

MULTI-FUNCTION USER GROUP
 MONTHLY NEWSLETTER-PUBLIC DOMAIN LIBRARY
 DISCOUNT BUYING SERVICE FOR HDW & SFTW

Issue #26 February, 1987
 Editor: Lyle Marschand
 Copyright (c) 1987

Single Copy: \$3.00
 Annual: (U.S. 3rd class) \$18.00
 (U.S. 1st class/Canada) \$24.00

Happy Valentines day !

(get her some nice flowers)

Continuing our study of Romans chapter 1...

²⁴Therefore God gave them up in the lusts of their hearts to impurity, to the dishonoring of their bodies among themselves. ²⁵Because they exchanged the truth about God for a lie and worshiped and served the creature rather than the Creator, who is blessed for ever! Amen
²⁶For this reason God gave them up to dishonorable passions. Their women exchanged natural relations for unnatural, ²⁷and the men likewise gave up natural relations with women and were consumed with passion for one another, men committing shameless acts with men and receiving in their own person the due penalty for their error. ²⁸ And since they did not see fit to acknowledge God. God gave them up to a base mind and to improper conduct. ²⁹They were filled with all manner of wickedness, evil, convetousness, malice. Full of envy, murder, strife, deceit, malignity, they are gossips, ³⁰slanderers, haters of God, insolent, haughty, boastful, inventors of evil, disobedient to parents, ³¹ foolish, faithless, heartless, ruthless. ³² Though they know God's decree that those who do such things deserve to die, they not only do them but approve those who practice them.

Paul goes on to say that God has revealed himself to all men, but that many have chosen to not honor him or give him thanks for the blessings he has given us. Nature itself reveals God to man. Look into a star filled sky to see the enormity of God's creation. Examine the order of the universe, the beauty of a flower. There is no way that creation came about by chance. A creator, God, is the author of it all. Yet, men come up with the craziest ideas to rationalize that there is not a God behind creation. Man's pride fights the thought of a God who is above us and to whom we will one day have to account. Our pride in our own wisdom is our greatest enemy, as Paul states in verse 22 "Claiming to be wise, they became fools" and in

verse 25 " because they exchanged the truth about God for a lie and worshiped and served the creature rather than the Creator...". Our society is one in which worship of man, not God is taught. The result of man's worship of himself rather than God is not a fun thing to think about. The wickedness of this world and especially the onerous effects of pornography and sexual perversions are not something God has caused, but a natural result of man's actions. God gives us a free will to choose our own destiny. If we let pride rule us and refuse to recognize God, we will end up worshiping the wrong things with disasterous results. The phrase "God gave them up to..." is used in verses 24, 26 and 28. This indicates that once one decides against God, God backs off and lets you reap the consequences of your actions. God is not punishing those that choose to not honor him, he just lets the natural consequences take place. BUT, God is always there waiting for all to come back to him through his son Jesus. Isn't it wonderful that we have a personal God who is not vindictive against those who have dishonored Him ! He loves us so much that He gave us a simple way to return to Him at any time in our life - just repent of our sins, recognize that Jesus died for the redemption of our sins and accept Him as our Lord. This simple act restores our relationship to God and leads to untold blessings in our lives. God is a loving God who does not want his creation to suffer the consequences of sin, rather God wants us to have eternal life with him. Won't you accept God's love for you by admitting your sins, asking His forgiveness and worshiping Him as your creator ?

INDEX

N I A D News	.....1
UPDATES	.....3
DECISIONS & OPTIONS	.....4
PUBLIC DOMAIN	.....5
WORKSHOP (GRAPHICS)	.....6
SMARTWRITER TIPS	.....8
WORKSHOP (BASIC)	.....9
BOOKS	.....12
BACKISSUE LISTING	.....13
SEGA UPDATES	.....15
PRODUCT LIST	.....16
CONTRIBUTORS: W. Motel; C. Kolander; B. Lenness; D. Metcalf, B. Tarnowski, Th. Scholten, John Busby	

NIAD NEWS

. We think you'll enjoy this issue.

There are four great SMARTBasic programs along with some important SMARTBasic tips. I have been wanting to publish a collection of SMARTWriter tips for some time and finally finished it for this issue. You should copy these ten important tips and keep them next to your ADAM for reference when using SMARTWriter. These tips will help you get alot more out of this excellent word processing program. Wayne has completed a low resolution color graphics program for you Okimate 20 printer owners and we are publishing it FREE in this issue. Wayne has written the Graphics Workshop, giving some insight in how SMARTBasic high resolution graphics works. We have included 2 graphics programs and a great word puzzle programs that both adults and children will enjoy. In response to several questions we will include next month information on interfacing printers to the ADAM and recommendations as to what printers to buy. Many of you have already purchased printers for high speed printing and graphics.

I get many questions as to whether ADAM owners should purchase additional hardware or buy another computer - see DECISIONS & OPTIONS for my opinions.

. We are very encouraged by the number and quality of new software coming out for the ADAM. We have always said that quality software is what determines a computers life. Hence, we feel very strongly that ADAM is alive and well based on the ten products we reviewed last month. See the UPDATES section for news on three MORE fantastic products that will be released within the next month. Some people said that ADAM would die by year-end 1985, then they said 1986 would be it. Well, you naysayers, wake up and smell the coffee, ADAM is still kicking and even growing !!

