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Ramblings From The Ridge
by D. Sage

Family Computing magazine's publisher has advised us that their publication intends to continue to support the ADAM in the future. Their latest two issues have returned ADAM to their cover and continue to carry programs and other information. We are pleased to share this news with you.

Unfortunately, not all the news can be good. It was recently announced that two computer magazines would cease publication with their December 1985 issues. The two are Creative Computing and Popular Computing. While I never have been a real fan of Popular Computing, I have subscribed to Creative Computing for some time. I always liked Creative at least until recent times when its format seemed to undergo changes that took much of the meat out of the publication. It seemed to become less technical and to lose much of David Ahl's personal touch and become more general than I cared for. Oh well, you can't please everyone, but in a time when computers hold so many people's interest, it is difficult to believe that a publication like Creative is unable to survive.

I realize that advertising is the key to the success of the glossy magazines, but when you look at the rates they charge, you can see why many companies simply cannot afford to spend that money at a time when margins are growing slimmer. Companies like Ziff-Davis may need to more carefully consider the revenues that are produced by subscriptions in paying the publication's way and thereby become less dependent on advertising revenues.

Many software and hardware advertisers have been reading the results of surveys that show that most of us make our buying decisions of these products based on word-of-mouth and reviews and not based on flashy advertising. Let's face it, there is little that you can tell about most hardware and software products in a half-page color ad.

Well, as I look out my window, I can see a concrete slab covered with snow and ice. No, my office is not finished. We have had rain, rain, rain, ice, rain, ice and snow. Needless to say, you can't do much building under those conditions. Looks like we will have to wait for the spring thaw.

Coleco has apparently begun to ship 2010 Text Adventure in limited quantities. Best of Electronic Arts has apparently been canceled and we have heard rumors that the last version was full of bugs.

Jeopardy also appears to have been canceled. Both it and Family Feud were to have had additional question packs when originally planned and the decision not to produce those may have led to the decision to cancel Jeopardy.

If you are interested in completing your collection of Coleco game carts, you should probably hurry. Some of these are already becoming scarce and since all cartridge production appears to have been discontinued by Coleco, the others will become scarce soon. Look for Coleco's ADAM software to also become scarce as remaining inventories are moved out.

Other companies continue to produce new software for ADAM. Strategic Software has introduced PaintMaster (reviewed in this issue) and TurboLOAD which is designed to speed up loading of data pack and disk software. According to Strategic, Basic programs processed with TurboLoad may load as much as ten times faster than normal.

The TurboLoad package also includes a file organizer that allows you to manage all of your data pack or disk files. It allows you to change the volume heading, rename files, lock, unlock, catalog, and load and run programs. This package is to be priced at $29.95 and will be available through the various mail order companies supporting the ADAM.

Strategic Software has also advised us that they plan to introduce MultiWRITE within the next few weeks. They indicate that it will have a 64 column display without any hardware add-ons and will be a full-featured word processor written primarily in machine language. This word processor will include right and left justification, onscreen centering, variable line width and spacing, variable tabs, move and copy, mid-line insertion, headers and footers, auto page numbering, single-page print, and other features. This product will be introduced at $39.95 and will be available from the same sources as their other software.

Elsewhere in ECN is an article announcing the introduction of 4D Forth for the ADAM. Since the article contains all the details, I won't repeat them here.

In a note that is sure to be of interest to some of you, Judy Hunt has advised me that she has successfully recovered money from the now defunct Adam Users of America's Taylor Barcroft (Garden of ADAM newsletter which lasted one issue). Ms. Hunt filed a claim through the small claims court in California where she is a resident.

This procedure can be successfully followed by other residents of California, but is likely to be of little

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help to non-California residents. Anyone interested in having the details necessary to bring such a claim should contact us here at ECN and we will be happy to help you.

Some of you have called about Serendipity Productions' ADAM TECHNICAL JOURNAL. No one has received any issues past #3 and they have ceased advertising. Since they have not responded to any inquiries concerning the current delay, we must assume that they have ceased publication. We are sorry to see them go, not only because of the money that has been invested in subscriptions, but because we felt that it was a fairly good publication.

A number of you expressed an interest in the Nintendo game system, so I have included a review in this issue. If the interest continues, I will try to include some mini-reviews of available game cartridges in the future. This is not intended to reflect a move away from the ADAM in our publication, but is only an attempt to supply information that, many of you have requested. Next time we will have a review of the Amstrad CPC 6128 which has finally begun to ship. It is unfortunate that many of these smaller companies receive no coverage in the larger computer publications.

This issue contains a variety of articles, including one on adding composite video to the Colecovision and Expansion Module #3, information on using languages with CP/M, ADAM system CALLs and reviews of a variety of products. This issue does not include any programs, but we hope to carry some in the next issue. Although, our subscription volume continues to grow, we have noticed a distinct decline in user written submissions of reviews, articles and programs. Remember this is your publication and you are encouraged to submit your programs, reviews, and articles. By next Issue, we also plan on making more CP/M public domain programs available, but unfortunately the demand for these materials has been fairly small.

In spite of rising postage and publication costs we have been able to hold the price of a subscription to ECN to $12.00 per year. Unfortunately, as of March 1, 1986, we will be forced to increase the renewal and new subscription rate to $15. Renewals at the current rate will continue to be honored until that date, regardless of the expiration date of your current subscription.

Our supply of back issues is currently limited to Issues #1, #2, #8, #9, and #10. These will remain available at the price of $3 each. If any of the other issues are reprinted, we will advise you in ECN.

We had planned on having this issue in the mail before Christmas, but if it doesn't make it, we still want to wish all of you a happy holiday season. We are looking forward to serving you in the years to come and are proud that we have now completed two years of publishing ECN while others have failed or never gotten started. Thanks to all of you and a special thanks to those who have regularly submitted materials and shared their thoughts with us and with you.

What About The Competition?
by D. Sage

Things are stirring again in the home computer market. Even though this market is alleged by other writers to be nonexistent, we have found it to be healthy and growing. The market obviously exists at different levels. There are those that are buying computers in the $1000+ range while another market exists below that.

Most ADAM owners belong to the lower end market along with others who have yet to find a product that suites their needs. The lack of sales at the lower end continues to be due primarily to a failure of companies to produce a product that meets the needs of much of the buying public.

The ADAM came close, but for reasons already discussed it failed. Commodore has produced products in the right price range, but has consistently failed to produce a machine that can be easily connected to products using standard interfaces.

In addition Commodore has a reputation of producing products that either have short operating lives or have not been fully tested. Atari products have also followed the path of non-standard interfaces and continue having difficulty recovering from their past reputation which includes poor user support.

Both European and Japanese companies continue to eye the American market, while some of these are now approaching that market cautiously, still others are expected to enter it in the near future.

Amstrad began shipping their CPC6128 in the U.S. in November and is hoping that it will be the success here that it has in England where it is rapidly becoming the best selling home computer in a highly competitive market.

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Sinclair, in the meantime, has changed its mind concerning the QL and decided to introduce it in the U.S. for $299. This move to the U.S. market is rumored to have been caused by Sinclair's inability to compete with the Amstrad system in the U.K. (the QL is available from QL Connection, 15 Kilburn Court, Newport, RI 02840, ph. 401/849-3805).

Meanwhile, in Japan, the MSX systems have been under going a period of quiet change. They are generally being transformed into 128K systems with an 80 column display, a built in disk drive, rather than the original cassette, and a new video chip that supports higher resolution graphics and more colors.

Originally they had used the same video chip as the ADAM, but found that it did not meet the needs of long term growth or of their customer base. This new generation of MSX systems is dubbed MSX-2 and is fully compatible with most MSX software developed for the earlier machines.

Some people suspect that these changes are being made to ready these products for introduction into the American market. These changes appear to be largely in response to the criticisms the machines have received when they have been displayed here in the U.S. It is also rumored that at least two Japanese companies (including Sony) may be planning on introducing their MSX-2 systems with an optical disk system for data base storage and retrieval.

The rumors indicate that these systems may be introduced in the U.S. in January with a price tag as low as $600 which includes a disk drive and optical disk system. I feel that such a move could have a major positive impact on the U.S. market and would be welcomed by many consumers.

Meanwhile, Yamaha seems to be the only company actually selling an MSX computer in the U.S. We recently obtained a Yamaha CX5M cassette based MSX computer, which we will be reviewing in the near future.

Yamaha has already announced an MSX-2 disk version of this same computer, but considering the delays we encountered in obtaining the CX5M, it will probably be a while before these are available. The CX5M is sold primarily as a music composition and synthesizer system, although it will run other MSX software if you can find it. If anyone is interested in the Yamaha system they should contact their local Yamaha music dealer for more information.

