EXPANDABLE COMPUTER NEWS

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ECN An Independent Newsletter for the Adam & Other Computers

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CHRISTMAS

ISSUE 5

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NOTE: The views expressed by contributors to ECN are not necessarily those of the publisher. ECN and Sage Enterprises are not in any way affiliated with Coleco Industries, Inc. We welcome contributions of original articles, programs, reviews, comments, questions, etc. We are unable to pay for such contributions at this time. Please include a signed statement giving us authorization to use your contribution. We would like to thank all of our subscribers for their assistance–without them this publication would not be possible.

Sage Enterprises has available for sale a number of products for the ADAM Family Computer System as listed below. To order any of these products send check or money order payable to Sage Enterprises in U.S. Funds to the address listed above. Missouri residents please add sales tax. All prices include shipping and handling.

ITEM	Foreign Price	U.S. & Canadian Price
Ribbon for ADAM printer	$9.05 US	$6.56 US
Blank Data Pack (Victory software)	$8.00 US	$5.52 US
Program Library I (see previous issue for description)	$13.30 US	$9.95 US
Program Library II (available approx. Dec. 1 - See this issue)	$13.30 US	$9.95 US

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Renewal Time Approaches

For those of you who wish to renew your subscriptions to ECN we would like to remind you that if you were a charter subscriber, your subscription will expire with our next issue. In order to determine when your subscription expires, look at your mailing lable and you will find four numbers (8501, 8503, etc.). If your number is 8501 then your last issue will be the January 85 issue which is issue #6. If the number is 8503 then your last issue will be number 7 the March issue. If you plan on renewing, please do so as early as possible. The renewal rate is $12.00 and we ask that you indicate on the outside of your envelpe that it is a renewal. This will help us to insure that you continue to receive ECN on an uninterrupted basis. Again we would like to thank all of you for your support. We will continue to work toward making each issue better than the previous one.

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Ramblings From The Ridge
by Darrell R. Sage

Late Night Callers
Anniverseries
Ethics
Product Support
Wish List
Changes
Getting Behind

I get calls. I get lots of phone calls and I really enjoy talking to all you ADAM owners. I really do. BUT! I am a morning person. That's not to say that I am alert and wide awake in the morning, but weekdays I have to get up at 5:00 AM CST in order to get to my other job in beautiful downtown Jefferson City by 7:00 AM. I also like to get at least seven hours of sleep. That means I generally crash by ten every evening.

We have reserved Saturday mornings from 9 AM till Noon for calls. If you have an emergency during the week, you may .be able to reach me between 6 PM and 8 PM CST. But please if at all possible call only on Saturday mornings. At other times you will risk getting our answer phone which means you will be charged with a long distance call.

I recently had a call at 11 PM on Sunday evening and have had other calls almost that late during the week. I look forward to talking to all of you but I do have to sleep sometime. Thanks in advance for your cooperation.

I usually wait and write this column last, but because we are delaying this issue in order to bring you some last minute developments, I have decided to write most of this a little early. The result will be more rambling than usual.

First, I would like to wish ADAM a happy first birthday. Although we don't know exactly when the first production ADAM rolled off the assembly line we do know that by the time this issue is mailed ADAM will be one year old.

I would also like to wish CREATIVE COMPUTING magazine and David Ahl and his staff a happy tenth anniversary. Creative Computing is pretty much the granddaddy of all home computing magazines. It is difficult to believe that it has been only ten years since this all started. We are glad to see them still alive and kicking at a time when so many other home computer publications are ceasing to exist. They have managed to adapt to their audience and the industry.

We hope that ECN will be as adaptable and that we will be around to congratulate them on their twentieth anniversary.

Who in 1974 could ever have imagined that in 1984 you would be able to buy a complete 64k computer system for under seven hundred dollars. If you have not seen Creative Computing's tenth anniversary issue, get one. It is full of good information about the history of home computers and is bound to become a collector's item.

I have heard a lot of rumors about ADAM's future. What it really all boils down to is that ADAM's future depends on you the owners and future buyers. We still think that it is the most computer available for the money.

Coleco has had their problems, but so have Atari and Commodore. You have a chance to let Coleco and the many software companies out there know how you feel about ADAM.

Write these companies and let them know how you feel about ADAM.

It is easy to write a letter when you have a complaint, but too often we don't write letters when we find something we like.

A number of major software companies are considering supporting the ADAM. Your letters to them in support of ADAM may be all that is necessary to get these companies moving.

Also write some of the magazines and let them know there is more than one side to the ADAM story.

It only takes a little time and a few stamps. So let's get those cards and letters in the mail.

You can find addresses for many companies in the ads that appear in the major computer magazines.

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A number of recent subscribers have asked us where we have been hiding all this time and want to know why we don't advertise more. Well we haven't really been hiding, but there are few means available to enable us to reach ADAM owners.

We have relied primarily on advertising in Family Computing magazine to reach most ADAM owners. Notices also appeared in Byte, Electronic Games, The Computer Entertainer, and other computer magazines.

If you think we are doing a great job then we ask that you help us spread the word to other ADAM owners. How can you do this? One way is to tell your local ADAM supplier about us. If they are interested we would be happy to send them a sample copy of a recent issue. Advertising is extremely expensive. In order to bring you our publication at a reasonable price, we cannot afford to expend large sums of money on advertising that will reach only a small percentage of ADAM owners. Remember we are trying to serve you and not just take your money. We publish ECN because we enjoy doing so.

This brings me to another subject. Notices of our publication first began appearing in February of this year. Those notices indicated that our first issue would be available in the spring of this year. Our first issue was in the mail by the end of March. Many of you are aware of other companies that have been advertising products or services for months, accepted payment, and have yet to deliver anything. This practice is to be abhored.

ECN was financed out of our own pockets. If it failed it was our loss. The practice of advertising a product that does not exist then financing its development out of purchasers' pockets is wrong. If a company does not have enough faith in its product to risk a financial loss then they should not be in business. We are well aware of what it costs to operate a business like ours. If you are not prepared to deliver a product within a reasonable period of time then you should not advertise it. If you are selling software or other products and are unable to meet your deadline then you have an obligation to notify your customers of the delay and offer them the opportunity to request a full refund of any advance payments. No one should have to wait longer than six weeks without such a notice.

The software and computer publishing industry needs to adopt standards of conduct governing this behavior. Few people get paid before they do the work. Can you imagine asking an employer to start paying you a regular salary immediately and then inform him that you won't start to work until six weeks later? If you order a product and don't receive it or a notice of delay, write the company. If you don't get a response in a reasonable period of time, write them again and send a copy along with an explanation to your local U.S. Postal Inspectors Office or a consumer action service. Send us a copy if you like so that we may pass the word along. Well enough of my crusade, it's time for more enjoyable topics.

Last year at this time I was busy considering the possibility of publishing a newsletter for the ADAM. It really sounded like it would be a lot of fun. I enjoy writing and had done some work on documentation for commercial software as well having worked with computers for a number of years.

The more I heard about the ADAM the more I felt that publishing a newsletter would be worth the effort. Now that I am putting together our fifth issue, I am certain that I made a good decision. Although publishing ECN is a lot of work, it has also been a lot of fun. I have not met many of you face to face, but I have gotten to know several of you fairly well by way of your letters and phone calls. You are really a great bunch of people and we do appreciate your help and support. Feel free to share your ideas and projects with us. Don't assume that what you are doing with your ADAM is of no interest to others. We can't publish everything we receive, but we try to fit it in if at all possible.

A tip, program you have written, or other comments may be just what another reader needs. If it is a program, provide an explanation of how it works and what it does. Also include a statement giving us permission to use what you send us.

Remember, we can't pay for what you send us, but who wants money when they can have fame.

The Winter Consumer Electronics Show will be held January 5-8 in Las Vegas. We are hoping to attend if at all possible. If we go to that show the next issue which is likely to be late anyway will probably be even later.

If we get to make the trip we would love to meet any of you who live in that area. Write us a note if you are interested in getting together with us and I will let you know exactly when we will be there and where we will be staying.

Because of other commitments and the holidays the January issue probably will not be in the mail until the end of that month. We hope to get back on schedule as soon as possible after that. ECN is continuing to evolve. We have changed the cover and will continue to make changes as our publication matures.

If you don't have Coleco's SmartLogo for the ADAM, we strongly suggest you get it. It is considered to be the best implementation of the Logo language on any home computer. We plan on starting a regular LOGO column soon.

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We are currently negotiating with a Canadian company who is interested in producing a French language version of ECN. If any of you know someone who would be interested in receive ECN in French, have them contact us and we will pass their name along to the Canadian company should we be able to reach an agreement.

Because this issue was really getting long, we had to cut a number of game reviews. These reviews will appear in our next issue.

The following are a list of projects (mostly programs) that we are either working on or plan to work on for future issues. If any of you are interested, feel free to try one yourself. We won't be disappointed if you finish one of these projects before we do. Most of them will require a lot of hours and patience to complete.

1.) Program to print mailing labels on standard labels from SmartFILER files.

2.) Program to backup SmartFILER files.

3.) General backup utility for copying programs and files on data packs in one pass.

4.) A utility program to control SmartWRITER output (variable line spacing, centering, etc.).

5.) An easy to use sprite editor and animator.

We wish all of you a happy holiday season and a prosperous and enjoyable New Year.

Listed below is my Christmas wish list. I doubt if I have been good enough for Santa to provide all these things but I can always hope.

* A universal printer interface for ADAM
* 2 disk drives for each ADAM
* Memory map and schematics for ADAM
* More room for our computers
* More time to program
* SmartBasic with sprites and sound
* Program development software
* SmartBasic compiler
* More Terrific Subscribers

We wish all of you a happy holiday season and a prosperous and enjoyable New Year.

West Hartford Happenings
by Darrell R. Sage

The Wall Street Journal continues to be filled with speculation that Coleco will drop the ADAM after Christmas. Remember this is only speculation. Most of it comes from the same type of people who thought that the IBM PC Jr. was the best thing since sliced bread.

We all know how accurate their precitions about Jr. have been. At the same time they are predicting the demise of ADAM, Coleco's stock price continues a strong recovery. While Wall Street analysts may be good at predicting trends in traditional areas, I have never been impressed with their record in the home computer field.

These are the same people who over valued video game stock. After being burnt in that area they are now under valuing home computer stocks. We feel the ADAM has long term potential for Coleco if they have the patience to stay with the product.

Indications are that Coleco may very well feel the same way. After all eventually Cabbage Patch sales are bound to decline.

Coleco has announced a number of promotions. The most recent will allow many retailers to sell the ADAM at $499. Rather than cut the wholesale price, Coleco is offering retailers $175 worth of free software with each computer.

Infoworld recently carried a relatively positive article on ADAM. The article quotes industry analysts who estimate that by year end approximately 320,000 ADAMs will have been sold. Coleco has been busy working to get peripherals and software on the market before Christmas. They currently are shipping disk drives, modems, and 64k memory expanders as well as data drives.

In addition to many of the software titles reviewed in this issue of ECN, Coleco has announced the shipment of: "Monkey Academy", a fast-action math arcade game for ages 6 to 12; "Wacky Word Games", an introduction to SmartWriter; and "Richard Scarry's Best Electronic Word Book Ever", a program which helps young children develop the skills they need to become successful readers.

A number of game titles have also been released by Coleco and other software companies.

At about the same time that Micro Fun announced the release of Boulder Dash, an award winning game, for the Colecovision/Adam, they indicated that they had suspended development of their MicroLearn software for the ADAM. Sierra has indicated it is having trouble finding retailers who will carry their line of ADAM software.

We have heard rumors that some software for the ADAM is now available in Canada that is not available in the US. One of these items is alleged to be a different version of BASIC. We would appreciate it if our Canadian subscribers would check this out and keep us posted. If there are any of Parker Bros, games for the Colecovision/Adam that you want, I suggest that you get them soon. I have suspicions that Parker Bros, may be getting out of the video game business. We hope this is not true, because they have brought us a number of truly great games.