. DISK DRIVES - We have quickly sold out all of the Coleco disk drives we recently received and our supplier has indicated that he also is sold out and doubts he will be getting anymore. Hence, it looks like the end of the Coleco disk drive. I seriously doubt that Coleco will begin re-manufacturing of this drive. There are a couple of companies that are considering making an ADAM disk controller that will allow the attaching of any standard drive to the ADAM. We are obviously encouraging them to do so.

We may be able to get some used drives with missing parts (power supply or cable). We'll let you know next month.

. ADAMLink Modems are still available, but don't put off purchasing one if you want it. The modem is a good investment since it will allow you to

link to other computers via phone lines. Many ADAMites get great use out of their modems through the Compuserve information system. Up until recently ADAMites on Compuserve used the FAM-200 forum for exchanging messages and up/downloading programs. ADAM was the only computer on the FAM forum and has recently moved to another forum - the Computer Club (enter GO CLUB at any prompt), where it will reside with other home computers. ADAM has two data libraries on the CLUB forum which contain all the programs which were on the FAM forum plus some new ones. DL 9 contains SMARTBasic and LOGO programs, DL 10 contains CP/M 2.2 programs. Rob Friedman and Tim Nunes are the Sysops of these ADAM data libraries. These guys are committed to the ADAM and are NIAD old timers, I know they will do a great job.

If you are a member of Compuserve, but are unsure of how to up/down load programs there is a DESCRIPTION option displayed after you enter the DL which you should read and print for later use. We are proud to have a home on Compuserve that is so active.

If you have a modem and are interested in joining Compuserve, just order the Compuserve Starter Kit which contains a membership and 5 hours of connect time.

. Many of you have called questioning where you can get new ADAM systems. Alpha-One has the following for sale while they last:

Complete ADAM System	- \$225
ADAM Printer	- \$ 75
ADAM Console	- \$ 70 including tape drive
	- \$ 55 without tape drive

NOTE: The ADAM CPU Console is the complete ADAM, not the Expansion Module that attaches to the Colecovision.

Contact them in New York at (718) 336-7612

. Al Roginsky of the Las Vegas ADAM Users group reported on the recent Consumer Electronics show there. Both Atari and Commodore surprised everyone by announcing IBM PC compatibles. The Atari machine is a stripped down version with no expansion capabilities, while the Commodore is more expensive but does have expansion slots. Commodore also privately showed a new computer that will be publically announced in March that is causing quite a buzz in the computer industry. Rumors are that it will be combination Amiga and IBM PC at a good price ! Sega showed a bunch of new games and an exciting 3D wrap around glasses set with a cable that attaches to the Sega base unit ! I can't wait to see this one !

. Sega is putting out more great games for their fine game system - see updates in this issue.

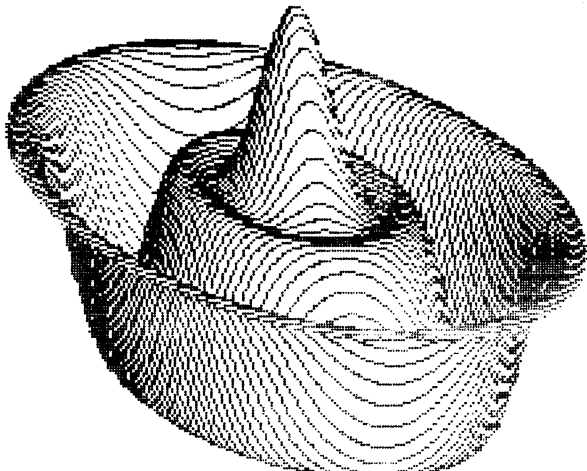
. As mentioned last month, to better service our many Canadian members, Sharon McFarlane will become our Canadian PD librarian. All submissions of SMARTBasic, CP/M 2.2, LOGO and ADAMCalc programs for the PD SOFTWARE EXCHANGE from Canadian members should now be sent to Sharon. Continue to send orders for purchases of all PD programs to NIAD. Thank you Sharon for helping NIAD and your fellow Canadians out. Sharon's address is:
Box 186, Etobicoke Post Office
Etobicoke, Ontario M9C 4V3

. Chicago local chapter meetings are held the 2nd Thursday of each month, 7:00 PM at the College of DuPage, Student Resource Center, Room 1042A next to the Cafeteria. The next meeting will be on Feb 12th. Come and meet other ADAM owners and get your questions answered as well as see demos of new software. COD is located at the intersection of Lambert and 22nd streets in Glen Ellyn, IL, just west of highway 53 on highway 56 (Butterfield Rd) and then north on Lambert, or take Rt 38 (Roosevelt Rd) west from 53 and go south on Lambert. Call COD at 858-2800 for more directions if you need them.

. Tractor Feed kits are available from NIAD for no charge for those who have the old style TF's without clamps and screws to them to the printer.

