects to mention how to load a created picture into another program. However, the only serious lack is that there is no way to get hard copy of a picture. I get a lot of mail from Koala Pad owners wishing for that feature, and I think many **Paint Magic**ians will concur. On the other hand, if you simply need an excellent program for designing full screen hi-res drawings in color with a joystick, **Paint Magic** will serve you well indeed. -JS

PEN PALETTE, $20 light pen and diskette for **64.**
High-resolution drawing aid for **Flexidraw** from Inkwell Systems, 7760 B. Vickers St., San Diego CA 92111. Requires CBM disk drive. Graphic printer optional. DOS protected. 90 day limited warranty. Replacement disk $5.

This is a new add-on to the **Flexidraw** light pen system. It adds full color capability to high-resolution pictures drawn with Flexidraw or other graphic packages. After brief use, I must commend Inkwell Systems on the first color drawing package that makes sense to me. Full-color high-res drawing is difficult on the 64, because each 8 by 8 dot square can only have 2 colors. Pen palette eases dealing with this restriction by allowing you to mix colors as desired in 23 "paint pots", and use each as needed to get the desired effect. It also has a way to peek at what colors are already in use in a given square. The only thing it really lacks is an "undo" option, to restore the prior colors after trying something.

(A "pause" command approaches this, but only undoes faulty paint pot selections, not faulty painting.) The package also includes a utility program to provide color animation, and shows how to load colored pictures into other programs. I understand **Pen Palette** may already be merged into a new version of the **Flexidraw** package, which would be best, even if it means increasing the price of the pen. Doing so would eliminate the need for the DOS protection, which eats 1541 drives, as we all know.) Overall, a very easy to use and powerful extension to the best light pen system available for the 64. Highly recommended. -JS

PICTURE PERFECT, $25 diskette for **64**.
Hi-res drawing program from Ranger Due, Micro World Computers. No stated warranty.

Neat high resolution drawing program that easily draws circles, lines, boxes, graphs and whatever your imagination can picture. Uses joystick (good response control) with up to 5 different pens, 15 colors, and upper and lower case. Instructions are simple mimeograph but straight-forward enough to do the job. Command summary sheet included for quick looks. Create and store drawings on disk for later use. Pretty sharp! -John Jamison

SUPER EXPANDER 64, $60 cartridge for **64** or **VIC**.
New graphic/sound aid from Commodore, 1200 Wilson Dr., West Chester PA 19380

Newly arrived for review. Adds sound and graphics commands to the 64 similar to those touted by competing computers. More later.

Music and Sound Aids:

CHATTERBEE, by Don't Ask Computer Software, Inc. $40 diskette for **64**
Spelling game from Tronix, 8295 South La Cienega Blvd, Ingelwood CA 90301 (213/215-0529)

Give me your vocabulary word and I will say it. Then type in the correct spelling of what I said and if correct, the bee smiles at you and a tune is played; if wrong, you get two more chances before being given the correct spelling. Great idea - if only the speaker didn't sound like someone with a terrible sinus cold. Soft consonants are almost impossible to understand. Also, the screen blanks out whenever the speaker gives the next word and explanatory sentence. Great idea, but very poor sound quality and extremely dull feedback or reward. Not recommended until sound quality is improved. -ES & Bob Wolters

COMVoice, $149 cartridge and speaker for **64**
Voice synthesizer from Genesis Computer Corp., P.O. Box 1143, Bethlehem PA 18018 (215/861-0850)

This voice synthesizer uses the very excellent Votrax sound generator to pronounce anything you type into your computer (without punctuation marks, however, such as apostrophes and question marks). Type a line number and the word SPEAK, and it will speak anything you type; add a line number to save and use in other programs you write. Since COMVoice uses phonemes, you use phonetic spelling on unusually-spelled words. Can duplicate any voice intonation (or incantation, if you prefer); one customer was even able to program in voice inflections, though this was not described in the manual. Sentence intonation rises and falls properly from beginning to end, and has 4 levels of intonation (for male/female voices). SPEAK command can be used with IF statement. Can pronounce individual numbers, or numbers up to 11 places (can't do a billion!!) , negative numbers and even decimals (point ...). It speaks letters when they stand alone, and converts them to words when typed together. This is the best we've seen on the market so far. Very highly recommended. -ES & Bob Wolters

MASTER COMPOSER, $35 diskette for **64**.
New music aid from Access Software, 925 E. 900 South, Salt Lake City UT 84105.