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Coleco seems to be on the right track with new products. Let's hope they keep up the good work.

What About The Competition?
by Darrell R. Sage

What competition? Atari seems to be in never-never-land. Even if their pledges to support the 800 are true, it seems as if no one will believe them. It is rumored that 800's will be selling for less than $100 by Christmas.

Whether or not Atari remains a force in the home market will be determined next year. They have to get their new product line together and then they will have to convince retailers to sell it.

Based upon current problems this may be a difficult task. Atari user groups are up in arms about the current lack of cooperation from the company.

Meanwhile Commodore is busy shipping the Plus-4. The name sounds more like a cold medicine than a computer. I just don't think this machine is what the public wants. Sales of Commodore 64's are expected to be off compared to last year. Think what Commodore sales might have been if they had brought out a decent disk drive and provided for compatibility in upgrades to future machines. Oh well, nobody ever seems to listen.

Commodore Plus-4

The PC Jr. is still around but without the clunky chicklet keyboard. IBM has provided free exchange of the old keyboards for the new ones. I am not sure what market the Jr. is supposed to address.

Price wise there doesn't seem to be much competition for ADAM outside of Atari and Commodore. Maybe next year the Japanese will enter the market or maybe it will be the British. The current situation certainly gives Coleco the opportunity to make the ADAM a success this Christmas. We'll have to see what the Winter CES brings us.

An ADAM Owner's View: One Year Later
by Joe Blenkle

It doesn't seem that long ago that I purchased my ADAM, but it's been almost a year since I received it via U.P.S. It was delivered almost a month earlier than promised by Montgomery Ward. In the time I've had it, I've learned a lot about computers, both good and bad, and happily most of it has been good.

My initial response to ADAM was one of frustration. The early models of the machine seemed to be full of bugs, and mine was no exception. It had numerous word processing problems; nothing serious, but little things that were very annoying. I waited until my warranty was almost up to get them fixed so I could become familiar with everything that was wrong with my unit.

The printer was next to cause me problems, but happily everything is now in good repair, or almost, as my ADAM occasionally refuses to replace a word it has searched for in the word processing mode. Other than that, ADAM works fine and gives me not a single problem.

My experiences with ADAM weren't my first with computers. In the past I have owned an Atari 400 and Texas Instruments 99/4A. Both were sold long ago.

The TI was bought on impulse, the Atari for game playing. It has since been replaced by an Atari 5200 for the same purpose. I'm very big on game playing. I use ADAM for that purpose, along with record keeping and writing. In the time I've owned an ADAM I have made the following observations about its capabilities.

First, as far as game playing goes, I have found no machine that can match ADAM. Graphically, while games vary from system to system, I've found games, no matter what manufacturer produces it are superior on the ADAM.

While the ADAM doesn't boast the hundreds of colors offered by other systems, I've found that the graphics are always crisper on ADAM games, subjects are better detailed, and the whole overall appearance of the game is better. I'm saying this from experience as I've compared a lot of games from system to system.

The gaming world is now just opening up to ADAM as manufacturers can produce cartridges not only for the computer system, but the ColecoVision game system as well. This will definitely be a plus when it comes to the decision of whether or not to put out a Colecovision/ADAM compatible version of a particular game.

I'm very happy with ADAM as a word processor, although I can think of a lot of more features I'd like to see in it. Hopefully, Coleco or some other company will put out an enhanced word processing package with features such as automatic centering, right margin justification, and a reverse search so you don't have to return to the beginning of a document every time you want to search for something.

I would also like to see a graphic printer for the ADAM somewhere down the line. Like many other ADAMites, I am very frustrated by the slow

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appearance of software and hardware for the ADAM.

Living on the west coast, we always seem to be the last to see products as they are released, not just for the ADAM but for other systems as well.

I know of several products for the Atari 5200 that have been out for at least six months in the east, but have not appeared in the west.

It will get better...it's only a question of when. I could go on and on about ADAM, but knowing there is limited space in ECN, I won't. It's enough to say that during the past year I have grown very attached to my ADAM. Unlike some computer systems that are outdated almost the minute they hit the shelf, I don't think ADAM will suffer this fate for quite some time because of the tremendous potential of the system for growth.

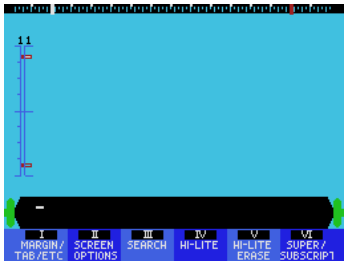
Despite some early problems, ADAM appears to be here to stay and there hasn't been one minute during the past year that I've regretted making ADAM my computer system.

Line-Spacing In SmartWRITER
by Tony Barnert

Many of you have noticed that SmartWRITER puts 1.5 spaces between paragraphs if spaced with a solo (RETURN).

For many reasons, you may want a single space or even half-space, which can be done as follows. For single space, the easiest way is to type a subscripted space (or nothing) before the (RETURN).

The half space is a bit more complicated, and basically involves printing every other paragraph in full SUBSCRIPT, making sure that each line begins with the (L) subscript character and ends with the (R) and a (RETURN).



It is also essential to end the paragraph with a subscripted (SPACE), or the next paragraph is buried. Some of the complexities which can be handled include the difficulty in editing the shorter line (the subscript characters are counted by SmartWRITER as spaces, but not by the printer), the added difficulty in subscripting an already-written paragraph (say after moving it - this requires inserting full L & R subscript characters at the beginning and end of each line, and then deleting the appropriate half - given the slowness of INSERT and DELETE, this can be tedious).

Some of the problems that remain include the inability to underline the subscripted paragraphs, and the fact that the printer is then not bidirectional and is even slower.

Despite all this, I feel that the tighter look and extra words per page are well worth the time and effort, at least until an improved word processor is available (or an RS-232 interface to bypass the printer). The general principal is also confirmed that most programs can be "tweaked" to do more than they promise.

Getting The Most Out Of CompuServe
by Joe Blenkle

With the ADAM SmartLINK Phone Modem available, there is bound to be a rush on one of the more popular on-line services - CompuServe.

The CompuServe Starter Kit (retail around $30) includes five hours of connect time. The SmartLINK Modem includes a card that entitles you to an additional two hours of time on CompuServe.

Seven hours seems like a long time, but it can go very fast if you are not careful. At $6 per hour

CompuServe

standard connect time (after your free time is used up), CompuServe can quickly run up a bill that you'd rather not see at the end of the month.

I've only used the system a short time, but I've already found ways to keep your time on-line to a minimum and therefore allow you to save money.

The first thing you will want to do is set up your own personal menu. You can list up to 10 items and their page numbers that are of interest to you. Almost as soon as you log on the system, this menu will be displayed. By inputing the appropriate menu number, you will be taken immediately to that service.

Another way to save connect time is by using the free- demo you receive with the SmartLINK Modem to access the CompuServe index and find the page numbers of the items you want to view.

In this way you will save your own time, while using CompuServe's. You can access the demo mode as many times as you want. If you choose to become a CompuServe subscriber, they will send you updated indexes on a regular basis.

Once you become a subscriber, you will have access to Compuserve's Electronic Mail (EMAIL) service. With this you can send messages to other computer users as long as you have their ID number.

Upon logging onto the system you will be informed if you have any mail waiting and if you do you will be

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taken to the EMAIL menu.

Another way of leaving messages is through SIG's (Special Interest Groups) or various public bulletin boards. As of this writing there wasn't an ADAM SIG, but hopefully there will be one soon. Upon logging onto the SIG you will be told if you have a message waiting. I recommend EMAIL for general message writing, as the SIG's take too long to get into. You can read through all the messages on the SIG and have the opportunity to answer or comment on any of them.

CompuServe is a lot of fun and it is interesting to browse through its many services and features. But beware, your time goes very fast and you can use up your free time and compile some very high connect charges if you are not careful.

I recommend that after you've found your way around the system, using about half of your allotted free time, that you set up a budget and log on to CompuServe for a pre-determined amount of time every day, week or month depending on your needs.

Always keep a log of how long you've spent on the system (you'll be told when you log off how long you've been on) and it is best when you log on to know exactly where you intend to go and what you intend to do.

Assembling Graphics Sprites
by Darrell R. Sage

Well we don't have a sprite editor yet, but at least we have a demonstration program that creates a sprite and allows you to move it with a joystick (see program listing).

The more work we do with machine language programming on the ADAM, the more we learn. In the last issue I indicated that you need to save the contents of a number of registers by PUSHing them before using them and by POPing them when you were finished.

The only time that this procedure is necessary is when those registers contain information that needs to be saved. We have eliminated those statements in the sprite demo.

The best way I know to cover sprites is by discussing my demo program line-by-line. Line 10 sets LOMEM to 32100. This allows us to reserve a portion of memory for storing machine language routines and sprite data. Line 20 CLEARs all variables and equates "s" to 30000 (this will be the starting location for the machine language routines). Line 30 sets "x" equal to 32000 (this is the memory location for the start of the sprite data) and "c" equal to 0 (this is a counter used in the program). Lines 110 through 220 contain the data for the machine language routines. Following each line of data is a REM statement that gives the assembly language equivalents for the preceeding data and a brief explanation of what that line does.

Rather than repeat that information, I will try to provide an explanation of what it means. Line 110 tells ADAM what size and magnification we want to use for our sprite(s). The second value in line 110 (227) specifies a 16 x 16 sprite that is double magnification. Essentially you have four options available for this value: 224 = 8x8 sprite, no magnification; 225 = 8x8 sprite, double magnification; 226 = 16xl6 sprite, no magnification; and 227 the value actually used in the program. The fourth value (1) in line 110 is used to designate one of the eight vdp registers in the video chip. Register one controls the size and magnification of sprites. The rest of line 110 contains the data used to CALL a system routine that stores the value (227) in the appropriate vdp register (1).

Lines 120-160 contain the machine language routine that stores the sprite data in the proper location in video ram. The first lines provide instructions and information used by the CALL routine in line 160. Line 120 tells the routine to use Table #1 in video ram. This is the sprite data table. Line 130 indicates that there will be four entries to load to VRAM. All 16xl6 sprites require a value of four (4) for each sprite; all 8x8 sprites require a value of one (1) for each sprite.

Line 140 contains the starting location of the sprite data (32000). This number is obtained by adding the second value in line 140 (0) to 256 X 125 (the third value). Line 150 indicates the entry in the vdp table to write to (0). Your choices range from 0 to 31 for a total of 32 entries or sprites. Line 160 CALLs the routine that processes all of this information. Once this routine executes the sprite is stored in VRAM. However, sprites are controlled by entries in two tables - table 1 stores the sprite data and table 0 stores the sprite attribute data.

Lines 170-210 contain the machine language data used to load the sprite attribute data. Line 170 designates table #O; line 180 sets the number of entries to one (1); line 190 specifies the entry to write to (0 which is the first entry); and line 200 gives the location of the sprite attribute data (32 + (125 X 256) = 32032). Line 210 CALLs the routine that processes the data. This is the same routine that was used to load the sprite data in line 160. Line 220 is the RETURN statement for the machine language routine.

The data for the 16 x 16 sprite is contained in lines 250-280. The data must be stored in the order

indicated. Next time I will go into detail on how to code the sprite data.

Line 290 contains the sprite attribute data which is described in lines 295-298. Lines 1000-1030 store the machine language routine. Lines 1990-2030 store the sprite data. Line 2120 CALLs the machine language routine stored at memory location 30000 which executes and draws the sprite. Lines 2500-2520 read the joystick and loads the values into memory for the horizontal and vertical position of the sprite. Line 2530 CALLs the machine language routine starting at memory location 30023, which is the part of the program that loads the sprite attribute table data. The sprite moves as you move the joystick. The program is terminated by a CONTROL-C.