. SASE's are required for all requests for information or if you want questions answered. Please help us by addressing and stamping a return envelope. Also, if you are requesting multiple pieces of information include extra postage.

. Renewals are due if the first 4 letters of your member number are 0287, as printed on the envelope of your newsletter.



NIAD PRODUCT INFORMATION - SPECIALS

- . Oki 20 w/ ADAM Plug N Print - \$199.95
- . Oki 20 w/ ADAM Plug N Print and PIA2 Parallel printer interface and cable - \$249.95
- . Super Action Controllers w/ Baseball - \$49.95
- . Expansion Module #1, Atari Conversion - \$44.95
- . Expansion Module #2, Driving Module w/ Turbo cartridge - \$49.95
- . New ADAM keyboards - \$9.95
- . ADAMNET 6 Ft cable for keyboard or disk - \$2.95
- . Royal Ambassador Education Pack; a series of 8 educational games with a Christian theme - \$9.95 disk/ \$11.95 DDP
- . New ADAM hand controllers - 2 for \$10.00
- . 3 1/2 by 15/16 inch tractor feed address labels - \$6.95/1000
- . 9 1/2 by 11 inch 20 Lb tractor feed "clean edge" perforations paper - \$9.95/500 or \$16.95/1000
- . Right directory tapes for backing up Supergames- \$2.50
- . Rconditioned data drives - \$19.95
- . Super Zaxxon - \$12.95
- . Recipe Filer - \$10.95
- . Fantasy Gamer - \$22.95
- . Basic Bonanza - \$22.95
- . PowerPrint - \$15.95
- . Number Bumper - \$15.95
- . Quickfax Quest - \$9.95
- . Strategy Strainer - \$9.95

NEW PRODUCTS

- . GraphixPix I
- . Graphixpainter
- . Electric Game Pack II
- . Address Book/ Calendar
- . Spritemaster
- . Jeopardy Question Maker
- . Family Feud Question Maker
- . Basic Ram Disk
- . Paintings Vol's I 2 and 3
- . Signs Vol's I and 2
- . Oki 20 printer
- . Panasonic 1080I and 1091I printers
- . Orphanware 80 CVU
- . Sega game system
- . Sega games
- . Kid's Trivia
- . Backup 3.0 (premiere copy utility)
- . Backup + 3.0
- . Family Feud Question Pack
- . Updated Pinball/Mack PD and 40 page manual
- . Pinball games Vol 1 PD

NIAD SERVICES

- . Disk conversion of Supergames - Buck Rogers,

Super Zaxxon, Dragon's Lair, 2010: Text Adventure, Donkey Kong and DK Jr., Recipe Filer, Smart Ltrs & Forms, Family Feud - send in the card label from your data pack as proof of purchase and \$4.00.

- . Replacement SMARTBasic tapes - \$7.00
- . ADAMLink II telecommunications software for up and down load of programs vial the ADAMLink Modem.
- . Fix SmartFiler tapes to provide the ability to print mailing labels by correcting the spacing problem and provide the latest bug free version - \$4.00.
- . Updates or fixes to PD tapes - \$3.00

UPDATES

. Strategic software has announced their newest ADAM product - MICROWORKS, which should be available in about 4 weeks. This is an integrated set of 5 programs providing -

- Write - a text editor
- File - a data base
- Calc - a spreadsheet
- Edit - a picture editor
- Graph - a business graphics program

The unique thing is that files can be passed between each of the five modules providing full integration. This program is patterned after the APPLEworks program and offers similar features. We're looking forward to reviewing it for next months issue. The availability of this type of program is a major advantage for all ADAM owners. Depending on the success of MICROWORKS, Strategic is seriously considering releasing a spelling checker. We have been encouraging them to do so, since we're positive this would be a useful product for us many SMARTWriter owners that aren't perfect spellers !

. MMSG has completed EASY COME EASY GO, a comprehensive home financial management system which sounds like it will be a real winner. We will have a full review in the March issue.

. Bob Lennes has completed ADAMTALK, a complete program for use with the Eve Speech Synthesizer. ADAMTALK will contain its own dictionary of words and routines that allow you to just enter a word or sentence and have ADAM "say" it back to you. This is the only such program available for the Speech Synthesizer. We will review next month.

. Walters Software has completed an upgrade of their MEDIA-AID utility program, adding some features and including the ability to utilize the 64K memory expander if you also have their RAM DISK product (reviewed last month). See our review of MEDIA-AID in the April/86 issue for more information on this fine set of utilities.

. Mr. T software has completed BASICAID, a program that modifies SMARTBasic 1.0 to correct some bugs and provide some nice additional features such as a 40 column text mode, automatic BSAVE/BLOADing and screen colors. We will review next month.

. Wayne is working on a program that will enhance the PAINTMASTER high resolution drawing program to provide the ability to do more fine color drawing.

. The Piedmont ADAM BBS system is operational 24 hrs at (803) 295-2197 in South Carolina. The Chattanooga Users Group is growing by leaps and bounds and now has an ADAM BBS. Hours of operation are from 10PM to 5PM the following day at (615) 344-2163.

The Tardis Console ADAM BBS is back online from 11PM to 7AM daily and until 12 Noon on weekends at (207) 929-8286 in Maine.