Despite its many critics the Atari 520 ST continues to be selling quite well. It is expected that the operating system for this computer will finally make it into ROM late in January. Software is now beginning to appear in quantities for the ST and includes a variety of products. Meanwhile, Atari is planning to introduce a 1-megabyte ST sometime after the first of the year.

Commodore's Amiga is also selling well, although I expect it to have much less of an impact on the home market than the ST. Many companies are producing software for the Amiga, but at prices considerably higher than comparable products for the ST. This makes sense since the Amiga costs more! I don't understand the logic in this, but people who own more expensive computers seem to be willing to pay higher prices. I guess it's the old "whatever the traffic will bear" concept.

Apple and IBM have been cutting prices. IBM is looking to unload the rest of their JR. inventory during the Christmas season. If they couldn't sell them last year, before it was discontinued, how can they expect to sell them now.

Apple is just trying to increase its revenues. Prices on the IIe and IIc continue to get better, but. Now you can buy an Apple compatible Franklin ACE 2000 with more for the money. The 2000 includes two Apple compatible 140K disk drives, 128K RAM, 80-column display, parallel and serial printer interfaces, three expansion slots, joystick connectors and composite color output all for $999.

That company has recovered from its lawsuit with Apple and has an operating system that runs the Apple software without violating Apple's copyright.

For more information contact Franklin Computer, Route 73 & Haddonfield Road, Pennsauken, NJ 08110, ph. 609/488-0600.

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I try to stay on top of any new developments in this area and will try to bring you news on any developments at the Winter CES. If you have any news or rumors on new computers, let us know and we will try to check it out and pass it on to everyone else.

ADAM System Calls
by D. Sage

This is the second in a series of articles covering ADAM'S system calls. Refer to issue #11 for part 1 and an explanation of how to use this information.

CALL FC45$ (64581) - This routine checks on I/O progress. Checks on DCB (device control block). Determines if I/O read is complete and error free. A register contains the device ID at start and the error code, if any, is returned in the A register.

CALL FC48$ (64584) - Similar to FC45$ but used for the keyboard I/O. A register usage is the same.

CALL FC4B$ (64587) - Get keyboard key or current status. If key press has occured place key in buffer. Error code, if any, is returned in register A. This appears to be a non-waiting command.

CALL FC4E$ (64590) - checks I/O status following a write. A register is device ID and error code, if any, is returned in A register.

CALL FC51$ (64593) - checks I/O write status of printer. A register is device ID and error code is returned in A register.

CALL FC54$ (64596) - Finds the Device Control Block for a specified device ID. A register is the device ID and IY contains the start of the DCB.

CALL FC57$ (64599) - Identical to FC54$.

CALL FC5A$ (64602) - Get address of Processor Control Block (PCB) for current PCB. Starting address returned in IY register.

CALL FC5D$ (64605) - This is a Hard Init. All devices are reset and all PCBs and DCBs are cleared and checks for all active devices.

I realize that some of these CALL statements are somewhat esoteric, but to some of you these will be useful. Next issue we will continue with more I/O calls.

CP/M & ADAM: Using Languages
by D. Sage

A number of you have asked for more information on using languages such as those supplied in the public domain for CP/M. Since some of these languages are accompanied by little or no documentation you are likely to have problems when trying to figure out how to load the language or how to load and run a program written in that language.

I will provide some of the information here, but would also suggest that you obtain one of the many books written on using CP/M that includes a section on using languages. You should also probably obtain a book on the language itself. For those of you who are using E-Basic, you will have to get one of the books on C-Basic.

Although these two languages have their differences, they are quite similar as is indicated in the documenta-tion accompanying E-Basic. Naturally, one of the requirements for using the various languages available for CP/M is a good familiarity with your ADAM CP/M manual and the various utilities that are included in your CP/M disk.

Before using any language take the time to carefully read the ADAM CP/M manual and become familiar with its features. It also wouldn't hurt to pick up one of the many good books on CP/M and read it over to help clarify further what to do. A number of these books have been reviewed in ECN. I have found the CP/M Bible by Waite and Angermeyer to be quite useful since it includes chapters on some of the languages as well as general information on CP/M and its various utilities.

The first step in using any language requires that you create a working CP/M system disk by using the SYSGEN command. You will also generally need to

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transfer a copy of PIP.COM to your new working system disk. You then need to transfer the necessary files from the language disk to your new working system disk. You should also transfer any sample programs written in the language to this disk if you are planning to run them. This new disk will then have to be booted from drive A to be used. Many of the public domain languages will only load and run from drive A. Likewise programs written in those languages will often only load and run if they are on drive A.

Compiled languages work differently than interpreted languages and are generally more difficult to use since most of you have never used anything but a version of interpreted Basic. With CP/M, everything that you use whether it is a program or language must be loaded before it can be used.

One of the languages available in CP/M is a version of Tiny Basic called TINIDISK. This is an interpreted version of Basic. To load it under CP/M all you have to do is type in "TINIDISK".

Once TINIDISK is loaded it works very much like SmartBasic although it has a restricted set of KEY words. Programs are written and run after TINIDISK is loaded rather than using an Editor.

Compiled languages operate substantially differently. Typically the program is written with an Editor and then is compiled and finally is run. During the compile, any errors will generally be listed. You then have to reload the editor and make the necessary corrections. Some languages such as Turbo Pascal have their own editors which eliminates the need to use the CP/M ED editor.

To use the compiler you generally enter the command in this fashion: "COMPILER PROGRAM [switches]", where COMPILER is the name of the compiler such as EBASIC and where PROGRAM is the name of the program you wish to compile such as TREK.BAS.

The switches are used to control compiler output of error messages and listings. The compile process produces an output file which is the compiled version of TREK.BAS. The new file will have an extension of INT (TREK.INT).

True compilers will produce a resulting file with the extension .COM which does not require a run module to load and run under CP/M. The EBASIC .INT file will only run using the EBASIC run module ERUN or other appropriate designation, depending on the version of EBASIC you are using.

I generally recommend that you use the latest version of the compiler which is BAS2-1.COM and the latest version of the run module RUN2-3.COM.

Occasionally you will get errors during the RUN stage that were not identified by the compiler. These will need to be corrected and recompiled before running.

I realize that for many of you, using CP/M is like learning a foreign language. Remember, learning CP/M takes time and patience. When in doubt reread the manuals and instructions or seek guidance from someone who is familiar with CP/M.

4D Forth For ADAM
by Philip Taterczynski

A version of the programming language, FORTH, prepared by 4D Interactive Systems and sold through Mountain View Press, is now available for your ADAM. The package includes FORTH software, the books All About FORTH, Starting FORTH, a source listing, and all the documentation for using FORTH on the ADAM. The price for the complete package is $175.00, and if you have any of the books, their prices may be deducted from that figure. Ordering information appears below.

FORTH is a compact, high-level language with many features of an assembler and operating system. These features are, in fact, part of the language. Programming in FORTH bypasses many steps familiar to users of SmartBASIC. When you program in FORTH you actually add commands to your own personal copy. These definitions are much shorter than their Basiic equivalents and become interactive with the computer when FORTH is up and running.

The following two examples show routines written in FORTH and Basic that are designed to print a message string when the "M" key is pressed:

BASIC:

```
10 GET m$
20 IF m$ = "M" then print "THIS IS NOT A MESSAGE"
```

FORTH:

```
:M."THIS IS NOT A MESSAGE" ;
```

This is a trivial example, but it's easy to see that longer routines save proportionally more space - and time.

This time savings become very important when FORTH is handling highly repetitive tasks, or using graphics.

FORTH can animate graphics with no noticeable time lag compared to machine code.

The following two programs perform 32,000 operations of the equation z = (x + y)/2 with fixed values for x and y:

BASIC:

```
10 X = 100: Y = 100: Z = 0
20 FOR I = 1 TO 32000
30 Z = (X + Y)/2
40 NEXT I
50 PRINT Z
```

Then type RUN

FORTH:

```
100 X ! 100 Y ! Z !
: ZZ  32000 1 DO X @ Y @+2/Z! LOOP
Z @ . ;
```

Then type "ZZ"

In FORTH you have defined a command string "ZZ" which executes the loop. The Basic version of the program takes 320 seconds to run; the FORTH version requires only 105 seconds, a time savings of 67.1%. A further advantage to the FORTH version is that all definitions you write are always available. In Basic, of course, you can run only one program at a time. You can see that FORTH uses typographical symbols where Basic uses full words, and that operations are written in "reverse notation" with the operators after the numbers.

So, FORTH is faster than BASIC, but speed is not the only consideration. FORTH lets you address all ADAM's peripherals and memory directly. It's possible for instance, to write your own modem software, or store and retrieve data in specific areas of memory without having to learn machine language. Data can be directed to any drives you have plugged in and even address the 64K memory expander. This allows you to use a greater range of ADAM's capabilities. It is even possible to recover data from files which have been deleted from a disk or tape's directory.