I realize that this is very complex, but it does work. Try playing with it. Next time we will try to make this information more useable, but we have to start somewhere.

```
10   LOMEN :32100
15   REM SPRITE DEMO by D. Sage
20   CLEAR: a = 30000
30   x = 32000: c = 0
110  DATA   14,227,6,1,205,32,253
115  REM    LDC,E3H;LDB,I;CALL FD20
116  REM    E3H=16xl6 double sprites
120  DATA   58,24,252
125  REM    LDA(FC18H) - table #1
130  DATA   253,33,04,00
135  REM    LDIY,0004H - # of entries
140  DATA   33,00,125
145  REM    LD HL,7D00H - location of data (32000)
150  DATA   17,00,00
155  REM    LD DE,0000H - entry to write to
160  DATA   205,44,253
165  REM    CALL FD2C - write tbl entries to VRAM
170  DATA   58 23,252
175  REM    LDA(FC17H) - table #0
180  DATA   253,33,1,0
185  REM    LD IY,0001H - # of entries
190  DATA   17,0,0
195  REM    LD DE,0000H - entry to write to
200  DATA   33,32,125
205  REM    LD HL,7D20H - location of data (32032)
210  DATA   205,44,253
215  REM    CALL FD2C - write table entries to VRAM
220  DATA   201
225  REM    RETURN
230  DATA   256
235  REM    end of ml data
240  REM    SPRITE DATA
245  REM    upper left quadrant
250  DATA   3,3,15,7,5,7,1,1
255  REM    lower left
260  DATA   7,11,19,35,2,2,2,14
265  REM    upper right
270  DATA   192,192,240,224,160,224,128,128
275  REM    lower right
280  DATA   224,208,200,196,64,64,64,112
285  REM    SPRITE ATTRIBUTE TABLE DATA
290  DATA   1,1,0,9
295  REM    1=vertical position
296  REM    1=horizontal position
297  REM    0=name
298  REM    9=color code-red
990  REM    store ml routine
1000 READ   a: IF a = 256 THEN 1030
1010 POKE   s+c, a
1020 c = c+1: GOTO 1000
1030 REM
1990 REM store sprite
2000 FOR i = 0 TO 35
2010 READ a
2020 POKE x+i, a
2030 NEXT i
2100 HOME: PRINT " USE Joystick #1"
2105 PRINT "Stop with Control-C"
2110 PRINT " Clear with TEXT"
2115 REM call sprite routine
2120 CALL 30000
2495 REM read Joysticks
2500 b = PDL(1): d = PDL(3)
2510 POKE X+32, b
2520 POKE x+33, d
2525 REM  call sprite location routine
2530 CALL 30023
2560 GOTO 2500
3000 END
```

Programs, Programs, Programs

In addition to the sprite demo program listed above, there are four other subscriber written programs listed in the back of this issue.

Most of these programs are self-explanatory and require no additional discussion. All you have to do is enter them and run them. In the future we plan to handle many of the programs written by subscribers in this fashion. If instructions are required, they will be provided. The programs in this issue are:

Dave's Revenge by D.B. Jacksch, a random sound and graphics program that will drive you wacky.

A 24 Hour Clock by M. Lightbourn.

Noel by Robert C. Purrenhage, a Christmas graphics program.

Alpha Filer by Mike Elsila, an alphabetical sort routine.

ALPHA-FILER is a utility program designed to alphabetize up to 300 names. When the program is firstjt run it will ask you to enter "No. 1?" The user should then type the first name or bit of information to be alphabetized.

The computer will alphabetize starting from the first character entered so the following format is suggested: 'DOE John F. -- (999) 123-4567.' Up to 74 characters may be entered not including commas which are illegal input.

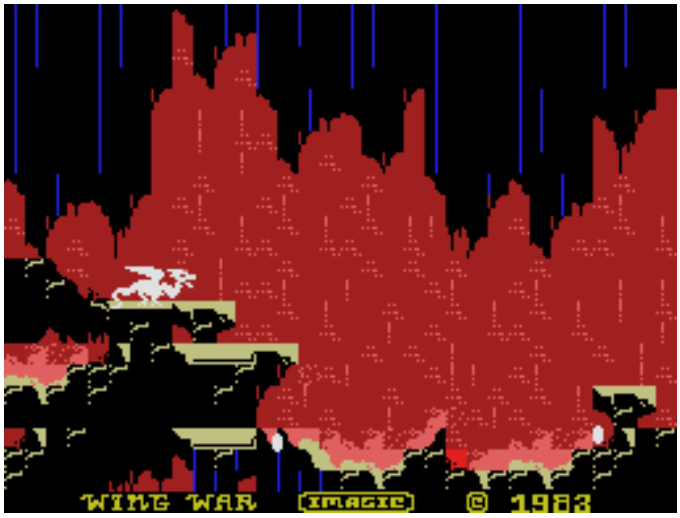
During the process of entering names, if the user should make a mistake, 'REDO' or 'redo' should be typed as an entry and the user may enter the previous name over. When the user is done typing in names, just type 'DONE' or 'done'. Then the computer will begin alphabetizing. This process could take anywhere from 10 seconds to 10 minutes depending on how many names the user entered.

After the alphabetizing process is completed, the computer will ask the user if he or she wants a printout. Enter 'Y' for yes or 'N' for no. The computer will begin printing out the alphabetized list on the printer if 'Y' is pressed. If 'N' is pressed, the user is given the option to continue. 'Y' or 'N' should be pressed here, too. If the user decides not to continue, the program ends.

Product Reviews: Briefs
by D. Sage

We received two products too late to allow us to do in depth reviews. Both are cartridges for the Colecovison/ADAM.

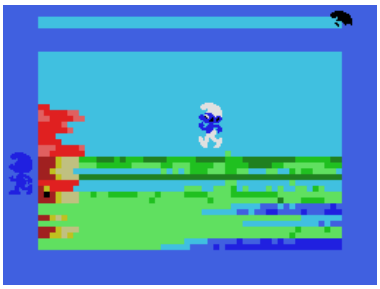
The first is WING WAR from Imagic. This is an extremely elaborate arcade type game that is



excellent in every respect.

WING WAR is not an easy game. Game play is extremely varied and the graphics are excellent. I recommend it.

The second is SMURF PAINT N' PLAY WORKSHOP. While this cartridge is intended for a younger audience, it is extremely well done.



SMURF is, of course, from Coleco. SMURF allows you to use canned scenes or lets you draw your own. You can also assemble animated scenes and play them back. It is excellent for young children. Its only shortcoming is the inability to save screens on data pack. If you have young children give this one a look.

Product Review: ADAM accessories
by D. Sage
Products: Printer legs with remote on/off switch
ADAM covers
Manufacturer: Data Backup, Box 335, Iona, Idaho 83427
Warranty: Replace defective components
Price: Dust covers $21.95 printer legs & switch $22.95 from Data Backup.

The dust cover set is made of lightweight nylon cloth and comes in a tan color. There are three covers, one for the printer, keyboard and memory console. The covers fit well and are excellent for keeping dust out of your ADAM. If you have a problem with dust then you definitely should consider this product.

When I first opened the package that contained the printer legs and remote switch activator, I was a little skeptical. Once I had the items in place on my printer, my skepticism disappeared. The legs and switch are easy to install and require no tampering with the electrical components.

Once installed the legs raise your printer about 3 3/4 inches off of the surface, allowing you to place fan fold paper beneath the printer. The paper feeds easily into the platen and does not hang up during operation.

Cable fasteners are provided so that the cables may be tied out of the way to one of the printer legs. The switch activator mounts on the bottom side of the ADAM. Essentially the switch is an extension that fastens to the original switch allowing you to turn your ADAM on and off from the front of the printer. No more groping behind ADAM to turn it on or off.

Included with the switch is an on/off label that you place directly above the add-on activator switch. The only problem we encountered was that on long printer runs, the printer would tend to walk. This was due to

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the fact that we had our printer setting on a smooth hard downhill surface.

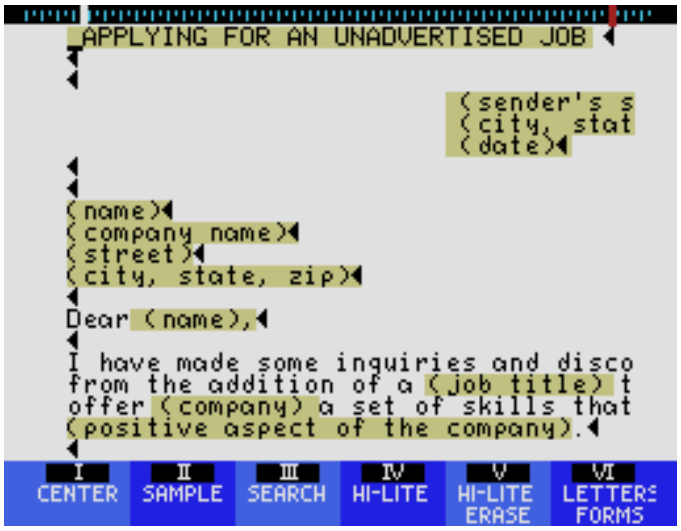
This problem is easily rectified by placing a cloth or pad on the table or by leveling your house if it tends to lean in one direction or the other. Actually it was easier to level the table and that eliminated the problem.

We have always been pleased with products from Data Backup and these items have not changed our opinion. If you need dust covers or the convenience of a printer stand then you should seriously consider ordering these items.

PRODUCT REVIEW: Smart Letters & Forms
by D. Sage
Product: Smart Letters & Forms
Manufacturer: Coleco
Media: Digital Data Pack
Requirements: ADAM
Warranty: 90 days
Rating: 7

Smart Letters & Forms is a somewhat unusual software package. It includes software and a series of files which contain prewritten forms and letters which you can personalize to meet a variety of needs.

The software allows you to access and modify the various form letters. The sample letters and forms included on the data pack cover a wide range of subjects such as invitations, business letters, thank you notes, complaints, shopping lists, check lists, change of address, announcements and even some stories, to name only a few.



Once you select a form you can personalize it using many of the features found in SmartWRITER. The main difference being that Smart Letters & Forms uses the moving window format rather than the on screen roller.

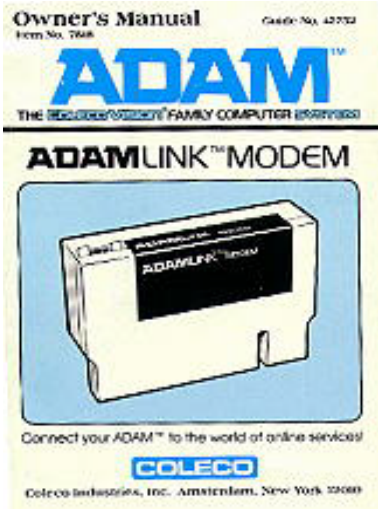
The manual is easy to follow and sufficiently detailed. Using this package is relatively easy.

I have some difficulty evaluating this package since it is not the sort of thing that I would use very often. If you like the convenience of canned forms and letters, then this product may be for you.

Product Review: ADAMLink Modem
by Joe Blenkle
Product: 300 Baud Telephone Modem
Manufacturer: Coleco
Requirements: ADAM/Private Telephone Service and modular connector
Media: Digital Data Pack and Hardware (Modem)
Warranty: 90 day
Price: $99.97 at Toys R Us
Rating: 9

Finally released, ADAM's phone modem opens up the world of telecommunications to ADAM owners.

Before getting into the finer points of the modem, I would like to say that I found several objectionable things with the modem. The promised two hours of connect time with Compuserve comes only after you purchase a separate Compuserve Starter Kit, subscribe to the service, and send in a card enclosed with the ADAMLink Modem. The modem does give you a free demo of Compuserve which you can access at any time, but does not allow you to actually use the service.