. If you're in Tennessee and want to join an ADAM users group contact the Chattanooga group at (615) 344-9715.

. Orphanware is considering selling do it your self kits for the 64K memory expander and parallel printer interface.

. Derrick Threat is marketing a very comprehensive BBS system to run on the ADAM. Price is \$40, contact him at (216) 383-8166 (voice) or you may call his operating BBS at (216) 486-7124. He also has an auto answer device for \$15.

. Syd Carter has completed a 300/1200 baud Hayes compatible internal modem for the ADAM. Price will be \$225 when it passes FCC approval.

. William Tardella reports the following on Pinball Contruction Set :

If you do the INSERT GAME LOGIC procedure twice it will work fine. (Editors note: For some reason if you continue to play after having done the INSERT GAME LOGIC, it is as if it didn't take. However, if you reboot the game disk/tape on which you just did the INSERT it will work fine, or you can do the insert twice as William suggest).

After playing a game, you may hit the "*" key on the hand controller to take you to the Player Option screen for that game. If you press 6 (done) at that point you will go to the catalog to choose another game.

. Jeopardy is a great game, W. Tardella discovered that if you hit the STORE/GET key during a game you can save the game at that point - I never thought to try that !

DECISIONS AND OPTIONS

From time to time I get letters asking for my recommendations as to whether one should spend the money to expand their ADAM or buy another computer. This is a decision that the serious home/ business user will have to make at various times no matter what kind of computer they presently own due to the rapidly changing technology.

I believe I can look at this objectively so here goes -

Firstly, I know for a fact that the vast majority of home computer owners do not use their computer to its potential. The innovative thing about the ADAM was its design for ease of use by the home user (I know that many of you don't believe this, but the ADAM is easier to use than most home systems). However, the real problem is that most people do not put the time required into learning how to operate their computer. Instructions are not read and people become frustrated and give up too quickly. There are so many home computers that are relegated to only playing games, that it is a real shame. So, NIAD attempts to aid people in making the most use of their ADAM. Unfortunately, when people get frustrated with machinery they tend to blame the machine and not themselves! This attitude sometimes leads to a decision to buy another computer in the hopes that "all will be better" with the new machine. Guess what, this is not the answer! Every computer requires study and work to effectively use it. Hence, my recommendations take this into consideration i.e. if the ADAM has the capability to perform the functions you need, but you are not using it to its capability the recommendation is to better use what you have. If the ADAM does not have the capabilities you need, I will recommend another computer or additional hardware/ software for the ADAM.

The most common question relates to word processing. The lack of an 80 column display bothers some people. Other common requests are for some features that the SMARTWriter word processor does not have - right justification, variable margins and line spacing. Others just are frustrated with trying to use SMARTWriter. I have used many different word processing programs and none are "easy" to use. All require study and frequent use to really use them effectively. SMARTWriter is a very good word processing program, that has all of the capabilities home and small business users would require. It does have its idiosyncrasies that you must get used to (see our SMARTWriter Tips column this month for some key tips to help you use it to full advantage). However, unless you absolutely have to have some of

the specialty functions mentioned above, SMARTWriter will do the job for your word processing needs. I have used it to do the newsletter for over two years. I use the Moving Window option with 36 characters across and it works fine for all my word processing needs. I would suggest that if you need these special word processing functions, there are three options available -

1. IF you are into CP/M 2.2, keep your ADAM and buy one of the 80 column hardware adapters (either the Eve or the Orphanware depending on your needs). This will give you 80 columns, the Eve unit comes with a sophisticated word processing program as well. There are also some good Public Domain CP/M word processors around.
2. Purchase a dedicated word processing computer (there are several on the market) if you don't need anything but a word processing computer. These systems come with built in word processing software and include a printer.
3. Buy an IBM PC compatible. By purchasing an IBM compatible you are assured of a wealth of software and hardware. A properly configured PC compatible will cost around \$1000, not including a printer. Depending on the sophistication of your word processing needs, be prepared to spend between \$100 and \$400 for your PC word processing software! Make sure your word processing needs justify this cost.

NON - WORD PROCESSING

This area is a little more subjective. The ADAM is capable, and has software available to do about anything you could want to do - spreadsheets (ADAMCalc), data base (SMARTfiler), LOGO, CP/M 2.2 and tons of Basic programs providing utilities, graphics, games and business programs. I would only recommend you buy another computer if ADAM doesn't have the capacity to handle your needs. As an example, if you need to put 2000 names and addresses on a single data base or if you need a 500 by 500 spreadsheet program. Regarding graphics, if you want to get into very high resolution color graphics, animation and computer art, I would recommend you buy a Commodore Amiga which is designed just for that purpose. What I'm saying is that if you have a business that has outgrown the ADAM, sell it and buy an IBM PC compatible which has the memory and sophisticated programs you might need.

If you are a home user only, but want more processing power for graphics, music and complex games buy a specialty computer or game only system. Watch for the announcement of a new, powerful machine from Commodore in March that may suit your needs.