Newly arrived for review. Its demo is quite impressive, featuring graphic displays of the actual notes as played. More later. -JS

MUSIC CONSTRUCTION SET, by Will Harvey. $40 diskette for **64.**
Music aid from Electronic Arts, 2755 Campus Dr, San Mateo CA 94403. Joystick optional. 90 day media warranty.

REVIEW #1: The ads, as strong a picture as they paint, don't even begin to tell how truly pwerful this program really is. You can load songs and listen to them, slow them, change the sound, and learn while you have fun. And those who already know their way around in the world of triplets and time signatures will discover a brilliantly designed and powerful tool, capable of serious professional composing. This thing really works!

The **Music Construction Set** can even transpose your composition for you. Again an excellent piece of software with thorough and enjoyable documentation. And all at a reasonable price. The beauty of the Construction Set is that you can just wander about, guided by what sounds good. The editing abilities using cut and paste are impressive. The only real criticism is that they didn't make the screen a little easier on the eyes. -Randy Chase (Northwest Users Guide)

REVIEW #2: Agreed. An excellent and supereasy program to use. If only the screen weren't so painful to view, and it could hold longer pieces. Recommended. -JS

MUSICOMP, $40 diskette or cassette for **64.**
Music composition/transcription software from Computer Alliance, 10730 White Oak Av., Grenada Hills CA 91344. Protected.

Until now, you could get only 2 types of music utilities for the 64. One allows you to 'play' your 64's keyboard like a piano keyboard. The second type, such as Commodore's **Music Composer**, allows you to input a confusing form of musical notation and then hear it played back. Most of this software has no visual display of the music being played, cannot work in a variety of key and time signatures, and cannot handle staccato, legato, tempo changes, triplets, etc.

Musicomp is several programs: the familiar 'piano keyboard'; an elaborate graphics program, using sprites and hi-res to display your music on an ordinary trebel/bass clef staff; a powerful programmers-aid package (incorporating autonumber, renumber, trace, step, delete, and a raft of disk commands); an impressive tutorial on the SID; and best of all, traditional music notation and terminology. Choose from 20 pre-set 'sounds', create your own, or play a dozen songs on the diskette.

My gripe is lack of a routine to dump your music program to a printer, which less sophisticated music programs can do. The 50-page loose-leaf manual is well-written, with good examples. None of the programs I've checked (such as **Music Construction Set**) approach **Musicomp**'s power and versatility. An 'enhanced' version should be available that lets you construct music using a joystick. Here is a prime example of a small, independent software house producing a quality product head and shoulders above the Big Names. I pat myself on the back each time I use this software. -Rich Westerman (The Hacker Rag)

NOTEPRO II, by Eli Sokal. $50 diskette for **64.**
Music utility from Electronic Lab Industries, 100 W. 22nd St., Baltimore MD 21218. No stated warranty.

The first thing I noticed was the documentation; incredibly, they consistently misspelled 'rhythm'. The program itself isn't bad for non-musicians, but it's nothing like writing real music. As a musician I found it difficult and uncomfortable to use the program's strange, non-musical notation. It makes pretty good use of the 64's sound capabilities, but the graphics aren't very effective. Most of it is relatively simple to use, but the arrangement section is very complicated, and not very well explained. Overall, not too bad, but only recommended until something better comes along (like **Music Construction Set**). -Marc Rosen

S.A.M., by Don't Ask Computer Software, Inc. $69 diskette for **64.**
Voice synthesizer aid from Tronix, 8295 South La Cienega Blvd, Ingelwood CA 90301 (213/215-0529)