Second, you can't download or upload anything to a data pack or disk drive with the modem. You can only type in real-time messages and communications.

Hopefully Coleco will come out with additional software which will allow you to send programs and other information that is stored on data pack or disk to other ADAM owners.

The promised ADAM On-Line service through Compuserve does not seem to be operational as of this writing (October 20, 1984).

The ADAMLink is easy to install and plugs into the Expansion Port #1 inside the ADAM's Memory Console. A dual phone jack is provided that plugs into your phone jack so that you can plug your phone into one side and the ADAMLink into the other. A

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10-foot phone cord is provided to hook to your phone line and the system is connected through the top of the console's ventilation slots.

The software allows you to change certain parameters so you shouldn't have problems communicating with any other computer and it also allows you to print out what comes up on the screen.

The system features an automatic redial, hangup and abort feature, along with several other features such as screen pause and the ability to switch from the command mode (where you set parameters, dial, etc...) to the terminal mode (where you receive information). Also featured is a running clock on the lower right hand corner of the screen, so you can tell how long you've been on-line.

In all, the ADAMLink is the best I've seen for a computer and other than the system's inability to up and download information from a DDP or disk, it is highly recommended to all.

Product Review: ADAMLink Modem (5-2)
by D. Sage
Price: $99.95 at Markline Co., 411 Waverly Oaks Rd., Waltham, MA 02154
Rating: 9

ADAMLink is here. Now ADAM owners can access a world of information through on-line services. I have been using Compuserve for a couple of years now and recommend that all ADAMLink owners join that service. It is diverse in its offerings and is relitively inexpensive. In addition you will be able to communicate with other ADAM owners through E-mail. Eventually you will have access to ADAM On-Line when it becomes available. As of October 28, 1984 ADAM On-Line was not listed on Compuserve.

In order to use ADAMLink you must have a private telephone and will have to install a modular phone jack outlet if you don't already have one.

Installing the modem is relatively easy, although care should be taken when inserting it into the Memory Console. Gently move your data drive wires out of the way when inserting the modem. Make sure your ADAM is unplugged when doing this. Once everything is hooked up properly, all you have to do is turn on your ADAM, insert the ADAMLink data pack and pull the computer reset.

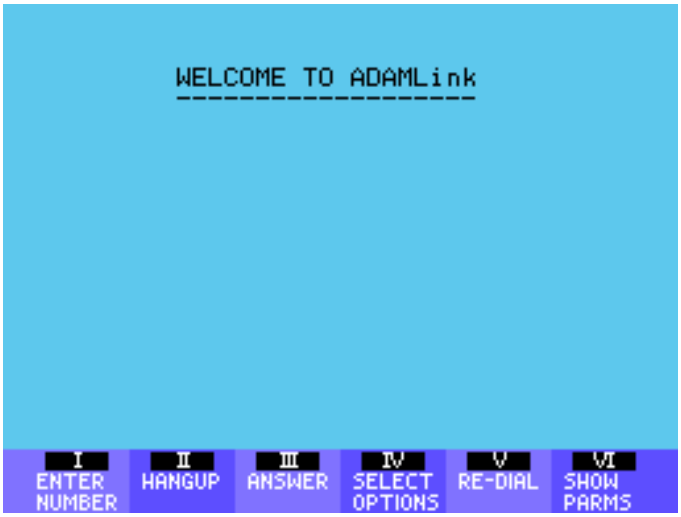
The ADAMLink software will load and run. The accompanying manual is quite clear on how to use the modem and software. When you are ready, dial up Compuserve using the enclosed DemoPak information sheet.

After you dial the number and ADAMLink makes the connection you have to enter a "Control-C". Compuserve will then request your User ID and Password, which are provided in the information booklet.

We had some difficulties hooking up for the first time. The ADAMLink apparently did not like having our answerphone connected, even though it was turned off. Once the answerphone was disconnected everything worked correctly and we ran through the demo screens provided by Compuserve.

After that I logged on using my regular account and checked to see if ADAM On-Line was available, which it wasn't.

Compared to inexpensive modems for other systems, ADAMLink is first rate. The Commodore



modem has software which does not allow you to upload or download and does not even have a printer feature. Furthermore the Commodore modem (VicModem) does not have an autodial feature. The autodial feature is nice to have. Upload and download capabilities would be nice and I hope they will be available in the near future.

Overall, I found the ADAMLink easy to install and use. I recommend it highly. We will be putting together a directory of ADAM owners who are subscribers to Compuserve so that we can contact each other by E-mail. Since we don't have a local Compuserve phone number, I will probably answer most questions I get by regular mail.

I will try to check my E-mail at least every two weeks and generally every week, but I have to keep

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my long distance charges within reason. Elsewhere in this issue you will find my User ID so you can leave me messages if you wish. Eventually, we may be able to set up a Special Interest Group Meeting on Compuserve. I will keep you posted on any developments.

Product Review: ADAM Disk Drive
by D. Sage
Product: 5 1/4" Disk Drive
Manufacturer: Coleco
Requirements: ADAM
Media: Hardware
Warranty: 90 day
Price: $269.95 at Markline Co., 411 Waverly Oaks Rd., Waltham, MA 02154
Rating: 10

The Disk Drive has arrived. I always worry about sensitive equipment like a disk drive being damaged during shipment. So far I have had no problems. The disk drive package was nestled inside another box with lots of foam peanuts. I have never received anything from Marklin that was damaged. They do good work.

The ADAM Disk Drive is easy to hook up and use. It comes with its own power supply and the communication line hooks into the ADAM Net outlet on the Memory Console. The hook-up instructions are quite clear and are well illustrated. The disk drive communicates via a serial rather than parallel interface.

In addition to the drive and instruction manual, mine included a DOS (Disk Operating System) disk and a blank disk, necessary hook-up wires, and an ADAM RFI-1 Kit which provides added protection from television interference. The kit includes several sleeves and liners which fit on the various wires hooked on your ADAM. Although we have not experienced interference problems, I went ahead and installed the kit anyway.

The correct order for turning everything on is: TV, disk drive, and ADAM last.

The DOS disk contains a Disk Manager which you can backup on any disk. The Disk Manager includes a number of useful utilities: format, rename, run, copy, delete. The format utility allows you to create a system disk or data disk.

If you choose system disk then the DOS files will be copied to the disk in addition to formatting it. The program also allows you to check for bad blocks. Formatting with the bad block check takes about four minutes, but it will save you problems later. Writing to a bad block could cause a loss of data.

The copy feature is handy and allows you to copy from disk to data pack, data pack to disk and data pack to data pack. The copy utility is fast. For all of my tests I used a 14 block program. When this program is loaded from data pack while in BASIC it took 2 minutes and 34 seconds to load. It took 1 minute to copy from disk to data pack and 1 minute 40 seconds to copy from one data pack drive to another.

I also tried saving and loading the program in BASIC. It took 24 seconds to save it to disk and 1 minute 5 seconds to load it from disk. I am well pleased with the speed considering it is a serial interface. The dreaded Commodore 1541 disk drives are much slower.

The run command in DOS is used to load and run machine language programs such as SmartBASIC that are on disks. It is not used to load and run programs written in BASIC.

The ADAM disk drive is sleek and quiet. So far I am well pleased with its performance. In case you are wondering, mine is number 184. If you want the advantage and speed of a disk drive you can now have it. If you plan on working with random access files, the disk drive is a must. I recommend it highly.

Product Review: The Stock Market Game
by Steve Chamberlain
Product: The Stock Market Game
Manufacturer: Image Microcorp
Requirements: ADAM
Media: Digital Data Pack or Disk
Warranty: Replace defective product
Price: $24.95 from M.W. Ruth Company
Rating: 9

The Stock Market Game is one of three programs recently released by Image Microcorp. It is written in machine language, which allows you to put it in ADAM, press reset and begin.

This is a simulation game for 1-6 players. It is a perfect game for people who like to follow the stock market and for those who would like to learn the techniques of stock trading. This game follows the

ups and downs of eight companies using the $50,000 you start with. At the end of the game the person who has the most money wins. To help you decide what companies to invest in you look at the charts (Big Board and Dow Jones) and try to speculate the future direction of the stocks. To call either of these charts you press the designated keyboard key(s) which is also how you use the other options available in this program.

The instruction book is very detailed and clear. It explains all of your options and also gives you a description of all the companies in the game. Because of my interest in stocks I loved the game from the very beginning, but I feel that because of the uniqueness and depth of this game it could be enjoyed by anyone. The graphics and sound effects add a nice touch to this game. If you like simulations and don't mind thinking a little, then I would not hesitate to pick up this game.

Product Review: Disassembler
by Steve Chamberlain
Product: Disassembler
Manufacturer: Image Microcorp
Requirements: ADAM
Media: Data Pack or Disk
Warranty: Replace defective product
Price: $34.95 from M.W. Ruth Company
Rating: 10

This was the first program that I know of by Image Microcorp for the ADAM. It, like the others by the company, is written in machine language allowing you to load it without having to boot up SmartBasic.

Before I describe this program I would like to explain how I rated it. I rated it a 10 in comparison to all other disassemblers, not in comparison to all programs. I feel that it is impossible to accurately compare this program to any other program, except another disassembler.

The purpose of this program is to take machine language from memory and convert it into something readable. I find this disassembler much more clear and understandable than any other. One reason I feel this way is because of the simplicity of the program; everything is menu driven. You have your choice of disassembling to opcodes, data or text. After you decide what you want to disassemble you have the option of outputting it to the printer.

On screen lines scroll upward on a colored background (very easy on your eyes) and stop before scrolling off the top. you then press a key to continue. With the printer, typing stops after 50 lines so that you may change the paper if necessary.

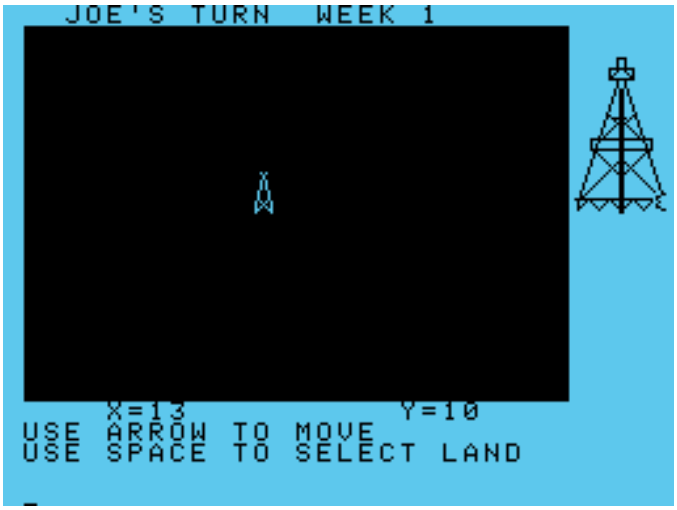
This is a program for the serious ADAM programmer who will know how to use the disassembled information. This program is a supplement to the upcoming assembler package for the ADAM.

Product Review: Black Gold
by Steve Chamberlain
Product: Black Gold
Manufacturer: Image Microcorp
Requirements: ADAM
Media: Data Pack or Disk
Warranty: Replace defective product
Price: $24.95 from M.W. Ruth Company
Rating: 10

This is a board style game for 1 to 4 players, where you can pretend to be J.R. drilling for oil.

On screen you have a map of the land (cost to drill, taxes...), player's net worth, and an oil well. Once you have chosen land to drill on, or not to drill, it is coded with a color that reveals its probable profit range (how close it is to the center of the oil field). If you are lucky enough to hit oil, then you are rewarded by getting to see the well spray a fountain of that most precious natural resource.

You, of course, also get the money you earn each week from the well. As the well starts to run dry you may find your taxes outstripping your profits. In that event, you may decide to sell it. After each turn your portfolio is displayed where all your financial information is kept and changed each turn (one



week). The main objective of the game is to become filthy rich in ten weeks (turns).