However, with the purchase of a more sophisticated

computer, be prepared to spend the time required to properly learn how to operate it. Just because you spend alot of money on hardware, doesn't mean it is esaire to use. In fact, it is usually more difficult.

PUBLIC DOMAIN WORKSHOP

This month we are listing Basic PD volume BNDV16. This volume contains 25 fine programs including some nice graphics and great adventure games.

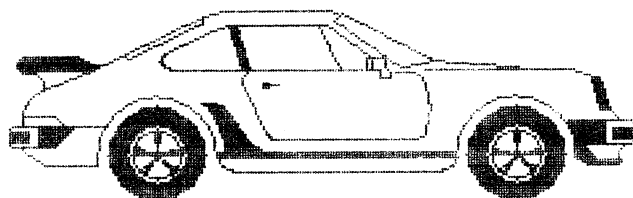
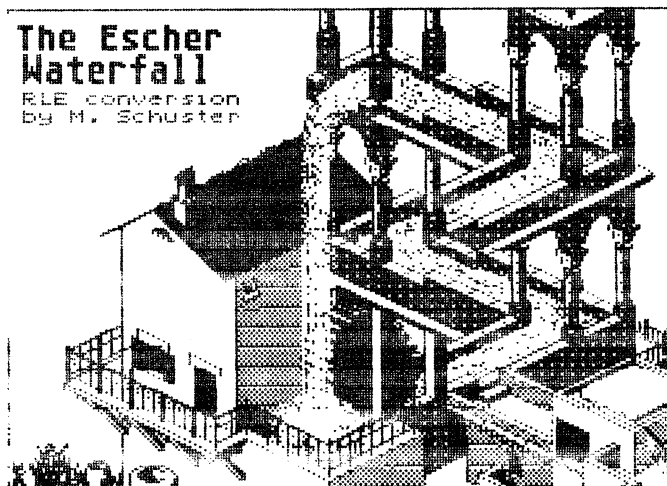
*** NIAD PUBLIC DOMAIN ***
BASIC VOLUME #16
PROGRAM DESCRIPTIONS

NOTE: Files with CAPITAL letters can NOT be run directly from basic (with the exception of the HELLO program). These files are either documentation files or special files as noted below. Also note, some of these files are special types of BASIC files that are run by entering BRUN instead of RUN.

- * BASICPGM - SMARTBasic with the DATA and REM space bump correction.
- * HELLO - The catalog menu program for selecting files.
- * strain - Calculates the strain of a physical object subjected to force.
- * bagels - A number guessing game.
- * quickreadr - A fast utility for reading blocks of data from your medium.
- * afilereadr - Demonstrates how to access A files from within a program.
- * slotmach - A slot machine game which changes control characters to produce a colorful display.
- * PUZZLE.ASM - A terrific and colorful game for patient puzzlers that also contains some great subroutines. Run by entering BRUN PUZZLE.ASM
- * .GRAVITAR - A good version of lunar lander. See docfile. Run by entering BRUN .GRAVITAR
- * landr - data file for .GRAVITAR.
- * TOLKIENasm - A good text adventure with instructions. Run by entering BRUN TOLKIENasm
- * SURVIV.ASM - Another text adventure set in a cave with graphic maps. Run by entering BRUN SURVIV.ASM
- * STARWARasm - Destroy the other spaceship before it destroys you! Run by entering BRUN STARWARasm
- * CUBE.ASM - An excellent version of the Rubiks Cube with some great sub routines. Run by entering BRUN CUBE.ASM
- * blastoff - An interesting hi-res demo program.
- * fireplace - A flaming hearth in GR mode.
- * topsecret - Tests your sense of humor!

- * ripples - A demonstration of sine, square & triangle waves in hi-res.
- * mandala - An interesting hi-res design program.
- * words - An interesting demonstration on the use of VTAB & HTAB.
- * mclaw - Another hi-res design program using the Serpinski curve.
- * serperspct - The Serpinski curve in 2 dimensional hi-res graphics.
- * adamamaz - A graphic maze game - get all treasure chests for a high score.
- * ms.liberty - A hi-res drawing of the Statue of Liberty.
- * cosplane - Hi-res design program using COS and SIN.
- * birdflower - An animation demonstration of a bird.
- * polyhedron - This program draws 2 dimensional polyhedrons.
- * eggerlin - Draws oval designs from your input.

See the Graphics Workshop for some printouts of a couple of the nice graphics programs from this PD volume.



PORSCHE 930 TURBO

GRAPHICS WORKSHOP

```
1REM HPLOT demo of HPLLOT every 2 picels effect
2REM NIAD 2/87 W. MOTEL
10HGR: cl=7:HCOLOR =cl
20FOR x=80 TO 220 STEP 2
30HPLOT x, 0 TO x, 150:NEXT
45HCOLOR =cl
50FOR x=0 TO 124 STEP 2
60HPLOT 0, x TO x, 0:NEXT
75HCOLOR =cl
80FOR x=30 TO 148 STEP 2
90HPLOT 180, x TO 255, x:NEXT
```

The above program demonstrates a color "optical illusion". Lines are HPLOTTed every 2 pixels (1 row on, 1 row off, 1 row on, etc.). Lines 20 and 30 do them diagonally, Lines 50 and 60 are vertical, and Lines 80 and 90 do the horizontal. Note the color used (CL=7) is white, yet the diagonal and vertical lines seemed to be red and blue. This illustrates some of the "tricks and color shading" you can create with the HPLLOT command. Only in the horizontal area or the overlapping areas get a deep-more truer color. Lyle noticed on some RLE pictures this effect which we knew could not be color since only white is used.