FORTH operates the same on all microcomputers. New routines written on an ADAM can also be used when entered on another system. It is also possible to insert a source disk from a PC Jr. into an ADAM disk drive and read out data written in PC Jr. FORTH.

The data is somewhat scrambled and won't run directly, but perhaps some clever FORTH user with time and patience can solve the problem. Since FORTH is a standard language, using it on an ADAM helps fulfill its function as a family learning tool.

Order from: Mountain View Press, Inc., P.O. Box 4656, Mountain View, CA 94040, ph. 415/961-4103.

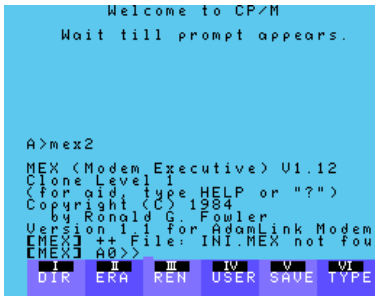
MVP accepts payment by check, Master Card or VISA and phone orders on credit card. Shipping charges are $20.00. Deduct $19.00 if you own Starting FORTH. Deduct $25.00 if you own All About FORTH.

(EDITOR'S NOTE: This article was submitted by Alan Taylor of the Southern Minnesota ADAM User's Group. The author is a former programmer from Coleco who is currently working for 4D Interactive Systems, Inc. Mr. Taterczynski was involved in a variety of projects the latest being development of JEOPARDY. 4D was involved in development of ZAXXON, Super ZAXXON, PEPPER II, SUBROC, TARZAN, and SPY HUNTER. This article was included because many of you have expressed an interest in FORTH and even though the author is affiliated with the company developing the product, it was presented in a relatively impartial manner. Furthermore, we know Mountain View Press to be a reputable company that specializes in carrying FORTH products.)

Telecommunications
by Joe Blenkle

The last two telecommunication's columns have dealt with MADAM7, the CP/M modem program and offshoot of Modem7 that has been configured for the ADAM.

There is also another CP/M telecommunications program that has been modified for ADAM called MEX (Modem Executive). My opinions of MEX are mexed (excuse the pun) to say the least. On the outside it seems to be a fine program, similar to MADAM7, but on the inside it seems to be much more difficult to use after using MADAM7 for these many months.



MEX features a built in phone library, self-copy feature so you can configure it for your own uses and function keys. It also has been configured to dial through ADAM's internal modem, a feature it didn't have when it first appeared in the ADAM section of CompuServe's Creative Computing SIG.

In all honesty, I don't like MEX, but in fairness to the program, I have not used it that much. Instead of downgrading it, I instead will attempt to compare it to MADAM7 in its features and versatility.

First, I'd like to mention that Kip Hammond (whose address is found below) is offering MEX on DDP to anyone who would like it, for a modest charge of $5.

The DDP also contains several other ADAM compatible CP/M programs. For the price, it's a

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worthwhile addition to your ADAM library.

Kip's DDP comes with only the MEX.COM program. I downloaded the MEX.HLP file from a local BBS, and a massive 80K document file is available on CIS or probably on any other BBS that has a version of MEX on it.

My first problem with using MEX is that I don't have the documentation. What little I know of it comes from the HELP file, which, at best, doesn't seem to be complete. With a little work though, I might be able to get MEX going and even learn to enjoy it.

MEX's basic commands are relatively easy to use. Once loaded, CAL, CALL, DIAL or PHONE will bring up the phone directory. Those commands followed by a phone number will dial the number for you. The PHONE command can be used for adding numbers to the phone library.

Once you connect, things proceed as they normally would. This, however, is where I have run into another problem. Despite following the instructions for returning to the command mode, I can't seem to get there, so, of course, up and downloading are out of the question. I'm sure there is an easy way to do this, but the on-screen instructions are not as clear as one might wish.

I have heard rave reviews about MEX, but MADAM7 seems easier to use and with less problems. A lot of the commands in MEX that are listed in the HELP file don't seem to be implemented in the ADAM version, although this again might stem from improper use rather than faulty configuration.

Some of the more helpful commands that do seem to work include: CLONE - recopies MEX with any changes you've added (i.e. phone numbers, parity, etc...); KEYS - displays the user defined function keys; BYE, EXIT, CPM - returns you to the CP/M system.

While I've spoken about MEX in less than glowing terms, it is a good program. Once you've located the HELP and documentation, it's a sturdy communications program that outshines even MADAM7. Its biggest problem right now is that no one has collected all the necessary files in one place in order to make it fully functional. Until they do, MEX.COM is a good start if you're looking for an inexpensive way to get started with ADAM CP/M telecommunications.

If nothing else, MEX will provide you with an opportunity to do a little exploring into your CP/M system on your own. It's always fun to see what you can discover about a program in this way.

MEX.COM and several other CP/M programs can be obtained on DDP for $5 from: Kip Hammond, 11280 Washington Place, Culver City, CA 90230. Kip wants me to remind everyone that the "Place" is very important in the address as there is a Washington St. close by.

Product Review: Personal Accountant
by Roger Felts
Product: spreadsheet, data base, amortization software
Manufacturer: Softsync, Inc.
Media: DDP
Requirements: ADAM
Rating: 2

My first problem with this program is that it is advertised as a spreadsheet with integrated data base. It does NOT have an integrated data base, merely one and the same as the spreadsheet. The box shows the main menu with the option of accessing the data base, but the actual menu says nothing about this and you cannot do it.

The spreadsheet itself is another problem. It comes with several accounts already open, to give you an idea. To make things easy on my wife while I was showing her how to use the program, we changed that to one account with a different name than those included. When we saved the account to tape and then called it back up, our account had disappeared and all of the other accounts were back. It would probably be a simple matter to go in and change the program so that it doesn't default to those accounts, but we shouldn't have to.

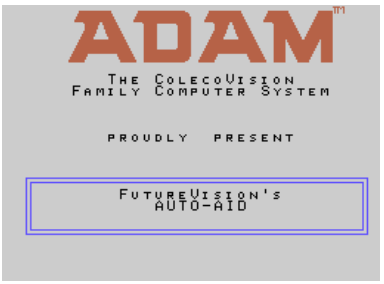
The data base (name & addresses) is limited to 5 lines of 40 characters each, with no provision to alter the layout to save memory. It also gives no indication of how much memory is actually available to the data base.

The amortization program works fine, but you are limited to working with one year at a time and anything under 4 digits will mess up the calculations. If you want a growth chart to show how much you pay or earn month to month, you can only do it to the printer. Again, I modified it to print to the screen, but I shouldn't have had to.

Overall the problems with this package far outweigh the good points. Not recommended.

Product Review: Autoaid
by Roger Felts
Product: Programming aid
Manufacturer: Future Vision
Requirements: ADAM
Rating: 8

AutoAid is a series of programs designed to make life easier for the ADAM programmer. It allows, among other things the definition of Smart Keys. That is to say, suppose you need to type the string "FOR



x = 1 to 100, step 3" several times in your program, AutoAid lets you define, say, SmartKey I to be that string. Then instead of typing the whole mess, you just hit SmartKey I, and it is typed for you. You can define any key to be any string, including the use of arrow keys and RETURN. AutoAid also includes several assembly language subroutines to allow you to: change color of background and text; read and write to the sound chip, the video chip or the 64K expander; and use a better low-res graphics mode. These are fun to play with and examples are given for the use of each of the subroutines (in case you didn't quite understand the explanation given). I like to play around with ADAM and looking at these has given me enough ideas to last for a while, anyhow. Recommended.

Product Review: Canon PW-1080A Printer
by Gary E. Woodruff
Product: Printer
Manufacturer: Canon
Requirements: ADAM, disk drive, parallel interface
Warranty: 15 day trial, 1 year replacement
Price: $199.00
Rating: 9

This printer has everything, well maybe not everything, but it does have:

* 160 cps speed dot matrix
* Near Letter Quality (best I've seen)
* Tractor/Friction Drive
* Programmable Characters
* 2-3K Buffer
* Four Character Styles
* Condensed, Enlarged, Emphasized styles
* Bi-directional printing in both text/Basic
* Unidirectional graphic mode
* Full Epson compatibility

I considered more than 20 different printers before deciding on this one. Epson's FX-185, Okidata 192, Star SG-10C, Panasonics and many other fine printers. All had features I liked. The Canon has all the features I like plus a great many operating conveniences not mentioned in the different companies' literature.