The instructions are very easy to understand and explain each step of the game in detail. If you love simulation games as much as I do, then this game is for you. The graphics, sound effects, and game play make this program an all around winner. It is a joy to play, especially with four people. I highly recommend it.

Product Review: Search for the Ruby Chalice
by Steve Chamberlain
Product: Search for the Ruby Chalice
Manufacturer: International Computing
Requirements: ADAM
Media: Data Pack or Disk
Warranty: Replace defective product within 60 days/after that replace for a $3 charge
Price: $24.95 from International Computing
Rating: 8

This is a text adventure game written in SmartBasic. You play the game by typing in two word commands like "go up" or "take chalice." The object of the game is to get away safely with the ruby chalice.

On your quest for the chalice you run into wild animals, snakes, and other dangers. This program is

comparable in size to other text adventure games for the ADAM, but one thing I liked more about this program is the random elements missing in other adventures I've played. This game is a lot of fun for the beginning or average adventurer and will not be that easy to solve right away (that is if you don't cheat).

I like this game but one thing that really frustrated me were some programming errors within the game. I do not know if the errors have been corrected since I received my copy or not.

Product Review: Congo Bongo
by Joe Blenkle
Product: Congo Bongo
Manufacturer: Coleco
Requirements: ADAM/ColecoVision, Joystick
Media: Cartridge
Warranty: 90 day
Price: $29.95 at Toys R Us
Rating: 6

Congo Bongo is potentially a good game, but the Coleco ADAM version leaves something to be desired with sub-par sound effects and difficult game play.

Graphically, Congo Bongo is the best translation I've seen, much better than the versions that were put out for the Atari computers and Atari 5200 system.

Sound effects are poor, however, a disappointment considering the ADAM's fine sound capabilities.

The game, even on its easiest level is difficult to play, not because of the mechanics, but just plain out and out difficult.

The idea of the game is to guide Safari Sam in his quest to get even with the gorilla, Congo Bongo, who is, "trying to make a monkey out of him." Three screens are featured, unlike the Atari version's two and this adaptation is very similar to the arcade version, including its difficulty.

A pause button is featured and the instructions with the game are excellent, but I feel Coleco could have done more with this adaptation to make the game more playable at lower levels of difficulty.

Product Review: James Bond 007
by Joe Blenkle
Product: James Bond 007
Manufacturer: Parker Brothers
Requirements: ADAM/ColecoVision, Joystick
Media: Cartridge
Warranty: 180 day
Price: $29.95 at Toys R Us
Rating: 8

I used to have fantasies about being James Bond. After all, I did have the same initials. After playing the James Bond 007 game from Parker Brothers, I'm afraid my fantasies have been shattered. I'm definitely not 007 material.

The game is actually four-in-one, drawing from the

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movies: Diamonds Are Forever, The Spy Who Loved Me, Moonraker and For Your Eyes Only. Each game is harder than the last, and the only way to reach the next game is to complete the previous one. After all four games are completed, the game is over.

I've managed to make it as far as the fourth game, but then it gets the best of me and I have yet to complete it. In the first game, your mission is to make it across first a desert scene and then an ocean scene, avoiding craters in the desert and killer frogmen, subs and a killer satellite on the ocean until you reach and land safely on an oil rig.

Game two finds you up against undersea missiles, subs and frohmen in quest of an undersea laboratory that you must destroy. Game three pits you against space shuttles, subs and frogmen in your quest to destroy three satellite discs rotating across the screen. In game four, you must retrieve secret radio equipment from an undersea wreck, avoiding trecherous terrain, helicopters, frogmen, subs and killer jellyfish.

All the action takes place from James Bond's super car which fires both flare bombs and bullets and can dive underwater and fly through the air for short distances. James Bond is a very entertaining game, its only possible drawback is its extreme difficulty.

Parker seems to be putting out a lot of games in this category, challenging from beginning to end. The game has two difficulty levels, beginner or advanced, both for one and two players. The action is great, the sound is good, all the way from the snappy James Bond theme that plays at the beginning to the explosions of objects blowing up. The game misses a 10 only because of its difficulty.

Product Review: Gork
by Tommy L. Earnest
Product: Gork
Manufacturer: C & C Distributors
Requirements: ADAM, Keyboard
Media: Program Listing
Warranty: None
Price: $5
Rating: 5

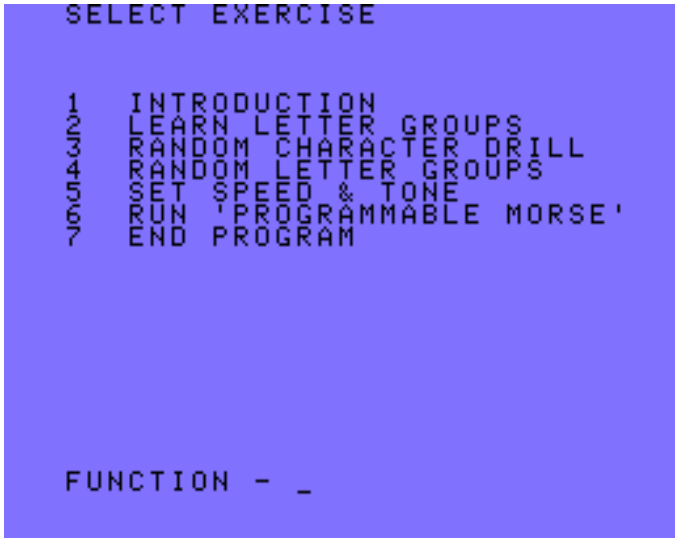
Gork is a text adventure. Your car broke down on the highway, there's no help for miles and a storm is brewing. That's the beginning of Gork. You are to search a house, go for a boat ride, and travel the country side in this game. Their ad states that this is the ultimate text-graphic exploration game.

What you get for your money is a photo copy of the listing that is ten pages long. One page lists commands, nine pages of program. The only graphics come at the end of the game when you solve Gork.

It does offer some challenge though very little. They also sell a map and solution, but if you study the list you can solve it yourself. If you want to type it in and you like text adventures it may be worth your while, at least for the price.

Product Review: Learning Morse Code
by Robert Giuliani
Product: Learning Morse Code & Programmable Morse Code Practice
Manufacturer: Image Microcorp, P.O. Box 3761, Cherry Hill, NJ 08034
Requirements: ADAM Family Computer System
Media: Digital Data Pack
Warranty: Will be exchanged if defective in manufacture, labeling, or packaging
Price: $19.95 from M.W. Ruth Company
Rating: 9

For those of you who are ham radio operators or would be operators, as well as computer enthusiasts, this morse code practice software will be of tremendous help to you in preparing for the FCC morse code tests.



The data pack includes two separate programs which perform individual functions. The first is called LEARN-MORS and by the name it does just that. You can select different letter groups to learn at your own

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pace. Once you feel you have mastered the sounds of letters, continue on to more random practice sessions.

The second program is called PROG-MORSE in which you can input up to 500 letter characters, numerals and puncuation. The program converts them into the proper morse code sound and transmits them back to you. This program is particularly applicable to those of you who conduct morse code classes. By using this, you can easily change the practice from class to class.

Product Review: SmartFiler
by Keith Devine
Product: SmartFiler
Manufacturer: Coleco
Requirements: ADAM
Media: Digital Data Pack
Warranty: 90 day
Rating: 10

SmartFiler is an easy to use organizer of any or all of your records. It sets up fields enabling you to call up information by categories you select. You can search for your information using any of four pre-designated categories. This feature is extremely helpful in enabling you to search your information several different ways. SmartFiler allows you to organize information alphabetically or numerically.

Another feature I really like is the way SmartFiler is compatible with SmartWriter, enabling you the freedom to design forms or formats for printing out information.

I found SmartFiler relatively easy to use and learn, but I have been somewhat spoiled by SmartWriter almost working by itself. I had to spend much more time studying the SmartFiler manual. The manual itself is clear and easy to understand. The SmartKeys are integrated well and are easy to use.

One drawback is that a data pack can only store one data file.

I have found the product very helpful in organizing and storing information, one of the primary reasons I purchased ADAM.

Product Review: SmartFiler (5-2)
by Joe Blenkle
Product: SmartFiler
Manufacturer: Coleco
Requirements: ADAM
Media: Digital Data Pack
Warranty: 90 day
Price: $19.95 at Montgomery Ward
Rating: 9

If SmartFiler is any indication of the kind of computer software we can expect from Coleco, the thousands that have purchased the ADAM computer have definitely made the right decision.

SmartFiler is a data based filing system that pens up virtually endless possibilities for storing information...from mailing lists to household inventories.

The program loads into the computer and then prompts you to insert a new data pack or disk (it won't work with one that already has programs on it).

Once you've defined up to 32 fields, the computer stores the form and then lets you input the information in the appropriate spaces. The size of your form indicates how many separate entries (records) you can make. My own data base for a mailing list has seven fields and room for 208 separate entries, including a "Text" field that can be up to two typewritten pages in length.

Any four of the fields are searchable. The search option allows you to enter multiple characteristics, partial names, etc... making it much easier to locate the information you seek.

The computer automatically puts your files in alphabetical or numerical order, depending on what you are searching for and the whole program makes it very easy to change information in any of the files at any time.

The possibilities are endless for this program, but I can see drawbacks to it, that, in any case, are probably avoidable. The first is that you can only have one data base per data pack or disk. If you have only a small number of items, this makes it a waste to tie up an entire data pack. It would have been nice to

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be able to store several small data bases on each data pack.

Secondly, once the fields and sizes are defined, there is no way to change them short of starting from scratch. The manual does suggest that you include several unnamed fields in case you want to add something later.

In all, SmartFiler is a great program, and if it is an example of things to come for the Coleco ADAM, the future of the system appears to be very bright indeed.

Product Review: SmartFiler (5-3)
by D. Sage
Rating: 8

Yes I know, this is the third review of this product, but then I am the Editor so I figured I'm entitled to put in my two cents worth.

SmartFiler is an excellent data base system in many ways. The documentation is excellent, report generation is excellent and the system is easy to use.

I have used other data base systems including PFS File on an IBM PC XT and SmartFiler is more flexible in many respects. It combines and exceeds the capabilities of PFS File and PFS Report except with regard to printing mailing labels.

So far, I have been unsuccessful in my efforts to find a way to get SmartFiler to print on standard one inch mailing labels. Three line addresses require labels with a 3/4 inch break, 4 lines-11/12, 5 lines-1 1/12. The problem is caused by ADAM's infamous extra half of a line feed that it insists on issuing at the end of each form.

As a programmer things like this bug me, so I will try to find the time to write a utility that will allow standard mailing lists to be printed from SmartFiler files.

I have one other complaint and this applies to a number of data base systems available for other computers as well as SmartFiler. No one seems to realize that data needs to be backed up. Someone needs to require that all programmers include provisions in their software for backing up data.

Unfortunately, I am guilty of this also. Ususally by the time you finish writing a complex system like SmartFiler, you don't want to see it again. Hence you don't include backup capabilities. Rather than just complain about this, I have decided to add a backup program for SmartFiler to my growing list of projects.

In spite of these two complaints, I still think SmartFiler is great and use it for my woodworking business.

Product Review: Adam's RIB
by Robert Cavangh
Product: Tutorial Programs for the ADAM
Manufacturer: Tapeware Technology, Inc.
Requirements: ADAM
Media: 2 Digital Data Pack
Warranty: 90 day
Price: $29.95
Rating: 10

The Adam's RIB tutorial system comes on two digital data packs. Shipping takes about three weeks. Having some basic programming knowledge is helpful when using these tapes.

The tapes include tutorials and helpful programs. The tutorials are: Word processing-An introduction to word processing concepts plus specifics on using SmartWRITER; Getting Started-an introduction to BASIC for the newcomer; SmartBASIC specifics-string handling, input/output, loops, graphics, etc.; Practical Applications-menus, input/output techniques, tape files, etc.; and Program Development-interactive development of practical programs, tests, and games.