REVIEW #1: Uses a software concept that needs to be polished or else it is just pushing the limits of the SID chip. The idea is to give you a Votrax type of speech generator, but falls far short of the mark. Not recommended until sound quality is

improved. -ES & Bob Wolters

REVIEW #2: The meeting of the Fox Valley Commodore Users Group was officially opened with greetings from S.A.M., the new speech synthesizer from Tronix. S.A.M. introduced himself and then sang the Star Spangled Banner for us. I just gotta get that program! -Herb Gross

Printer Aids:

PRINTER UTILITY PROGRAM, $20 diskette or cassette for **64** or **VIC**.
2 printer utilities, from Cardco, 313 Mathewson, Wichita KS 67214 (316/267-6525).

These two programs, designed for Epson MX and FX series printers (with Graftrax), Gemini-10, -10X, and 15, and Prowriter (a la C-Itoh B510), simplify the process of using non-CBM printers. One program allows you to dump your screen - including all CBM graphics characters - directly to the printer, either in normal or reverse image. The dump function is accessed either via a SYS written into your program or by the press of a user-defined key. The program also lets you include graphics characters in program listings and perform other printing functions without a full-scale screen dump. The program doesn't interfere with normal BASIC programs and can be loaded at several locations.

The other program lets you use various size and style printfaces (up to 2 inches), with letters printed lengthwise down the page, allowing printing of "banner" headlines, etc. Although the program can take 8 minutes to load from tape and a requested printing job can also take some time, the results are worth the wait. -Scott Shearer

PET-TRAX, $40 ROM for **PET with BASIC 2 or 4.**
PET to Epson graphics program from AB Computers, 252 Bethlehem Pike, Colmar PA 18915 (215/822-7727).

Although the one-line listing in AB's ad says "software," this turned out to be a ROM (versions for $9000 or $A000 available). Luckily I had room for the version I received. Works on all but original ROM PETs and all keyboards, allowing the use of Commodore graphics in 1) screen dumps and 2) listing of the program in memory. A nice feature is that one can choose regular width or "hi-res" (condensed type). Good news for Gemini owners - it also works with that printer (be sure to put the line-feed switch on). What I expected was a program to make an Epson recognize and print PET graphics characters; what I got was an expensive screen dump and list utility. Not recommended. -Candy Jens

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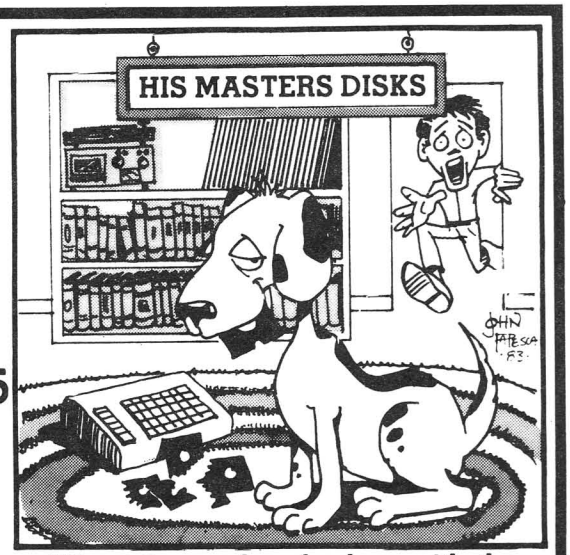

"Should've made a back-up with the Clone Machine."

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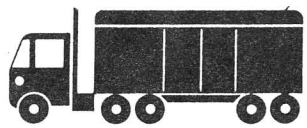

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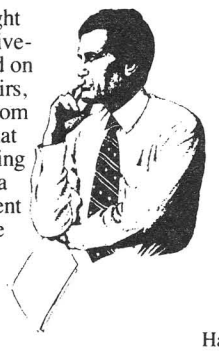

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Coming Up

New Arrivals

Here is a brief list of new programs whose reviews are still in process. We'll hope to have full reports on these and others next issue.