The tractor feed performs flawlessly and is located behind the carriage, so you don't waste a piece of paper each time you change documents. It has a defeat switch for using single sheet paper, a feature several other printer's don't have and don't tell you about. It has an easy adjustment for paper thickness, a form feed button, and a line feed button. And its power switch is easily accessible, especially if you locate the printer on the left side of your ADAM.

This printer is very well built, very easy to use and has a NLQ mode that surpasses any other I have seen. The buffer holds in excess of one page of material and frees the computer to your use within 9-10 seconds after you hit print.

The only thing I don't like about this printer is that the dip switches for changing character styles, etc. are on the inside and you have to remove the cover to change them. However, there they can't be bumped and most people will use software commands anyway.

The best part is the price. List price is $499, but through Computer Direct in Barrington, IL (312-382-5050) the price is right.

Product Review: C-Interface
by D. Sage
Product: Printer Interface
Manufacturer: Capital Software, P.O. Box 370, St. Louis, MO 63032
Media: Hardware
Requirements: ADAM, Commodore compatible printer
Warranty: One year
Price: C-Interface, $69.95 + 3.50 s&h; with Centronics option, $119.95 + $4.00 s&h

Two days after the C-Interface ad appeared in Family Computing magazine, I placed my order for the C-Interface with the Centronics option and the Okimate 10 printer. About four weeks later I received the printer via UPS and the interface arrived a couple of days after that.

I carefully read the accompanying instructions and at first opportunity, decided to give the "C" a try. The instructions are relatively easy to follow, but since the interface mounts in one of the internal slots you have to drill a hole in the ADAM'S removable cover in order to hook up the printer cable. I have two stand-alone ADAMs and one Expansion Module 3. Since I already have Eve SP-1 interfaces on the two stand-alones, I decided to install the C in my Expansion Module.

The first problem I encountered was that the instructions for drilling the hole in the cover apply only to the stand-alone ADAM and not to the Expansion Module. The internal slots in. the Expansion Module are located further to the left than in the stand-alone, so you are forced to figure out where the hole should be drilled.

The next problem that I encountered is that the C-Interface goes into slot #1. For those of you who don't have a modem, that is the modem slot. For

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those of you who do have a modem, you will probably not want to spend time removing the modem and installing the C-Interface and vice versa. Since slot #2 and the external expansion slot will both support a printer interface, I am really not certain why this company chose to use slot #1 which is necessary for the modem. I suspect that this decision will greatly diminish the success of the product's sales.

In any event, the installation process only took a few minutes, but then I have a well equipped work shop and more drill bits than most people have pencils. You need either a 5/8 or a 3/4 in. drill bit. The larger hole is necessary if you get the Centronics option. Once the hole is drilled and the interface is installed in slot #1, you then connect the Commodore din type cable to the interface and your Commodore printer. I used the Okimate 10 printer, since I was interested in the color capabilities of the interface. I also have a Commodore 1525 that would work quite well for black and white graphics or printing.

Next I reread the manual before trying to use the accompanying software. Having worked with the Eve interface for some time now, I was disappointed to find that the software does not patch SmartBasic so that you can use the PR# commands and there is no software support included for CP/M.

The accompanying data pack contained the following Basic and machine language programs:

CDRIVER (m/l program)
graphprint (the rest are Basic)
cenprint
comprint
cdiagnosis
context
centext
bwtest
colortest

For my first test, I put a black ribbon in the Okimate 10, so that I could print out some program listings and SmartWriter files.

I followed the instructions and loaded and ran all the appropriate programs. To list or print files from a disk or ddp other than the one accompanying the C-Interface you have to run the comprint or cenprint programs, break out of the program with a Control-C when asked if you wish to pause between pages, insert the data pack or disk, get a "catalog", then type in RUN 42020 to list the file or program from that data pack. The files listed correctly with no problems. This is somewhat inconvenient since you cannot list a program that you are working on unless you save it first (this may be a good practice, but you then have to reload it to continue working). This is not nearly as convenient as typing PR#1 or PR#2 and then LIST. This also makes getting a printed copy of a catalog rather difficult if you want to use the C-Interface rather than the ADAM printer.

The next step was to test out the color printing features of the C-Interface. A demonstration program "colortest" is provided to show you how to do this and to test your printer. I loaded the programs according to the instructions for the black and white graphics test and everything worked correctly. The program prints out everything shown on the graphics screen and can be modified to reduce the number of lines actually printed, so you don't waste ribbon on printing the border.

It would be nice if you could use this program in conjunction with software like PaintMaster, but at this time that is not possible. To do this you would have to write a program that would load a Save'd PaintMaster picture and then do a screendump using the graphics utility accompanying the C-interface.

Perhaps someone will come up with software to do this. If you already have graphics programs that are written in Basic, it should not be too difficult to modify them so that you can include a print feature to dump the image to an Okimate 10 color printer.

If you want to use the Centronics adapter with the C-interface, you have to exercise some caution. The manual instructs you never to turn on a printer connected to the Centronics adapter until after you have initialized the port using the accompanying software. Otherwise, damage to your ADAM could result.

The manufacturers of the C-Interface ask for feedback on how the product and software support can be improved. In addition they offer a full one year warranty and indicate that changes to the software will be supplied to original owners during the warranty period.

Perhaps the one change or improvement that needs to be made is to allow access to the C-interface using the PR# commands. Another enhancement that would be nice, would be the addition of CP/M support.

My response to this product is somewhat ambivalent. For someone who is looking for a general purpose printer interface, I would have to continue to recommend the EVE SP-1. For someone whose primary needs are for color printing or for a less expensive alternative to the EVE then I would say you may want to consider this product, if you are willing to accept the inconvenience of swapping your modem with the C-interface in order to use its features.

For myself the $70 is worth it to have the color capabilities, but then I have three ADAMs and do not

use this one for telecommunications. For these reasons I am giving the C-Inter-face a rating of 5 and only a conditional recommendation.

Product Review: Convert & Installing Turbo Pascal
by Tom Gilmore
Product: CP/M 2.2 media convertere
Manufacturer: Sage Enterprises
Media: Disk or DDP
Requirements: ADAM, at least one disk drive, at least one digital data drive, CP/M 2.2, SmartBasic, plus at least one piece of other software that you're itching to get on your ADAM to use.
Warranty: 90 days
Price: $34.95 + $2.00 shipping from Sage Enterprises
Rating: 10

I had been looking for a way to get on my ADAM a nifty piece of development software called Turbo Pascal (Version 3.0, $69.95 from Borland Internaional, 4585 Scotts Valley Dr., Scotts Valley, CA 5066). It (Turbo Pascal) had "grown up" on CP/M micros and had been adapted for MANY 8-bit and 16-bit machines. If only I could find a way to use it on ADAM, I could see it extending the commercial [income producing] life of at least 2 ADAMs, plus probably plenty of others, if their owners only knew how good ADAM hardware and Turbo Pascal could be -- a high-level, general language, fast and efficient, a genuine compiler (not an interpreter like SmartBasic or Logo), suitable for AI, yes: Artificial Intelligence, experiments and developing, and a really handy editor with autotab, prev-page, next-page, quick-to-the-end, quick-to-the-top, with real WORD-editing, real line and column number indicators, etc. (on which this review was originally written).

As the Emporer said in "Amadeus", "Well, then there it is." And so it was. The CONVERT package from Sage Enterprises opens wide the door to CP/M software for ADAM owners. "Other" files are translated to ADAM-compatible files. It's an honor to report: IT WORKS!

Following on the heels of the very useful and reliable PACKCOPY software, CONVERT provides practical (and enjoyable) solutions to some key user needs and problems. With proofread, easy-to-follow, on-line and on-paper instructions, carefully tuned to new-user needs, it quietly WORKS! It does what it says it will do, and I appreciate that!

Now, to some new-user insights that might help your introduction:

1. Careful now, CONVERT does NOT magically translate ALL disks, or ALL CP/M software. (It does what it says, so read what it says it does...).

2. It MAY be hard to get what YOU want on an SSDD (single-sided, double density) disk. For example, from Borland's myriad CPM options, just one fit - here it is: Radio Shack IV CP/M 80 5" SSDD (provided for DEC Rainbows).

3. Make sure it's generic CP/M 2.2 for an 8 bit computer. (ADAM is a Z-80, if that helps someone.)

4. Software vendors (and retailers) may not believe you when you say, "Yeah, if you can make it SSDD, I can read it with Sage's CONVERT right on my ADAM."

5. If the software developer has done his homework, you may have a full evening explaining what does what in detail on your ADAM. As an example, see Turbo's questions and my answers below.

With those points in mind, if you can (or want to) meet the stated requirements, DO IT! CONVERT is a prize. IT WORKS!!