Programs included are: Utility-a POWERFUL aid to programming that provides automatic line renumbering with all GOSUBs and GOTOs resolved and merge for combining BASIC programs; Jumbochars-for creating block characters on the screen or printer; Hireschars and Loreschars-let you design your own characters and insert text into high and low resolution graphics screens; Keyinfo- shows values generated by keyboard; Numbering Systems-explains binary and hexidecimal numbers and how to convert to decimal and back; Text Generation and Display-allow you to create and output text in BASIC on either the screen or printer.

Other programs include a menu-driven checking account program, systems tests, toolbox, memorydump and more.

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Adam's Rib is mostly self explanatory and very well organized. This one is definitely worth it.

Product Review: Adam's RIB (5-2)
by D. Sage
Rating: 9

Shortly after purchasing this set of data packs, we received a set from Tapeware for review. These programs do not come with a great deal of printed documentation. You are provided with instructions on loading and running the programs that include all of the documentation and instructions.

The information is presented in a flexible and useful fashion. I was extremely pleased with the overall quality of Tapeware's effort. The tutorial portion of the program is a must for any family that wants a painless method for learning more about their ADAM, especially programming.

As mentioned in the preceeding review the tapes also include a number of utilities that would be useful to experienced computer users and programmers as well.

Another thing I liked about Tapeware, is that they provide follow-up support to their products. We recently received updates on some of the programs that covered some bugs and errors. This practice of notifying purchasers of their products of necessary changes is to be commended. In this industry today, too many companies forget about you once they have your money.

Although we have not tried out every program or feature included on these data packs, we have not experienced any problems with those we tested. Products such as these should be packaged with every ADAM sold. If you don't own a set of Adam's RIBs you should really consider getting one.

Product Review: ExperType
by D. Sage
Product: ExperType
Manufacturer: Coleco
Requirements: ADAM
Media: 2 Digital Data Pack
Warranty: 90 day
Price: $19.95 at Montgomery Ward
Rating: 9

Coleco may have gotten off to a slow start with software releases for the ADAM, but recent releases such as ExperType have made the wait well worthwhile.

ExperType comes packaged in a plastic book-like case. Included in the case are the documentation and digital data pack. The documentation is excellent and easy to follow.

This program is extremely flexible and adaptable to persons who have never typed and those who are experienced who want to improve their skills. I have been touch typing for 25 years and still found the program beneficial in improving my speed. The various exercises available are enjoyable and varied. You can use lessons that teach each set of keys, type from printed material provided by ADAM, design your own lessons, or let ADAM create lessons around your own weaknesses at the keyboard. The only option that ExperType lacks is a lesson that includes game playing.

ExperType can keep track of 10 users, you sign on at the beginning of a session with your name. When you first use the program you also enter your age, this allows the ADAM to design exercises using appropriate material. Since ADAM remembers who you are it will remember where you need practice.

As far as I am concerned, Expertype is a must for any family that wants to improve their typing skills. Even if you think you need a typing program with game incentives for smaller children, I would suggest you take a look at ExperType and consider it for yourself.

Product Review: ADAM Dust Cover Set
by Jeff Silva
Product: Dust Cover Set
Manufacturer: Omicron Industries
Price: $19.95 at Toys R Us or Alpha-One
Rating: 9

Is your ADAM sitting around collecting dust, like a magnet attracting iron oxide particles? If so, this handsome dust cover set is your solution. While the set isn't exactly cheap, you don't have to worry about whether or not you are supposed to turn ADAM on first, then insert them, or to insert them before turning ADAM on or off, because, since they are dust covers and not electronic media, they don't really have a heckuva lot of memory to accidentally wipe out. Comprende, Mon Ami???

It is a good idea to wait 10 minutes or so before putting the printer cover on, because the transformer inside the printer can get HOT and you don't want to melt your expensive cover. Anyway, all three pieces fit perfectly over your printer, keyboard and CPU and are a very attractive brown psuedo-plastic-vinyl-leather with the official ADAM logo on each piece, as

well as identifying each piece in case you didn't know that the printer was called "ADAM SMARTWRITER" for instance...(This also helps identify which cover goes where in case you are as lousy as I am at assembling and comprehending ANYTHING!!)

The keyboard and printer especially tend to collect dust and should someone have the gall to actually bring a liquid drink near your ADAM, these covers, in place, will protect your computer from the Pepsi Syndrome.

I think that dust covers are needed, so why not get these attractive ones? The covers come in a set of three for ADAM stand alone owners. Some stores are also selling the printer and keyboard covers at a reduced price for people with the expansion module.

I heard from Omicron that they are supposed to be manufacturing the Expansion Module cover soon. I admit that these dust covers will hardly be the most exciting peripheral you've bought for your ADAM, but they are probably more functional and useful than you might think, especially since they will probably help to extend the life of your computer. Nuff said! (Who's Nuff anyway?).

Product Review: Information for ADAM Explorers
by D. Sage
Product: ADAM Technical Information
Manufacturer: Peter Hinkle, 117 Northview Rd., Ithaca, NY 14850
Media: 52 Page Manual. Programs included in manual may also be obtained on data pack by sending a blank data pack with your order
Requirements: ADAM
Price: $9.95 for manual from the author

If you are looking for a source of technical information, Peter Hinkle has provided a good starting point. In this manual Hinkle has brought together information about ADAM's memory map, video and sound chips, CPU and its instruction set, and BASIC and the operating system. In addition the manual includes a number of programs: a disassembler and supporting programs, sound routines, a sprite demo, and a shape table program. Although this manual does not provide a complete memory map, it does give you a starting point.

I can vouch for the fact that it is extremely difficult to develop a memory map by decoding the system. Such an effort covers endless hours. Hinkle has attempted to write the manual so that non-technical people will also be able to use the information. This is extremely difficult to do because of the nature of the system. Much of the information available on the video and sound chips from Texas Instruments is almost unintelligible.

I have difficulty assigning this product a rating because there is so little technical information available. Let me say that if you are interested in learning about machine language and ADAM's operating system, this manual is a good place to start. The author has indicated that he will be providing updates to purchasers as he is able to decode the system. At $9.95 I feel this product is a bargain.

Book Review: Discovering Science
by D. Sage
Title: Discovering Science On Your ADAM With 25 Programs
Author: Talcott Mountain Science Center
Length: 181 Pages
Price: $15.95 from TAB Books
Rating: 8

Discovering Science on Your ADAM is an enjoyable book that combines text, programs and projects into an overall learning experience. The book is designed for school age children. I think it probably fits grades 4 through 8 best.

Programs are intended to supplement textual materials provided in each chapter. Each program is accompanied by a line-by-line explanation so that the book is also a useful device for teaching BASIC programming.

Each chapter covers a different area of science and include astronomy and space, earth science, life science, math and computer science, and physics.

The book includes a glossary and an index. The text is written in a light and enjoyable style that encourages reading and learning. For children who are bored by traditional science texts, this book could be a useful supplement. None of the programs presented are long or terribly complex, yet they complement the text and add another dimension to the learning experience.

This book deserves a closer look to see if it fits your family's needs.

Product Review: SmartBASIC Bonanaza
by D. Sage
Product: SmartBASIC Bonanaza
Manufacturer: Martin Consulting
Media: Data Pack
Requirements: ADAM
Warranty: Replace defective product
Price: $34.95 from Martin Consulting
Rating: 9

SmartBASIC Bonanaza is a collection of 15 programs from Martin Consulting in Canada. This data pack includes the following programs: mansion,

magic, othello, filer, labels, finanace, typer, disassem, fugue, sounder, design, tennis, breakout, tryme, pretty and assembler. The programs provided include a good variety of utilities, games, music and home-record keeping programs.

The data pack is accompanied by a 20 page booklet and an insert which contain program descriptions and instructions. The instructions are relatively brief but sufficient and are supplemented by instructions within the programs.

The variety included in this data pack will make it a valued addition to your library. My wife doesn't like to play board games such as othello, so I am glad to be able to play this game against the computer.

I really like adventure games such as "mansion," but unfortunately lack the time. I look forward to the opportunities such as this where I have to review software for ECN.

Well, you know what they say about all work and no play. I have played around with the programs in this collection and consider this an excellent all around collection. I definitely would recommend it.

ColecoVision / ADAM High Scores
by Joe Blenkle
(High Scores as of Nov./Dec. 1984 Issue)

GAME	PLAYER	LEVEL	SCORE
Antartic Adventure	Joe Blenkle	-	150,460
BC's Quest for Tires	Joe Blenkle	1	13,320
Blackjack/Poker	Skip Clark	-	$11,000
Buck Rogers, Super	Scott Swenson	4	1,964,901
Congo Bongo	Joe Blenkle	1	7,010
Cosmic Avenger	Skip Clark	1	30,310
Destructor	Joe Blenkle	1	85,140
Donkey Kong	Dale Rhodes	1	3,419,500
Donkey Kong, Super	Joe Blenkle	1	251,000
Donkey Kong Jr.	Scott Swenson	4	143,200
Donkey Kong Jr., Super	Jason Hirsch	1	218,100
Front Line	Rob Cavanagh	1	110,500
Frogger	Ann Petersen	Slow	14,000
Gateway to Asphai	Ann Petersen	-	37,000
Gorf	Joe Blenkle	1	12,100
Heist	Joe Blenkle	-	96,782
James Bond 007	Joe Blenkle	1	57,550
Looping	Scott Swenson	4	644,425
Miner 2049er	Joe Blenkle	-	78,785
Montezuma's Revenge	Joe Blenkle	-	43,650
Mousetrap	Skip Clark	4	1,550,480
Mr. Do	Scott Swenson	4	2,225,230
Nova Blast	Joe Blenkle	Cadet	97,400
Pepper II	Skip Clark	1	139,380
Pitfall	Joe Blenkle	-	64,862
Pitfall II	Joe Blenkle	-	195,665
Popeye	Kari Elsila	1	109,600
Q*Bert	Joe Blenkle	1	461,575
Quest for Quintana Roo	Tom Earnest Jr.	1	91,900
River Raid	Rob Cavanagh	1	43,220
Space Fury	Skip Clark	4	32,480
Subroc	Rob Cavanagh	1	2,575,900
Time Pilot	Rob Cavanagh	1	201,420
Temple of Asphai	Judy Rose	-	42,000
Turbo	Scott Swenson	4	169,792
War Games	Robert Cavanagh	8	102,420,000
Zaxxon	Scott Swanson	4	169,600
Zaxxon, Super	Joe Blenkle	1	113,700

Glitches, Bugs, Errata, Etc.
by Darrell R. Sage

- The Mix N Match program in the book "Programming ADAM-Home Applications in the BASIC Language" has an error in line 500. To correct the error delete line 500 and add the following lines:
500 IF ans$>="A" AND ans$<="Z" then 510
504 IF ans$>="a" and ans$<="z" then 510
506 ans$=CHR$(95)

- The program SNAKERIDER from our last issue had a glitch in line 245. It should read:
245 for i=1 to 2*df: NEXT

- There are a number of problems with the programs in the book "Adam's Companion." The music program on page 219 has an error in line 4460. That line contains a GOSUB 2600. There is no such subroutine. Change the GOSUB to GOSUB 5810. We have had complaints of errors in the PICMAKER program, but the worst is the Mailing-Label System in Chapter Ten. Even when the programs are debugged they will not work properly. The program is SLOW. Do not waste your time entering it.

- You cannot use ATARI 2600 cartridges in ADAM or the Colecovision unless you have an Expansion Module #1. Our references to the Defender cartridge not working involved the Atarisoft Colecovision version.

- Coleco has begun shipping their free home software library from their earlier promotion this summer. The package includes the 32 Basic Pprograms software and book from Dilithium. The software comes on four data packs.