To see this effect with other colors, simply change line 10 CL = your new HI-RES color code. You can also experiment by changing the HCOLOR = x at line 10, 45, and 75 to 3 different colors to see the effect in the overlap areas. This will also point out the dreaded color-bleed problem.

In case you don't know what this is, it is caused by trying to change a HI-RES color within an 8 position zone already set. On a HI-RES screen, you have 256 columns (going left to right). Each 8 columns are controlled by the same color code (one color for the "off" bits, one for the "on" bits). The zones are columns 0 thru 7, 8 thru 15, 16 - 23, 24 - 31, 32 - 39, 40 - 47, etc. Type the following in and notice the effect after each line. We will be working in 2 zones, 32 thru 39 and 40 thru 47.

```
HGR:HCOLOR=3 (color is white)
HPLLOT 32,0 TO 32,150
HPLLOT 33,0 TO 33,150
HPLLOT 34,0 to 34,150
HPLLOT 35,0 TO 35,150
```

You now have a fairly clear white line, now do

```
HCOLOR=5 (color is red)
HPLLOT 40,0 TO 40,150
HPLLOT 41,0 TO 41,150
```

This gives you a red line in zone 2, white is still there, now enter -

```
HCOLOR=6 (color is blue)
HPLLOT 37,0 TO 37,150
HPLLOT 38,0 TO 38,150
```

Notice the previous white line now was also changed to blue, since these are in the same color zone and were previously set on. The last color change AND hplot within that zone caused the color code for the "on" bits to get changed, which caused the white to go to blue.

PAINTMASTER owners:

The above problem is also encountered in PAINTMASTER when you draw over a previously drawn area. This is not a problem with PaintMaster. TIP: try the ERASE with a fine brush within a drawn area to get more detail into your picture. The ERASE sets bits "off" which use the background color. The only problem with this is that it always uses the background color, which may not be what you want. I am working on a patch that will allow you to specify a different background color for a specified area, which will give you more capability to this already excellent program.

Okimate 20 Color Printer

Good News for the OKI 20 owners. The following is a LO-RES color screen print program. Simply get your LO-RES pictures on the screen and RUN my program. All colors print, including black (whether it is a black line or black background). The principle is based on the color pattern example in the OKI manual and the building of 3 "print buffer" areas per LO-RES row, one for each of the 3 ribbon colors. Please note, this is not the most sophisticated, structured program, but it is a quicky program that works. As far I as know, it's also the first free LO-RES print for the ADAM using the OKI 20, so enjoy it. Print time is about 7 minutes per screen.

```
1 REM LO-RES color screen print
2 REM for OKIMATE 20
3 REM by W. MOTEL NIAD 2/87
10 LOMEM :32000
20 POKE 40, 27: POKE 41, 65: POKE 42, 8: POKE 43, 3: C
ALL 90: REM 8/72
21 POKE 40, 27: POKE 41, 50: POKE 42, 3: CALL 90
30 yb = 27648: rb = 28672: bb = 29696
40 FOR vh = 0 TO 39: ob = 0: FOR vl = 0 TO 39
50 c = SCRNVl, vh)
60 ON c+1 GOSUB 1001, 1002, 1003, 1004, 1005, 1006, 10
07, 1008, 1009, 1010, 1
011, 1012, 1013, 1014, 1015, 1016
70 wb = yb+ob: ON y GOSUB 1100, 1200, 1300
80 wb = rb+ob: ON r GOSUB 1100, 1200, 1300
90 wb = bb+ob: ON b GOSUB 1100, 1200, 1300
```

```

100 ob = ob+8
110 NEXT v1
120 POKE 27968, 13: POKE 27969, 3
121 POKE 28992, 13: POKE 28993, 3
122 POKE 30016, 13: POKE 30017, 10: POKE 30018, 3
130 POKE 40, 27: POKE 41, 25: POKE 42, 3: CALL 90
140 POKE 40, 27: POKE 41, 75: POKE 42, 64: POKE 43, 1:
POKE 44, 3: CALL 90
150 POKE 92, 0: POKE 93, 108: CALL 90: POKE 92, 40: POK
E 93, 0
160 POKE 40, 27: POKE 41, 75: POKE 42, 64: POKE 43, 1:
POKE 44, 3: CALL 90
170 POKE 92, 0: POKE 93, 112: CALL 90: POKE 92, 40: POK
E 93, 0
180 POKE 40, 27: POKE 41, 75: POKE 42, 64: POKE 43, 1:
POKE 44, 3: CALL 90
190 POKE 92, 0: POKE 93, 116: CALL 90: POKE 92, 40: POK
E 93, 0
200 NEXT vh
210 POKE 40, 27: POKE 41, 48: POKE 42, 3: CALL 90
220 PRINT " DONE ": STOP
1001 y = 1: r = 1: b = 1: RETURN
1002 y = 3: r = 1: b = 2: RETURN
1003 y = 3: r = 2: b = 1: RETURN
1004 y = 1: r = 1: b = 3: RETURN
1005 y = 1: r = 2: b = 1: RETURN
1006 y = 2: r = 2: b = 2: RETURN
1007 y = 1: r = 3: b = 1: RETURN
1008 y = 3: r = 3: b = 1: RETURN
1009 y = 1: r = 3: b = 3: RETURN
1010 y = 3: r = 1: b = 3: RETURN
1011 y = 2: r = 2: b = 2: RETURN
1012 y = 3: r = 2: b = 3: RETURN
1013 y = 2: r = 3: b = 2: RETURN
1014 y = 2: r = 3: b = 3: RETURN
1015 y = 3: r = 3: b = 2: RETURN
1016 y = 3: r = 3: b = 3: RETURN
1100 FOR x = 0 TO 7: POKE wb+x, 255: NEXT x: RETURN
1200 FOR x = 0 TO 7 STEP 2: POKE wb+x, 85: POKE wb+x+1,
170: NEXT x: RETURN
1300 FOR x = 0 TO 7: POKE wb+x, 0: NEXT x: RETURN