Now to my installation dialogue via ADAM, with many thanks to Sage for CONVERT. With Turbo you can just push the actual key(s) in reply to the installation questions. (Note: * indicates my answer could have been better. If you know a better answer, use yours and let me know.)

Turbo's Question	**ADAM Owner's Answer**
	TINST
[S]creen install	
[C]ommand install, etc.	S
Choose one of the following terminals:	
(list of over 30)	None of the above
Terminal Type:	ADAM
Send an initialization?	Y [RET]
Command string?	Ctrl-Y [RET]
Send a rest string?	Y [RET]
Command string?	Ctrl-Z [RET]
Cursor Lead-in Command?	[ESC] Y [RET]
Positioning, between?	[RET]
Positioning, after?	[RET]
Column first?	N [RET]
Offset to add line?	32 [RET]
Offset to add column?	32 [RET]
Binary address?	Y [RET]
Clear Screen Command?	[ESC] E [RET]
Does that home cursor?	Y [RET]
Delete LINE command?	*Ctrl B [ESC] I [RET]
Insert LINE command?	*Ctrl J [RET]
Erase to End of Line?	[ESC] K [RET]
Start Low Video Command	Ctrl] [RET]
Start Normal Video?	Ctrl / [RET]
No. of Rows on screen?	24 [RET]
No. of Columns?	31 [RET]
Delay After...	0 [RET]
Delay After...	0 [RET]
Delay After...	0 [RET]
Is this definiation OK?	Y [RET]
Operating Frequency MHz?	4 [RET]
[S]creen install, [C]ommand install, [Q]uit	Q [RET]

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(Editor's Note: Spaces have been added to the owner's entries here for readability only. Do not enter spaces during installation. [RET] means the RETURN KEY and [ESC] means the ESCAPE key.)

I knew from experience that I could waste a lot of time trying to improve on the defaults, so I skipped the [C] dialogue. All 45 of the commands will work, except number 8, 9, and 27. You get a lot you never had before!

NOTE: I didn't like the results using the ADAM default color settings on the alternate character set, so using CONFIG.COM I tried others and found the following to be the best for me: 0 0 1 B 4.

To finish off my installation for a streamlined operation, I took a fresh disk with the revised SYSGEN (from CONFIG), PIP'd on only the following COM files: LISTER, STAT, PIP, TURBO; plus TURBO.MSG, and TURBO.OVR. Then I used CONFIG once again to set the SMART KEYS as follows:

Smart Key I DIR M:*.*^M DIR M:	**Smart Key II** PIP M:=*.COM^M INIT M:	**Smart Key III** M:LISTER^M LIST
Smart Key IV M:PIP^M PIP	**Smart Key V** M:STAT A:*.* STAT ALL A	**Smart Key VI** M:TURBO^M TURBO PASC

It's an exciting combination: ADAM hardware and Turbo software, thanks to Sage's CONVERT! Happy Designing!!!

Product Review: Fastfiler (11-2)
by Roger Felts
Product: Data Base
Manufacturer: Strategic Software
Media: Data Pack
Requirements: ADAM
Rating: 8

In almost direct contradiction to a review published in the last news letter, I recommend this program. The copy I received was defective, and after quite a runaround (it must be the hardware—you know the ADAM is not very well engineered, I was told). When I located the problem on my own (two lines of the program had been superimposed), it worked fine. Strategic Software indicated the problem was with their duplication service. I was told that after many complaints they were changing duplication services. This is the only problem I have had with this program.

I use Fastfiler at work (I manage a video store) to keep track of how often my tapes rent. I also have our membership list and the store's inventory organized with Fastfiler, and once I got it running, have had no other problems with it. Recommended.

Product Review: Nintendo Entertainment System
by D. Sage
Product: Video Game System
Manufacturer: Nintendo
Warranty: 90 day
Price: $159.95 ($120 at Crazy Eddie, 401 Old Country Road, Carle Place, NY 11514, ph. (516) 333-4040
Rating: 10

Remember when the experts said that dedicated video game machines were dead? Well, how come the Nintendo system is selling so well? During a time when Coleco and Atari are selling their game systems and cartridges at discounted prices, Nintendo has introduced an excellent, inexpensive game system that appears to be on its way to success.

When you buy a Nintendo system you get their Phaser light gun, the R.O.B. (robot), the system unit, and the Duck Hunt and Gyromite game cart-ridges. The system can be connected directly to a composite monitor or a television set. The instructions are easy to follow and it took only a few minutes to set up the system. R.O.B. took a little longer, because I failed to read the instructions first. When I purchased this system, I also obtained the EXCITEBIKE and ICE CLIMBER cartridges. Excitebike is one of the programmable carts that

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allows you to design your own racing course.

I have already spent several hours playing all four games and have found them to be excellent. Graphics, game play and sound are superb. In Duck Hunt you use the light gun to shoot ducks or clay pigeons. Hitting the targets takes skill, because of the sensitivity and accuracy of the light gun. To knock down a duck you have to be right on target and the clay pigeons are even harder to hit on the higher levels. To advance to a higher level you must have at least a 60% hit rate, otherwise the game ends.

In Gyromite you must send commands to R.O.B. from the TV screen to make him move the spinning gyros to the appropriate station. Once done, R.O.B.'s controller is activated causing various barriers to be raised or lowered on the screen. This allows you to move the professor to get rid of the dynamite or avoid the pesky Smicks. Using R.O.B. requires more strategy than simply playing the game on the screen. At higher levels you have to have R.O.B. use both gyros in order to manipulate both the red and blue barriers at the same time. This means that you have to get one gyro spinning so that it can be left in place while you retrieve the second one. This game is more than a challenge it is also quite fun.

In Excitebike you race dirt bikes either solo or against computer controlled competitors. In order to advance to a higher level you must finish at least third in the current heat. Action is realistic and fast. This

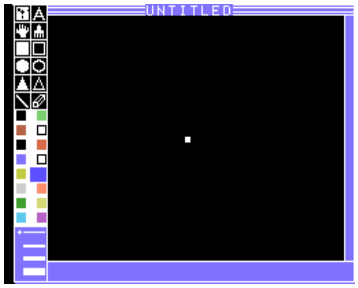
game also allows you to create your own race course with a variety of obstacles available for inclusion.

Of the four I have played Ice Climber the least, but only because I have not had the time to play it. This is a one or two player game where both players play simultaneously and can either help or hinder each other. The goal is to chop through various levels of ice and climb up to the top of increasingly more difficult mountains.

The Nintendo Entertainment System is a low-cost, but extremely entertaining way to play arcade quality video games. This system all ready has over 25 top-notch games available. I highly recommend it.

Product Review: Paintmaster
by D. Sage
Product: Paint Software
Manufacturer: Strategic Software
Media: DDP
Requirements: ADAM, joystick
Warranty: 90 day
Price: $24.95, review copy supplied by Strategic Software
Rating: 8

Paintmaster is an easy to use "paint" program that allows you to create pictures on your ADAM. While the software requires that you load Basic before running, most of the software is written in machine language and simply uses a Basic loader to run. Accompanying the software are a number of sample pictures that give you an idea of the program's capabilities.



This software pushes the graphics capability of the ADAM'S video chip close to its limits, which can result in occasional bleeding of colors and on-screen flickering of the joystick driven paintbrush.

These problems are acknowledged in the documentation.

The software allows you to select from any of the ADAM'S available colors for either background or paint. Paint is applied by pressing the right fire button of joystick #2 and can be erased by pressing the left fire button. You can select from a variety of brush widths. In addition you can select a variety of filled or unfilled shapes including circles, triangles and trapezoids. You can use the line feature which will draw a line between any two points of your choosing. You can move previously created objects or duplicate them elsewhere on the screen. About the only features lacking in this program are the ability to readily change the color of an existing area of your picture and a fill feature found in paint programs for other computers. All of this can be overcome or worked around using the features provided.

You can store your masterpieces on data pack or disk and recall them whenever you wish, just to admire them or make further improvements. Except for the blinking of the on-screen brush, movement of

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the brush with the joystick is relatively smooth, certainly smoother than some of the paint programs I have used with the Commodore 64. The bleeding problem can be worked around to some extent by choice of brush size and by exercising care when placing colors next to other colors.

If you are in to graphics or art, this program will probably be for you. Detailed works will take a great deal of time, but you can stop and return whenever you like. The only other feature lacking in this program is a way to print out your creations and maybe someone will solve that soon. Recommended.

Product Review: Sorcerer
by Amil Dillinger
Product: Text adventure
Manufacturer: Infocom
Media: Disk
Requirements: ADAM, disk drive, CP/M 2.2
Warranty: As is, unless purchased from INFOCOM, then 90 days
Price: $43
Rating: 10

Sorcerer comes in a sturdy attractive package (10 x 13 in.) along with a copy of "Popular Enchanting" complete with spell casters display ads and classified for the wizard.