- Jeff Silva has been busy writing software companies. Here are some of the responses he has received to his inquiry about their plans to support ADAM:
  Microprose Software - No
  Penguin Software - No
  Sublogic - Maybe, they do consider the mail they receive.
  Quicksilva - No for now
  Lucasfilm Games - Hope to
  Avalon Hill - Not yet, maybe in the near future

- Files should be deleted in SmartBASIC not in

SmartWRITER. We hope to have more on this later.

WARNING: Do not save files or programs on your SmartBASIC tape. If you do you are asking for trouble. After SmartBASIC is loaded, remove the tape and put it away. Doing this will greatly extend its life.

WARNING: If you buy software that can be copied or if you write programs that you want to keep, make a backup copy(s) on a separate tape(s). For purchased software such as our Program Library series, copy the programs to a separate tape and put the original away. DO NOT use your original program tapes for storing programs or files. If you have a program like "maillist" that creates files, make an extra copy (in addition to the original and backup) on a blank data pack. Use this copy for creating and storing your mailing list or other files. The more information you store on a data pack, the greater the risk of losing all of the information. It is also wise to make printed listings of important programs.

If your questions were not answered in this issue don't worry. We will get to them. This issue is running long and we have had to cut it off in order to get it to the printer.

Bulletin Board

- ADAM On-Line now exists on CompuServe. It is not yet functional. If you want to check it out periodically, it can be reached with the command "GO ADA-1." Of course you have to be logged on to Compuserve to get there.

- If you want to have your CompuServe ID Number listed, this is the place. Also after you log on enter your name and other information in the User Directory. Users can be listed based on type of computer. At last count 59 ADAM owners had entered their info in the directory. In order for users to communicate with each other by EMAIL you have to have the other person's ID Number. We will print that info here for those who wish and may eventually put together a directory of subscribers and information about them if you all are interested. Let us know.

CIS SUBSCRIBER	ID NUMBER	ACCESS
Joe Blenkle	75056,1074	Email, Game SIG
Darrell Sage	75035,1264	EMAIL

Listed below are ADAM owners wishing to hear from others by regular mail: Tommy L. Earnest, Jr., Box 329, Athens, WV 24712; Robery C. Purenhage, 115 Broad Street, Malvern, PA 19355; Lee Smith, 105 Donna Drive, Terre Hill, PA 17581.

- FOR SALE: Quest for Quintana Roo, $10.00, contact Tommy L. Earnest, Jr. (above).

- WANTED: Star Trek type computer game (not the Coleco cartridge), phone book program (like maillist). Contact Tommy L. Earnest (see above address).

- WANTED: Robert Purrenhage (see address above) has questions about Gateway to Asphai: how and where does one use a cross, wand, staff? I've gotten through level 8, dungeon 99. After surviving for the time interval, instead of going to a deeper level, one begins level 8 over, with all critters and objects restored to their beginning status. I couldn't find any goal on level 8; other than doing away with the dragon and wizard. Has anyone further information to offer?

- Guy S. Bona, 1824 Wesley Ave., Berwyn, IL 60402 has a bowling program he is willing to share with anyone who is a bowling league secretary. Write for details.

- FOR SALE: Games for the Atari Computers - Centipede and River Raid-$10.00 each. Send SASE for availability to Joe Blenkle, 6229 Channing Drive, No. Highlands, CA 95660.

- Everyone wants to know what size (ohmage) potentiometer is needed for monitor. Does anyone have the answer? How about it Carlton?

- Randall Pritchard would like a program that converts decimals to proper fractions. Let us know and we will pass along the info.

- FOR SALE: Bounty Hunter, Adventure Pak I, Adventure Pack II-all from Victory Software, and Search for the Ruby Chalice-$15.00 each. Contact Steve Chamberlain, 120 E. 4th St., Bloomsburg, PA 17815.

- Jay Hardebeck wants a sports game for his ADAM that allows you to pick players and teams, enter their performance statistics, and then have the computer determine the outcome of such hypothetical game. Does anyone know if such a game is available in the public domain for other computers? Let us know and we will let him know.

- WANTED by everyone - modem software for the ADAM that allows uploading and downloading of files and software to disk or data pack.

- WANTED by everyone - Universal Printer Interface for the ADAM.

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```
999  END
1000 FOR i=0 TO 99: x=i: y=PEEK(64885): IF y<>13 THEN RETURN
1010 NEXT i:GOTO 1000
```

Snakerider - Program Listing
by Mike Elsila

```
5  REM  SNAKERIDER by Mike Elsila
10   REM  revised by D. Sage
100  GOSUB 500
110  HOME
115  REM  player coordinates
120  x(1)=19: y(1)=19: x(2)=20: y(2)=19
130  GR
140  COLOR =15
145  REM  draw border
150  HLIN 0, 39 AT 0:HLIN 0, 39 AT 39:VLIN 0, 39 AT 0:VLIN 0, 39 AT 38
155  REM  player direction and color
160  dir(1)=8: dir(2)=2: col(1)=2: col(2)=3
165  REM  joystick routine
170  FOR t=1 TO 2
180  p=PDL(6-t):IF p<>1 AND p<>2 AND p<>8 AND p<>4 THEN 200
190  dir(t)=p
200  IF dir(t)=1 THEN  y(t)=y(t)-1:GOTO 220
205  IF dir(t)=2 THEN  x(t)=x(t)+1:GOTO 220
210  IF dir(t)=8 THEN  x(t)=x(t)-1:GOTO 220
215  y(t)=y(t)+1
217  REM  collision detection
220  IF SCRN(x(t), y(t))<>0 THEN 260
225  REM  move player
230  COLOR=col(t):PLOT x(t), y(t)
240  NEXT t
242  REM  speed control
245  FOR i=1 TO 2*df:NEXT i
250  GOTO 170
255  REM  flash
260  FOR a=0 TO 15:COLOR =a:PLOT x(t), y(t):PRINT CHR$(7):NEXT a
270  TEXT:HOME
280  IF t=1 THEN  w=2:GOTO 300
290  w=1
295  REM  scoreboard
300  PRINT TAB(5); "** PLAYER "; w; " WINS! **"
310  ac(w)=ac(w)+1
320  PRINT:PRINT:PRINT:PRINT:PRINT
330  PRINT  TAB(12);  "SCORE:":  PRINT:  PRINT:  PRINT
340  PRINT "PLAYER ONE (BLUE): "; sc(1)
350  PRINT "PLAYER TWO (RED): "; sc(2)
360  VTAB 21:PRINT "PRESS "; :INVERSE:PRINT " p "; :NORMAL:PRINT " TO PLAY AGAIN."
370  PRINT
390  PRINT "PRESS "; :INVERSE:PRINT " s "; :NORMAL:PRINT " TO STOP.";
395  GET a$:IF a$<>"p" AND a$<>"P" AND a$<>"s" AND a$<>"S" THEN 395
400  IF a$="p" OR a$="P" THEN 110
410  HOME
420  PRINT TAB(6); "** FINAL SCORE: **":PRINT:PRINT:PRINT:PRINT:PRINT
430  PRINT "PLAYER ONE (BLUE): "; sc(1)
440  PRINT "PLAYER TWO (RED): "; sc(2)
450  IF sc(1)>sc(2) THEN PRINT "*** PLAYER ONE WINS! ***":GOTO 480
460  IF sc(2)>sc(1) THEN PRINT "*** PLAYER TWO WINS! ***":GOTO 480
470  PRINT "*** IT'S A TIE! ***"
480  GOTO 590
490  REM  title screen
500  HOME
510  PRINT TAB(7); "** SNAKERIDER **":PRINT:PRINT TAB(8); "by Mike Elsila":PRINT:PRINT:PRINT
520  PRINT "This is a two player game."
530  PRINT "Each player controls a":PRINT "different colored SNAKERIDER"
540  PRINT "that is leaving a trail behind.":PRINT
550  PRINT "The object: Do not crash":PRINT "into a wall, your opponent's"
555  PRINT "trail, or your own trail.":PRINT
560  PRINT "Each player uses a joystick to move; both joysticks are"
565  PRINT "utilized."
570  VTAB 23:PRINT "ENTER SPEED TO BEGIN: "
575  PRINT "Fast=1-99=Slow ";:INPUT df
580  RETURN
590  END
```

Music Player - Program Listing
by D. Sage

```
5  LOMEM :29000
10   REM  Music Player by D. Sage
20   REM  London Bridge
30   ONERR  GOTO 3310
200  DATA  58,102,109,211,255,201
210  s=28000:REM  memory location
215  REM  store ml routine
220  FOR i=s TO s+5
230  READ x:POKE i, x:NEXT i
260  sd=144:REM  base voice on
270  qu=159:REM  base voice off
280  lc=28006:REM  sound value location
290  tm=15:REM  tempo
300  REM  music data-voice, note, duration, volume
305  DATA  1,13.4,16,0
```

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

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

Alan L. Taylor
612 7th Ave. NE
Stewartville, MN 55976
707/533-8415 (after 6 pm)

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For more information send self addressed stamped envelope.

ADAM is a registered trademark of Coleco Industries Inc.

DATA BACKUP Products for the ADAM computer.
P.O. Box 335 Iona, Idaho 83427
This coupon worth $5.00 towards the purchase of the printer leg set with remote switch activator for the ADAM. Return this certificate with order. Expires 12-31/84.
Regular advertised price is $22.95 + $2.00 shipping & handling. Include a check or money order for $17.95 + $2.00 shipping and handling. Idaho residents add 4% tax. ADAM is a registered trademark of Coleco Industries Inc.

```
10 LOMEM :32100
15 REM SPRITE DEMO by D. Sage
20 CLEAR: a = 30000
30 x = 32000: c = 0
110 DATA 14,227,6,1,205,32,253
115 REM LDC,E3H;LDB,1;CALL FD20
116 REM E3H=16x16  double sprites
120 DATA 58,24,252
125 REM LDA(FC18H) - table #1
130 DATA  253,33,04,00
135 REM LDIY,0004H - # of entries
140 DATA 33,00,125
145 REM LD HL,7D00H - location of data (32000)
150 DATA  17,00,00
155 REM LD DE,0000H - entry to write to
160 DATA  205,44,253
165 REM CALL FD2C - write tbl entries to VRAM
170 DATA 58,23,252
175 REM LDA(FC17H)  -  table #0
180 DATA 253,33,1,0
185 REM LD IY,0001H - #   of entries
190 DATA 17,0,0
195 REM LD DE.0000H - entry to write to
200 DATA 33,32,125
205  REM LD HL,7D20H - location of data (32032)
210 DATA 205,44,253
215 REM CALL FD2C - write table entries to VRAM
220 DATA 201
225 REM RETURN
230 DATA 256
235 REM end of ml data
240 REM SPRITE DATA
245 REM upper left quadrant
250 DATA 3,3,15,7,5,7,1,1
255 REM lower left
260 DATA 7,11,19,35,2,2,2,14
265 REM upper right
270 DATA 192,192,240,224,160,224,128,128
275 REM lower right
280 DATA 224,208,200,196,64,64,64,112
285 REM SPRITE ATTRIBUTE TABLE DATA
290 DATA 1,1,0,9
295  REM 1=vertical position
296  REM 1=horizontal position
297  REM 0=name
298 REM 9=color code-red
990 REM store ml routine
1000 READ a: IF a = 256 THEN 1030
1010 POKE s+c, a
1020 c = c+1: GOTO 1000
1030 REM
1990 REM store sprite
2000 FOR i = 0 TO 35
```

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```
2010 READ a
2020 POKE x+i, a
2030 NEXT i
2100 HOME: PRINT " USE Joystick #1"
2105 PRINT "Stop with Control-C"
2110 PRINT " Clear with TEXT"
2115 HEM call sprite routine
2120 CALL 30000
2495 REM read Joysticks
2500 b = PDL(1): d = PDL(3)
2510 POKE x+32, b
2520 POKE x+33, d
2525 REM call sprite location routine
2530 CALL 30023
2560 GOTO 2500
3000 END
```