CHARTPAK-64, $43 diskette for **64**. From Abacus Software, Box 7211, Grand Rapids MI 49510. DOS-protected, backup available for $5. 90 day media warranty. This statistics and graphing package does exist and work.

Datamanager, from Sky Shepard. An in-memory data manager.

EZ Books 64, by B. Prouty (See Midnite 10 for a review of the excellent PET/CBM version.)

Gradebook, from C. Peraini. A handy grading program.

Kinder Concepts, programs for early education from Midwest Software. These are the PET versions; the 64 and 264 versions (see Midnite 15 for review of 64 version) will come directly from Commodore.

Master 64, from Abacus. A very powerful programmer's aid and file manager. (See review of CBM version in Midnite 10.)

Paper Mate School, by D.C. Johnson. A customized version of the popular Paper Mate word processor, optimized for school use.

plus about a dozen good-looking new books from Prentice/Hall and others.

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Resources

Here are the addresses of some user group newsletters quoted in recent issues. Many thanks for the great job they are doing in their local areas and for keeping us informed about their work!

COMAL Today, c/o Len Lindsay, 5501 Groveland Terrace, Madison WI 53716
Commodore Computer Club of Toledo Newsletter, 734 Donna Dr, Temperane MI 48182
Commodore International, a staff newsletter published by Commodore Corporate
Commodore Newcomer's Newsletter, c/o Art Klinger, 4659 Balboa, Wichita Falls TX 76310
Commodore 64 Users Group Newsletter, c/o Clearfield UT
Commodore Users Group of St. Louis,c/o Richard Schumacher,Box 6653, St.Louis MO63125
Comm'putoy Cult, c/o Jane Campbell, Box 86531, San Diego CA 92138
Computer & Software News, 99 Park Av., New York NY 10157 (dealers only)
DISKUSS, c/o Don Bidgood, 25 Medford St., Dartmouth, N.S. B2Y 3C2 CANADA
DTACK Grounded, c/o Hal Hardenberg, 1415 E. McFadden, Ste. F, Santa Ana CA 92705
Eight Squared c/o J.A. Skelton, P.O. Box 76, Mt. Holly Springs PA 17065
The Exchange, c/o Bill McDannell, 1410 S. McArthur, Springfield IL 62704
The Hacker Rag, c/o Rich Westerman, R.R #1, Box 279, St. Anne IL 60961
Hardcopy, c/o CHUG, John Walker, 8738 Wildforest, Houston TX 77088
Industry Week, (dealers only. address unknown)
Infoworld, 375 Cochituate Rd., Framingham MA 01701 (magazine)
Journal/20, r.i.p. Write Mike Apsey, at Box 1149, Van Alstyne TX 75095
FOCUS, c/o Mike Spengel, Apt. 410, 4301 Columbia Pike, Arlington VA 22204
Fox Valley Commodore Users Group, c/o Herb Gross, 833 Prospect, Elgin IL 60120
Jeffries Report, Box 6838, Santa Barbara CA 93160
Microcomputing, 80 Pine St., Peterborough NH 03458 (magazine)
OK Connection, c/o Randy Hill, 1401 N. Rockwell, Oklahoma City OK 73127
On-Line, c/o Paul Motise, Rockville MD VIC/64 UG,
Peeks and Pokes, BCUG, Bloomington IL
SuperPET Gazette, c/o Paul Skipsi, Box 411, Hatteras NC 29743
The Use-Letter, South Bay CUG, c/o Craig Whittler, 17306 Ermanita #3, Torrance CA 90504
SFVCUG User's Port, c/o Tom Lynch, San Fernando Valley CUG (SFVCUG)
Wall Street Journal, New York NY (magazine)
WCUC Newsletter, Westmoreland PA
Western Illinois PUG Newsletter, Quincy IL

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The **Midnite** is published **bi-monthly** by **Midnite Software, Inc.**
Price: $23 US per year (individuals)
$15 US per 6 copies (groups)
($28 CDN; $33 surface, $43 air overseas)
Back issues? #11-15 are available, plus our Whole PET Catalog ($8 postpaid)

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