This, as is true with all Infocom games is a text adventure. However, it's not just a regular text game that will take only one or two word commands. When playing Sorcerer, you write much as you would talk. For example: you might say, "Cast the Bozbar spell on the horse." or "Point the magic wand at the

Demon." You can also ask or tell the Sorcerer to do more than one thing at a time. Example: "Take all but the dagger, slimy vial and ruby." or "Throw spell book and candle stick into the chasm."

You can also move in 10 directions, north, south, east, west, northwest, southwest, southeast, up and down. You can use abbreviations for these, i.e. NE, U, D, etc.

The major drawback I have found is the 80 column screen that the text is displayed on. To eliminate this I purchased Screenchop from Elliam Associates. (NOTE: In the screenshot in the left column, Sorcerer has been reconfigured for ADAM's screen width).

This program loads itself under CP/M and will not interfere with other programs. It allows all of the text to appear on the screen at one time so that you do not have to scroll horizontally. You can also use the undo key to remove the CP/M Smart Key display at the bottom of the screen. This lets three more lines of text be displayed. The return bar will allow the next 22 lines of text to be displayed or if this is to much to be read, the space bar will allow the next 5 lines to be displayed.

To load Sorcerer using Screen chop the following steps must be followed:

1. Insert CP/M in DDP drive #1 and pull computer reset.
2. Insert Screenchop disk, leaving CP/M ddp in drive.
3. Type C: and push return.
4. Type SCNCHOP and press return. Wait for it to load.
5. Take Screenchop out and insert Sorcerer Disk.
6. Log in Sorcerer disk by pressing Control-C.
7. Type in SORCERER and press return.

Get ready, set, go. You start out in a strange location and cannot remember how you got there. As the haze clears, you see that you are in a forest. As you look around, you see that all the trees are sickly and there is no undergrowth. One tree looks climbable and the path continues to the northeast. Wait--what's that? A hellhound is racing toward you, its open jaws displaying rows of razor sharp teeth. What do you do now? Naturally, you climb the tree to safety. Right? Wrong! You see a giant boa constrictor sliding toward you, while at the base of the tree the hellhound jumps madly about with its jaws snapping at you. What do you do now? Sorry, you'll have to buy the game to find out.

I rated this game a 10 because you talk to it in multiple word commands. It's not a game you can sit down and master in an evening's play. It's hard and takes about 40 hours on-screen time. It has a save command that allows you to start where you left off rather than beginning over each time you play. If you like text games, this is definitely for you. I have several other Infocom games and will send in reviews as I work them. These games are definitely a

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challenge and a lot of fun. I included loading instructions because many ADAM users may be beginners like I am with CP/M and they may find this useful.

Product Review: ADAM Resource Directory
by Roger Felts
Product: Directory
Manufacturer: Keith Burrows, editor, The ADAM Resource, P.O. Box 90, Seelyville, IN 47878
Price: $134.95
Rating: 8

The "ADAM Resource Directory" is billed as "Everything in the World for your ADAM", and tries to be just that. It has fairly complete listings of manufacturers and makers of ADAM software and hardware, listings of BBS's nationwide and in Canada, a tips section that should become more and more valuable in the future, listings of ADAM software by type and application as well as alphabetically, and a listing of ADAM users by city, interests and configuration. This last is, of course, incomplete as only those users who contacted the editor were included, but scattered throughout the book are addresses to write to so that your name, tip, product, or user group can be included in the next edition (the plan is to publish twice a year).

The Directory certainly helped me: now I can get rid of most of those catalogs from software companies that my wife has been kicking about. I both recommend the Directory and encourage everyone to submit (they are planning a user group news section and a review section for the next edition...). Recommended.

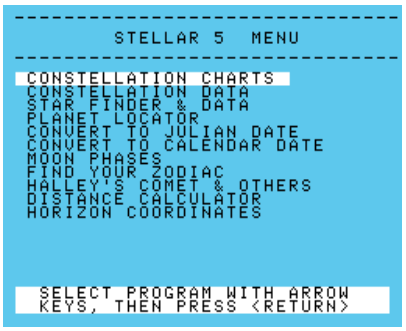
Product Review: Stellar 5
by D. Sage
Product: Astronomy Software
Manufacturer: Hanania Enterprises, Ltd., P.O. Box 356, Tinley Park, IL 60477
Media: D isk or DDP
Requirements: ADAM
Warranty: 30 days
Price: $36 on disk/$39 on DDP. Review copy supplied by manufacturer

Stars, comets, constellations are all there in the sky, but where? Stellar 5 will help you find them and more. Written in Basic, this is an extremely useful collection of menu loaded pro-grams. For those of you interested in astronomy or interested in learning astronomy this is a useful program.

Shortly after I received the initial review copy, I was sent an update that includes the ability to display planet positions relative to six of the Zodiac constellations for a 60 day period.

I have checked a number of the program's features against some of my star books and found the results to be quite accurate. I particularly like the comet tracking features. I plan on using that to follow Halley's which will be the first comet I have seen since the 1950s.

Some of the other features included in Stellar 5 are the ability to calculate distances between objects; a star, comet, galaxy and nebula locator; constellation displays; phases of the moon, Zodiac signs; calculate Julian dates; and the planet locator. The software is all menu driven and the disk drive version is relatively fast. The author even includes information on using celestial coordinates, sufficient to use the software.



This software is an ideal way to introduce yourself or your children to astronomy. If you are lucky enough to find a clear night, try the program and then go outside and try to locate the planets, Halley's comet, or a constellation using the information provided by the program. This program is highly recommended.

One of the problems many of us are experiencing while trying to view the stars is light pollution. You can do your part by turning off any unneeded outside lights during Halley's comets visit, especially during the prime viewing hours.

Bulletin Board

- Robert A. O'Donoghue, P.O. Box 381, Brampton, Ontario, Canada L6V 2L3, ph. 416/457-4064 would like to hear from ADAM owners in the Brampton area. The address for CHALLENGE WARE has been changed to 5801 Foxboro NW, Canton, OH 44718, ph. 216/494-6870.
- Spectrum Electronics, 14 Knightswood Crescent, Brantford, Ontario CANADA N3R 7E6, has available 64K memory expanders for $80 Canadian ($65 U.S.) and they carry a 30 day warranty. If there is sufficient interest they may consider producing a modem and an RS-232 board.
- FOR SALE: (All items mint and complete) Colecovision with Donkey Kong and talking Sewer Sam $35.00; Turbo Driving module with Turbo and Dukes of Hazard-$20; Roller Controller with Slither and Centipede-$20; ADAM expansion module CPU without Data Drive-$35; ADAM Keyboard-$12; Unopened Basic or Buck Rogers-$4 each; ADAM's

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Companion book (updated) $4. Add postage. Contact John Bonavita, P.O. Box 320, St. Bonaventure, NY 14778.

Glitches, Bugs, Errata, Etc.

■ John Moore informs us that a short in your game controllers can disable your ADAM. The symptoms are that the ADAM will enter the typewriter mode when turned on, but the SmartWriter cannot be brought up.

Strategic Software has submitted the following information concerning FastFILER:

■ "A defect has been discovered in several versions of SmartBASIC that prevent FastFILER from saving your File and Records to data pack or disk properly. If you are experiencing this difficulty, we suggest that you follow the procedure listed below as it may eliminate the problem. Please Note: The right bracket symbol (]) that appears on the screen while SmartBASIC is loaded will be referred to as the ready prompt.

1). Load SmartBASIC into memory.
2). When the ready prompt appears, insert the FastFILER program data pack.
3). When the ready prompt appears, type the following line as shown and press [RETURN]:
load filer.obj
4). When the ready prompt appears, type the following line as shown and press [RETURN]:
4512 print chr$(4);"init data"+d$:print
5). When the ready prompt appears, type the following line as shown and press [RETURN]:
delete filer.obj
6). When the ready prompt appears, type the following line as shown and press [RETURN]:
save filer.obj

"You may now run FastFILER and your file should save normally. However, you may now only keep one (1) file on this data pack at a time. If you have any other files present on the data pack or disk that you are storing your file/records on them will be erased. We suggest that you back-up your files often."

■ Owen McNulty tells us that in the "Dam Busters" cartridge, the spotlight circles appear only when one is over the lake. They will not appear at any other time.

■ J.S. Ramsay suggests that for readers who feel constrained by the 24 character limit on searchable fields in SmartFiler, he suggests running the excess characters over into a second, non-search-able field (i.e.; TITLE1, TITLE2, etc.) and using the print format option to rejoin the fields for outputting hard copy.

User Group News

The list of ADAM user's groups continues to grow. If there isn't a group in your area to join -- start one today!