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Program Listing: 24 Hour Clock
by M. Lightbourn

```
10   REM 24 hour clock by M. Lightbourn
12   REM ** Please note to adjust rate change speed
value and or tab value **
20   INPUT "What is the hour?"; h30 INPUT "What is
the minute?";m
40   INPUT "What is the second?";s
50   PRINT h; TAB(5); m; TAB(8); s
60   HOME
70   SPEED = 68
80   h = h+0: m = m+0: s= s+0
90   IF s = 60 THEN LET m = m+1: IF m = 60 THEN
LET h = h+1
95   IF s = 60 THEN LET s = 0
100  IF m = 60 THEN LET m = 0
110  IF h = 24 GOTO 20
120  GOTO 50
```

Program Listing: 24 Hour Timer
by M. Lightbourn

```
10   REM   24 hour timer by M. Lightbourn
20   INPUT "Set timer for hours?"; a
30   INPUT "Set timer for minutes?"; b
40   INPUT "Set timer for seconds?"; c
41   h = 0
42   m = 0
43   s = 0
50   PRINT h; TAB(5); m; TAB(8); s
60   HOME
70   SPEED = 68
80   h = h+0: m = m+0: s = s+1
90   IF s = 60 THEN LET m = m+1: IF m = 60 THEN
LET h = h+1
95   IF s = 60 THEN LET s = 0
100  IF m = 60 THEN LET M = 0
105  IF a = h AND b =m AND c = s THEN 130
110  IF h = 24 GOTO 20
120  GOTO 50
130  PRINT h; TAB(5); m; TAB(8); s
140  PRINT CHR$(7)
145  PRINT CHR$(7)
150  PRINT CHR$(7)
```

Program Listing: Dave's Revenge
by DB Jacksch

```
2    REM    DAVE'S REVENGE
5    REM    by DB  Jacksch
10   HGR: HPLOT 127,95
20   LOMEM :29000
30   ONERR GOTO 190
40   GOSUB 280
50   POKE c, 228: CALL s
```

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```
60   p = n: HCOLOR = 1
70   h = RND(1)*127
80   m = RND(1)*127+128
90   HCOLOR = RND(1)*15+1
100 HPLOT TO m-63, h
110 IF p < 127 THEN 130
120 n = h: a = -1: GOTO 140
130 n = m: a = 1
140 FOR m = p TO n STEP a
150 POKE c, m: CALL s
160 NEXT m
170 GOTO 50
180 REM   SILENCE
190 POKE c, 191: CALL s
200 POKE c, 223: CALL s
210 POKE c, 255: CALL s
220 POKE c, 158: CALL s
230 POKE c, 63: CALL s
240 POKE c, 95: CALL s
250 POKE c, 127: CALL s
260 END
270 REM   INITIALIZE
280 DATA 58,102,109,211,255,201
290 s = 28000
300 c = 28006
310 FOR a = s TO s+5
320 READ b
330 POKE a, b
340 NEXT a
350 RETURN
```

Program Listing: Alpha Filer
by Mike Elsila

Alpha Filer is a utility program designed to alphabetize up to 300 names. When the program is first run it will ask you to enter "No. 1?" The user should then type the first name or bit of information to be alphabetized.

The computer will alphabetize starting from the first character entered so the following format is suggested: 'DOE John F. -- (999) 123-4567.' Up to 74 characters may be entered not including commas which are illegal input.

During the process of entering names, if the user should make a mistake, 'REDO' or 'redo' should be typed as an entry and the user may enter the previous name over. When the user is done typing in namesm just type 'DONE' or 'done'. Then the computer will begin alphabetizing. This process could take anywhere from 10 seconds to 10 minuntes depending on how many names the user entered. After the alphabetizing process is completed, the computer will ask the user if he or she wants a printout. Enter 'Y' for yes or 'N' for no. The computer will begin printing out if 'Y' in pressed. If 'N' is pressed, the user is given the option to continue. 'Y' or 'N' should be pressed here, too. If the user decides not to continue, the program ends.

```
1    REM     alpha-filer by Mike Elsila
5    DIM a$(300)
10   HOME
20    PRINT TAB(5); "A L P H A - F I L E R":
PRINT:PRINT:PRINT "A
COMPUTERIZED ALPHABETIZING":PRINT TAB(8);
"FILE PROGRAM"
21   PRINT: PRINT: PRINT: PRINT: For a= 1 TO 31:
PRINT "-"; : NEXT a
22   PRINT: PRINT TAB(3); "B Y  M I K E  E L S I L
A": PRINT
23   FOR a = 1 TO 31: PRINT "-"; : NEXT a
24   PRINT: PRINT: PRINT: PRINT
25   PRINT: PRINT: PRINT: PRINT
30  PRINT TAB(4.5); "PRESS ANY KEY TO START:
"; :GET a$: HOME: k = 1
40   PRINT "No. "; k; ". "; : INPUT b$
45   IF LEN(b$) > 76 THEN PRINT: PRINT "NAME
TOO LONG.  PLEASE REDO.":
PRINT: GOTO 40
46   IF b$ = "REDO" OR b$ = "redo" THEN k = k-1:
GOTO 40
47   IF b$ = "DONE" OR b$ = "done" THEN 70
50   a$(k) = b$: k = k+1: GOTO 40
70   PRINT: PRINT "DONE: ARE YOU SURE?  ";
71   GET c$: IF c$ = "N" OR c$ = "n" THEN PRINT:
GOTO 40
72   IF c$ <> "Y" AND c$ <> "y" THEN 70
80   HOME
90    PRINT "ALPHABETIZING PROCESS": PRINT
"--------------------"
100  FOR i = 1 TO k-1: PRINT i; : IF a$(i+1)>= a$(i)
THEN 150
102  b$ = a$(i+1)
104  a$(i+1) = a$(i)
106  a$(i) = b$
108  GOTO 100
150  NEXT i
160  HOME
165  FOR a = 2 TO k: a$(a-1) = a$(a): NEXT a: k =
k-1
170  PRINT "DO YOU WANT A PRINTOUT?  ";
171  GET c$: IF c$ <> "Y" AND c$ <> "y" AND c$ <>
"N" AND c$ <>
 "n" THEN 175
172  IF c$ = "y" or c$ = "Y" THEN 180
174  PRINT: PRINT "ARE YOU SURE?  ";
```

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```
175  GET c$: IF c$ <> "Y" AND c$ <> "y" AND c$ <>
"N" AND c$ <>
 "n" THEN 175
176  IF c$ = "N" OR c$ = "n" THEN PRINT: GOTO
170
177  GOTO 200
180  HOME
182  PR #1
184  FOR a = 1 TO k: PRINT a; ".  "; a$(a): PRINT:
NEXT a
186  PR #0
200  HOME
210  PRINT "DO YOU WISH TO CONTINUE?  ";
220  GET c$: IF c$ <> "Y" AND c$ <> "y" AND c$ <>
"N" AND c$ <>
 "n" THEN 220
230  IF c$ = "Y" OR c$ = "y" THEN 240
232  PRINT: PRINT "ARE YOU SURE?  ";
234  GET c$: IF c$ <> "N" AND c$ <> "n" AND c$ <>
"Y" AND c$ <>
 "y" THEN 234
238  GOTO 300
240  HOME: FOR a = 1 TO k: PRINT "No. "; a; ". ";
a$(a): NEXT a:
 k = k+1: GOTO 40
300  END
```

Program Listing: Noel
by Robert C. Purrenhage

```
0    HIMEM : 41000
10   TEXT: HOME: HTAB(12): VTAB(8): PRINT "N O
E L"
20   PRINT: PRINT: PRINT: PRINT TAB(16); "by"
30   PRINT: PRINT: TAB(7); "Robert C. Purrenhage"
40   PRINT: PRINT TAB(15); "1984"
50   FOR t = 1 TO 10000: NEXT t
110  HGR: SCALE = 1: ROT = 0
120  GOSUB 8000
1000 REM draw horizon
1010 FOR x = 0 TO 19 STEP .07
1020 y = SIN(x)*2+150
1030 HCOLOR = 9: HPLOT x*13, 159 TO x*13, y
1040 NEXT x
1050 HCOLOR = 0: FOR x =75 TO 255 STEP 3:
HPLOT x, 150 TO x, 148: NEXT x
1060 HCOLOR = 4: HPLOT 0, 156 TO 255, 156:
HPLOT 0, 154 TO 255, 154:HPLOT
0, 152 TO 255, 152
4000 HCOLOR = 2: DRAW 1 AT 10, 150
4100 FOR stars = 1 TO 500
4110 HCOLOR = 10: x = INT(RND(1)*255): y =
INT(RND(1)*135): HPLOT x, y
4120 NEXT stars
4200 HCOLOR = 8: DRAW 2 AT 183, 29
4300 REM draw magi
4310 FOR magi = 200 TO 55 STEP -1
4320 y = SIN(magi)*1+150
4330 HCOLOR = 15: DRAW 3 AT magi, y: XDRAW
3 AT magi, y
4340 NEXT magi
4350 HCOLOR = 15: DRAW 3 AT magi, y: DRAW 3
AT magi+15, y: DRAW 3 AT
magi+30, y
5000 REM rays from star
5010 HCOLOR = 8: x = 185: y = 30: HPLOT x, y  TO
35, 140: HPLOT x,  y
TO  30, 135
5020 HPLOT x, y TO 25, 131: HPLOT x, y TO 15,
132: HPLOT x, y TO 5, 133
6000 REM message
6010 SPEED = 25: PRINT: PRINT TAB(4); "GLORIA
IN EXCELSIS, DEO": SPEED
= 255
7999 END
8000 qs = 3: pt = 16766: tl = 41000
8005 of = qs*2+3
8010 by = tl: GOSUB 8100
8015 POKE pt, lo: POKE pt+1, hi
8020 POKE tl, qs
8030 FOR n = 1 TO qs
8040 by = of: GOSUB 8100
8050 POKE tl+n*2, lo: POKE tl+n*2+1, hi
8060 READ a: POKE tl+of, a: of = of+1
8065 IF a <> 0 THEN 8060
8070 NEXT n
8075 RESTORE
8080 RETURN
8100 hi = INT(by/256): lo = by-hi*256
8130 RETURN
8999 REM stable shape table
9000 DATA 9, 36, 36, 36, 36, 36, 45, 45, 53, 54, 54
9010 DATA 54, 54, 62, 63, 63, 36, 36, 36, 37, 37, 37
9020 DATA 37, 45, 45, 45, 36, 36, 52, 54, 54, 45, 45
9030 DATA 45, 45, 45, 54, 54, 54, 54, 54, 63, 63, 39
9040 DATA 36, 36, 36, 36, 44, 46, 46, 46, 46, 36, 76
9050 DATA 60, 39, 63, 60, 39, 63, 60, 39, 63, 63, 62
9060 DATA 55, 63, 62, 55, 63, 62, 183, 146, 146, 82, 73
9070 DATA 73, 33, 36, 37, 53, 54, 14, 44, 14, 36, 36
9080 DATA 53, 53, 54, 0
9999 REM star shape table
10000  DATA 9, 45, 45, 63, 36, 45, 63, 63, 45, 62, 46
10010  DATA 38, 37, 60, 52, 6, 0
10999  REM camel & rider shape table
11000  DATA 73, 33, 36, 37, 53, 182, 9, 36, 44, 44, 54
11010  DATA 6, 128, 128, 128, 37, 60, 60, 36, 63, 44, 54
11020  DATA 119, 57, 62, 60, 62, 39, 60, 55, 53, 46, 53
11030  DATA 45, 45, 0
```

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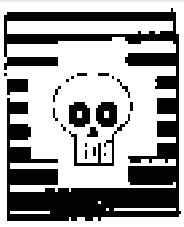

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