```

0 & NIAD PUBLIC DOMAIN

BASIC # BNDV16

```

10 HGR2: FOR d = 1 TO 999
20 HCOLOR = 6
30 HPLLOT 0, 0 TO 254, 0 TO 254, 190 TO 0, 190 TO 0, 0
40 FOR g = 1 TO 2
50 s = (RND(1)*9+6)*.01: x = RND(1)*139: y = RND(1)*95
60 FOR a = 1.55 TO 3.15 STEP s: b = SIN(a)*x+139: c =
COS(a)*y+95
70 HPLLOT b, c TO b, 190-c TO 254-b, 190-c TO 254-b, c
TO b, c
80 NEXT a
90 HCOLOR = 10
95 IF PEEK(64885) <> 13 THEN TEXT: END
100 NEXT g: NEXT

```

0 & NIAD PUBLIC DOMAIN

```

1 REM : RIRD & FLOWER.PGM
2 REM : TAPE No.32285-1
3 REM : Draws a Flower and Animated Bird
10 HGR2
20 x = 149: y = 145: pi = 3.14159
120 n = 1.5
130 HCOLOR = 3: HPLLOT x, y
140 FOR i = 0 TO 5*pi STEP .3
150 r = 50*SIN(n*i)
160 c = r*COS(i)+x
170 d = -r*SIN(i)+y
180 HPLLOT TO c, d
190 NEXT i
200 REM Plot Bird
210 HPLLOT 1, 20
220 FOR x = 1 TO 90 STEP 4
230 y = (6/15)*x+20
240 HCOLOR = 2: GOSUB 330
250 HCOLOR = 0: GOSUB 330
260 HCOLOR = 2: GOSUB 390
270 HCOLOR = 0: GOSUB 390
280 HCOLOR = 2: GOSUB 450
290 HCOLOR = 0: GOSUB 450
300 NEXT x
310 HCOLOR = 2: GOSUB 330
320 GET zz$: TEXT: END
330 REM : Plot Bird Position
340 HPLLOT x+15, y+40 TO x+40, y+30
350 HPLLOT TO x+50, y+50
360 HPLLOT TO x+60, y+30
370 HPLLOT TO x+85, y+40
380 RETURN
390 REM : Plot Bird Poistion 2
400 HPLLOT x+10, y+35 TO x+40, y+35
410 HPLLOT TO x+50, y+50
420 HPLLOT TO x+60, y+35
430 HPLLOT TO x+85, y+35
440 RETURN
450 REM : Plot Bird Position 3
460 HPLLOT x+10, y+30 TO x+50, y+50
470 HPLLOT TO x+85, y+30
480 RETURN

```


SMARTWRITER TIPS

The following is a collection of SMARTWriter bugs, tips and general information that all users of SMARTWriter must know to operate this fine word processing program.

Study these 10 items and place them in a handy spot for later reference.

1. REVISION LEVEL - The latest version of the SMARTWriter software (which is permanently stored in a chip inside the ADAM console) is R80, which you must have since earlier versions have many bugs in them. Turn your computer on and while you are still in the Electronic Typewriter mode hold down the CONTROL and R keys simultaneously - a number will appear below the IV at the bottom of the screen. If it is lower than R80, take your unit to the nearest Honeywell service center to be upgraded to the R80 version.

2. SAVING FILES - If you are typing a long document at one sitting, it is a good idea to save the document multiple times as you are typing it to prevent any problem from destroying all your work. HOWEVER, after you type the first page or so and store the document, giving it whatever name you choose, you must do the following to allow you to re-save the document using the same name and hence continue to build the document on your media.