NATIONAL GROUPS

#1 Adam User's Group
Attn: Jay Forman
P.O. Box 3761
Cherry Hill, NJ 08034

ADAM User's Group
P.O. Box P
Lynbrook, NY 11563

LOCAL GROUPS

Victor L. Watford
P.O. Box 777
Russellville, AL 35653

Richard Bains
7210 Bulen Drive
Anchorage, AK 99507

Danny Levitt
4525 S. White Pine
Tucson, AZ 85730
ph. 602/790-9678

Robert R. Marentes
9425 N. 38th Ave.
Phoenix, AZ 85021

Brian Stranahan
So. California ADAM Users
8580 Buggy Whip Rd.
Alta Loma, CA 91701
ph. 714/989-1394

Frank Fleich
13381-19 Magnolia Ave.
Corona, CA 91719

Central Calif. Adam User's Group
James Turner, Jr.
20110 Ave. 19
Madera, CA 93637
ph. 299/ 661-8290

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Bay Region ADAM Information Network
George Havach
550 27th St. #202
San Francisco, CA 94131
ph. 415/282-3056

Inland Empire Users Group - Mike & Paula Smith
6644 Seine Ave.
Highland, CA 92346
ph. 714/862-5807

Denver ADAM User's Group
Jesse Thornhill, II
1416 Lipan St.
Denver, CO 80204

Hawaii AUG - Harlan Fletcher
2335C Apollo Ave.
Honolulu, HI 96818
ph. 808/422-4019

Donald R. Lager
5415 N. 2nd St.
Rockford, IL 61111
ph. 815/877-7786

Greater Cincinatti Adam Users Group
c/o Keith Bowman
P.O. Box 434
Alexandria, KY 41001

ADAM Network
P.O. Box 85
East Detroit, MI 48021

Bill & Nancy Rahn
12426-15th St. S.
Afton, MN 55001
ph. 612/436-6577

Alan L. Taylor
612 7th Ave. NE
Stewartville, MN 55976
ph. 507/533-8415 - Call after 6 pm

Downtown Minneapolis AUG
Thomas C. Gilmore
1424 West 33rd St.
Minneapolis, MN 55408

Outsider's Users Group - Donald Viltiard
P.O. Box 771
Starkville, MS 39759

Omaha ADAM Users Club - Norman Castro
809 West 33rd Ave.
Bellevue, NE 68005
ph. 402/291-4405

Al Roginski
4327 Thorndale Pl.
Las Vegas, NV 89103

Metro Adam User's Group
Russell Williams
414 W. 149th St.
New York, NY 10031
ph. 212/208-0645 - (9am-5pm M-F)

Genesee Valley Adam Users
Donald K. Zimmermah
5132 Jordon Road
Silver Springs, NY 14550

Tri-Angle Adam Users - Gary E. Hill
L-5 Oak Grove
Chapel Hill, NC 27514
ph 919/968-0299

Lake Erie Adam Users
Jonathan Fligner
2110 W. 36th Street
Lorain, OH 44503
ph. 216/282-8467 between 4:30pm & 8pm EST

The (717) Adam Users - Steve Chamberlain
120 E. 4th ST.
Bloomsburg, PA 17815

Adam Users of El Paso - Dick Lewin
6308 Falling Star
El Paso, TX 79912

Houston AAUG
c/o Thomas Rutan
1805 14th Ave. N
Texas City, TX 77590

Norfolk ADAM Group
Gerald M. Steen
1000 Rockbridge Ave. #144
Norfolk, VA 23508

ADAM Washington D.C. Users Group
Jim Tyson
1811 St. Roman Dr.
Vienna, VA 22180

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Westmount, Quebec H3Z 2Y6

Winnipeg Adam Users Group
David Fordyce
729 Government Ave.
Winnipeg, Manitoba R2K 1X5

Metro-Toronto Adam Group
P.O. Box 123
260 Adelaide St. East
Toronto, Ontario M5A 1N0

AUSTRALIA
ADAM Owner's & User's Group
Frank Ellis
4 Norman Street
Deakin, ACT 2600, Australia

High Scores
by Joe Blenkle

Anyone wishing to add their name to the high score list should send the game, score, and level to Joe Blenkle, P.O. Box 41746, Sacramento, CA 95841 or leave an EMAIL message on Compuserve at 70247,2466. Due to space limitations, all games may not be listed in every issue of ECN. Entries may be limited to only those scores for which new high scores have been achieved. For a complete list send a SASE to the above address.

GAME	PLAYER	LEVEL	SCORE
2010: Graphic	Joe Blenkle	1	20,310
A.E.	Tsachi Meyers	1	271,300
Carnival	Tsachi Meyers	1	106,000
Congo Bongo	Joshua Hale	1	18,600
Cosmic Avenger	Allen Keltner	1	52,630
Decathlon	Allen Keltner	-	9,480
Donkey Kong Jr.	Tsachi Meyers	1	117,700
Gorf	Tsachi Meyers	1	16,040
H.E.R.O.	Joe Blenkle	1	29,310
Ladybug	Leah Trossen	1	2,033,680
Looping	Tsachi Meyers	1	800,000
Monkey Academy	Joe Blenkle	1	26,410
Mousetrap	Allen Keltner	1	3,308,550
Omega Race	Joe Blenkle	3	96,350
Pepper II	Robert Dahl	1	3,000,000
Slurpy	Joe Blenkle	1	1,970
Smurf Rescue	Jason Peppers	1	250,000
Space Fury	Allen Keltner	1	206,330
Space Panic	Tsachi Meyers	1	18,560
Spectron	Joe Blenkle	1	2,990
Spy Hunter	Tsachi Meyers	1	251,000
Subroc	Joe Blenkle	1	998,800
Tapper	Joe Blenkle	1	229,225
Turbo	Tsachi Meyers	1	204,680
Venture	Tsachi Meyers	1	3,200,000

High Scores as of Jan./Feb. 1986 Issue

Adding Composite Video To Module #3
by John Moore

(Editor's NOTE: This procedure will void the warranty on your Colecovision game system and may void the warranty on the Expansion Module #3. The use of this procedure is at your own risk. Neither the author nor Sage Enterprises will accept responsibility for damage done to your system as a result of the installation of these modifications to your Colecovision.)

Since several people have expressed a desire to add a monitor to their Expansion Module #3, there might be some interest in how I did it. It is not a difficult job, and the circuit works, but I would not recommend it to anyone who is not familiar with electronic repair and soldering. This modification requires more skill than a packaged do-it-yourself kit!

If you lack this experience, perhaps you could find a TV repairman or a friend who is an amateur radio operator who would be willing to do the job for you.

For convenience's sake, I will specify the Radio Shack part number on the parts list. Since prices may vary, they'll be omitted, but I would expect that you will spend less than $10 on it. In each case, buy only one of each item. Most come in packs of two or more - so you will have enough.

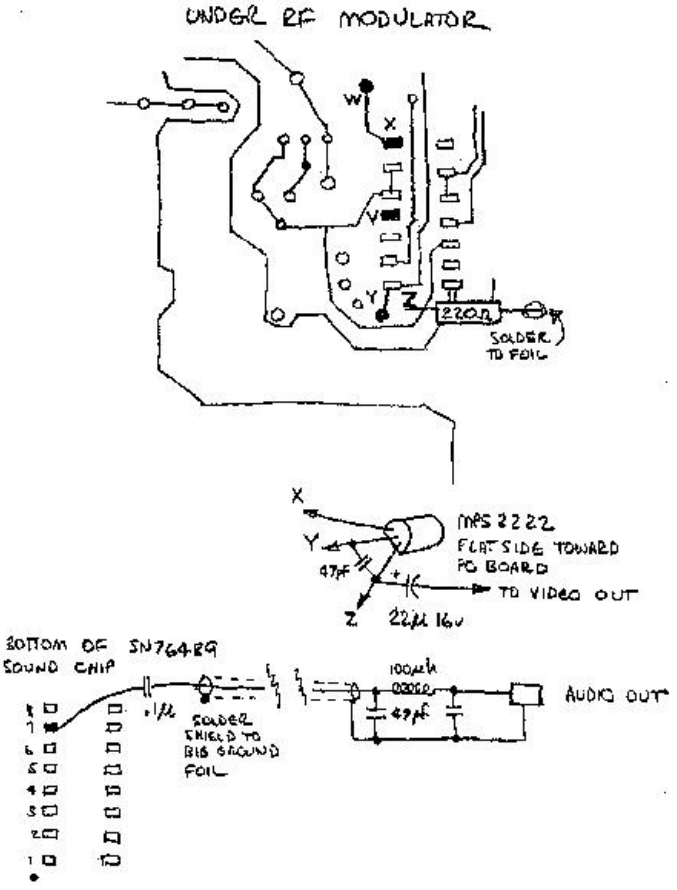
1 - MPS2222A transistor	(276-2009)
RCA-type jacks	(274-346)
22 mf 16V tant. capacitor	(272-1437)
22K resistor	(271-038)
220 Ohm resistor	(271-015)
0.1 mf capacitor	(272-135)
4.7 pf capacitor	(272-120)
100 pf capacitor	(272-123)
100 mh choke	(273-102)
Shielded cable	

When you have these parts, you are ready to begin. Remove the 8 screws that hold the Colecovision together, and work the top free. Mine did finally come loose, but I had to work at it! Now remove the two screws holding the upper shield in place. Inside are two more screws holding the circuit board and lower shield in. Remove them. You may need to unsolder the front left corner. Look and see.

Looking at the bottom shield, you will need to notch out a hole for the output cables to come through. At the corner nearest the old power socket, cut out a notch. Turn the circuit board over and examine the area underneath the RF modulator (the little metal box on the rear of the board that has the channel switch and output socket on it). Compare it to the drawing to find where you will need to make connections. Find this before proceeding.

Now you will need to drill two holes for the output jacks. There is enough room on the lower deck at the rear of the Colecovision between the old power input socket and the place where you've been plugging the cord to your TV set. Mount the jacks there. You might as well go ahead and wire in the filter (consisting of the 100 microhenry choke and twin 100 pf capacitors to ground) to the sound jack. Now we will install the rest of the circuit. Look at the top of the board and find the Sound Chip (SN76489). When you have found it, locate it on the foil side (bottom) of the board. Solder one end of a .1 mfd disc capacitor to pin 7 as shown, counting the lower left-hand pin as one. Be sure to insulate the leads of the capacitor with old wire insulation or "spaghetti". The other end of the capacitor goes to the 100 mh choke. Be sure to solder the shield to a grounded foil, and to the outer conductor of the output jack.

Now, we will connect the video. In each case, insulate wires so that they will not short out to others. I



also placed a patch of electrical tape on the shield that went under the circuit so that it would not accidentally hit that either. Refer to the diagram to make the connections carefully. First, connect a 22K resistor between points W and V. Lay out a 220 Ohm resistor as shown and solder the right side to the ground foil to hold it in place.

Prepare the transistor, and solder it in place with the flat side down. The top lead is soldered to X. The center lead to Y and the lower lead to I. Now connect a 4.7 pf capacitor from Y to Z and the positive lead of the 16 mf capacitor to Z (the end of the 220 Ohm resistor). The output video line should have its shield soldered to the ground foil and the center lead soldered to the negative lead of the 16 mf capacitor. This completes the work on the circuit board, so carefully install it in the Colecovision along with its shields.

You should have already connected the audio line, so now, just route the video line to the jack, connect the center wire to the center of the jack and the ground wire (shield) to the outer conductor.

If the signal coming out the video jack is too high, then you will need to buy a small 1K trimmer from Radio Shack and connect it to the video line and video jack. This circuit is virtually identical to the one Coleco included in the stand-alone ADAM. Putting it in your Colecovision allows you to get higher quality in both video AND sound with a monitor!

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PACKCOPY

PACKCOPY Version 1.1

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CONVERT is a utility program that allows you to transfer information from other CP/M single-sided double-density disk formats to the ADAM CP/M disk format. **CONVERT** allows you to read and write to disks that are In the following formats: Zenith 100 CP/M 85 SSDD; TRS-80 Model IV CP/M+ SSDD; and IBM CP/M-86 SSDD.

Your ADAM can only run programs that are CP/M 2.2 compatible. These programs are commonly called generic CP/M 2.2 programs. ADAM cannot generally run programs that were written for other versions of CP/M or that have been specifically configured for another computer. Most dealers and suppliers of CP/M programs have the capability of supplying CP/M 2.2 software on a variety of disk formats. Unfortunately, few companies can supply such software In the ADAM format. Most companies can supply CP/M 2.2 software In the formats that **CONVERT** can read. When buying such software make sure that you get a generic CP/M 2.2 version copied to one of the formats listed above. DO NOT buy CP/M+, CP/M 85 or CP/M 86 software. You will probably need to tell the dealer that your computer 1s a Z80, 8 bit system, to help avoid any confusion.

CONVERT requires at least one disk drive and one data drive. The best arrangement is to have two disk drives, although this is not necessary.

In addition to copying programs from the three formats to the ADAM format, you can also transfer data files. How does **CONVERT** work? **CONVERT** reads the necessary tracks of one disk and manipulates the information in order to put it into the format ADAM needs. **CONVERT** copies an entire disk. If you do not need all of the Information copied, you can use CP/M to delete that information.

CONVERT may be obtained directly from Sage Enterprises for $34.95 plus $2.00 for shipping/handling (Missouri customers should include sales tax). To order send a check/money order to Sage Enterprises, Rt. 2, Box 211, Russellvllle, MO 65074. Sorry no COD's or charge cards. If you have additional questions please feel free to call us Monday, Tuesday, Thursday or Friday from 9:00 am to 4:00 pm CT at 314/782-3448.

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CP/M PUBLIC DOMAIN FOR THE ADAM

Now many of the CP/M Public Domain programs and languages are being made available for the ADAM on ADAM disk or digital data pack. Included in this library is a wide selection of software including languages, games, utilities, text editors and formatters, and more. Each month additional software will be converted and made available to ADAM owners at a minimum cost. Because many ADAM owners do not have access to a high speed printer, we will provide the accompanying documentation in printed form when such documentation is extensive for an additional charge. While we have tested much of this software we cannot guarantee that it Is all bug free; however, most of this software has been around for some time and has gone through a number of revisions to eliminate any bugs that have appeared.

All prices are given in U.S. funds. Canadian orders should be in U.S. funds or equivalent. Orders for other foreign countries add $2 for disk and $3 for ddp per item to cover overseas shipping. Missouri residents must include sales tax.

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cpm2	TINIDISK - this is a version of Tiny Basic. Includes documentation file, 6 pages long (include $1 for printed copy) Source file (ASM) is included. Includes STARTREK, a tinidisk version of the original trek game. (1 disk or ddp) 84K.	$5	$7
cpm3	PILOT & ZPILOT - two implementations of the PILOT language, includes source files and demo programs, but NO documentation. (1 disk or ddp) 93K.	$5	$7
cpm4	POW2 - Text formatter for use with the CP/M ED (editor), includes source and extensive documentation files - 20 pages (Include $3 for printed copy of documents) (1 disk or ddp) 76K.	$5	$7
cpm5	EBASIC package - this is a subset of the CBASIC compiled Basic language. It Includes several versions of the compiler and runtime Interpreter as well as the source files. It includes a HELP disk that contains documentation on CP/M, EBASIC and CBASIC in approximately 70 printed pages of material. Although some of the documentation is redundant it is extremely useful (include $10 for a printed copy of documents) Includes a version of Othello game (5 disks or 5 ddps).	$25	$35
cpm6	EBASIC games (REQUIRES cpm5 above) Poker. Gunner, Civil War, Golf, Football, Blackjack, Lunar1 - text games. (1 disk or ddp) 63K.	$5	$7
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cpm8	EBASIC games (REQUIRES cpm5 above) 2 Startreks, craps, LEM, Bagels2, Poet, TicTacToe, Hangman, Cannons, Chomp, Amaze, Ace, Fit, Fib, Core, Hello, Loan, Euclid, Stars, Keno, Strike9, Lanes, Animal, Bioprint, Story, Combine, Lander, Chase, Wumpus, Bagels, Plot2, Coretest, Love--text games (2 disks or 2 ddps) 205K.	$10	$14
cpm9	EBASIC games (REQUIRES cpm5 above) Blackjack, Kingdom, 23match, Swarms, Rocket, Bagels, Trap, Bullseye, Wumpas, Chief, Convert, NFL, Dice, Russian, Checkers—text games (1 disk or ddp) 73K.	$5	$7

Some of this software will work with a screen chop program, some will not. You will have to experiment. To order these products send *i* check or money order to Sage Enterprises, Rt. 2, Box 211, Russellville, MO 65074. All prices Include shipping for U.S. and Canadian orders.

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- PROGRAM AND HARDWARE AVAILABILITY
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The above is represented in out bi-monthly mewsletter, AUGment, which is received by all members. Learn more about how you can get additional benefits from the POWER of ADAM and find out about what other AUGies are developing for the ADAM. JOIN THE MORE THAN 5000 MEMBERS NOW!!! Just send in your check in the amount of $12.00, payable to AUG, along with your name, address and telephone number to AUG, P.O. Box P-2, Lynbrook, NY 11563.
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