After storing the document the FIRST TIME -

- . Hit the CLEAR button on the top right of the keyboard

- . Hit SMARTKEY VI (CLEAR WORKSPACE)

- . Hit SMARTKEY VI again

- . Hit the STORE/GET key

- . HIT SMARTKEY VI and proceed to GET the file you previously saved

Once you have done this procedure once, you do not have to do it again. You can continue to save the same document, using the same name as many times as you wish. When you do save it, SMARTWriter will display the name you gave the document the first time you stored it in the yellow section at the bottom left of the screen; to save it under the same name just hit SMARTKey VI (don't enter the name again).

If this procedure is not followed, and you try to save a file using the same name (during the same session) you will get an error message.

3. CLEAR WORKSPACE BUG - There is a bug when you attempt to clear the workspace and hit the keys too fast. You'll notice that either the system will lock up or most likely, the sound will be gone and when you type at the end of a line the characters will not appear until you jump to the next line. Once in this situation, save your document and turn ADAM off and back on again to correct. To prevent this from happening, just wait a second

in between hitting the the keys required to CLEAR workspace.

4. VERTICAL MARGINS - There are a couple problems here. When you have a blank line within your document, the result is that 1 1/2 lines are spaced when the document is printed. This means that if there are many blank lines and you have a multiple page document, it is likely that a page will print past the end of the paper. There are two "tricks" to prevent this from happening.

- . Make sure that the line preceding the blank line does NOT have a carriage return on it, then put the carriage return by itself on the blank line.

However, if the line after the the blank line must be indented this will not work.

- . On the blank line use either super or subscript and put a space in between them, then the carriage return.

The other problem is that if you change the VERTICAL LINE spacing, many times it will not take until you do it a second time. If after changing it there is no hesitation before the regular SMARTKeys are re-displayed, the vertical margin was not actually changed. Just hit the SK I, then SK III and after a hesitation (you will notice the vertical margin marker going up and down), the new margins will be in effect.

5. FORMATTING A LINE - If you are entering data on a line that you want to be in a certain spot, you must have a carriage return (done by hitting the RETURN key) at the end of the line to "hold" the line in place. Also, if you want to indent a line, the previous line must have a carriage return at the end of it.

6. MOVING WINDOW - The moving window must be used for entering data in columns to "see" how the columns will look in the final print out (remember to put a carriage return at the end of each line by hitting the RETURN key). I also recommend using the moving window format for all typing because you can move the cursor around much quicker and see a whole screen full of data. What I do is get into the moving window mode (hit SK II, then SK VI) and then set my right margin to 46, which allows me to see a whole line on the screen at once. Of course, the right margin must be reset to 70 prior to printing out the document.

I find this much preferable to using the standard format when typing a document.

7. CARRIAGE RETURN BUZZ - If when you attempt to place a carriage return at the end of a line, SMARTWriter "buzzes" at you, it means that there are characters to the right of where you are trying to put the carriage return. These characters may

be spaces, which of course you can't see. You can either advance your cursor to the right a few spaces and then hit the backspace key to erase the characters, then hit the carriage return key or you can hit the INSERT key, then hit the carriage return key, which will place the return at that point in the line.

8. UNDERLINE BUG - If the left margin is set to 1 and you attempt to underline the first character strange problems will result. Don't do both together.

9. NO MORE ROOM/ CANNOT WRITE TO THIS FILE

DISASTER - Probably the most defastating problem is when you go to save a document and there is not enough room on the media for the document to fit or there is a bad block on the tape/disk. SMARTWriter comes back with a NO MORE ROOM or CANNOT WRITE TO THIS FILE message and tells you to hit the ESCAPE key (make sure you remove your media before you do this) and then proceeds to say "RESTORING FILES, the vertical margin marker begins to cycle and will never stop, the keyboard is locked and there is no alternative but to reset the ADAM losing the contents of memory. There is no fix for this problem, just prevention by making sure you save large documents a page at a time so the most you will lose is a page. You must monitor the amount of space left on your media by doing a catalog in SMARTBasic. There is no easy way to verify that all the blocks on a tape are ok, but this can be done on a disk by VERIFYING after you format it.

10. OUT OF MEMORY - There is a limited amount of memory available in the ADAM to keep a SMARTWriter document. If you don't have the 64K memory expander, you should limit the number of pages in any one document to about 7. If you do have the 64K you can go up to about 20. If you try to create larger documents it is possible that you will lose the whole document similarly to the problem in number 9 above. You can break a very large document into pieces, making separate files every 7 pages or so, just make the last page end at then end of a physical page (use the end page marker to be sure), then when you want to print the document out you would print the first 7 pages, followed by the next 7, etc.. You can even use the page number option to start the subsequent files with the correct page number.

SMARTBASIC WORKSHOP

MULTIPLE BLOCK DIRECTORIES

By Bob Tarnowski

A standard tape or disk formatted for the ADAM c contains a one block DIRECTORY capable of ma intaing information on 35 user files. By ent ering CATALOG, the user gets a list of the file s (or programs), the type of file (usually A or H) , the length of the file in blocks and the number of free blocks remaining on the medium. Often, you can fill the tape or disk with 35 programs and still have plenty of room (in blocks) left but ADAM tells you "No more room". This article wi ll explain what happened and what you can do abou t it.

A block contains 1,024 spaces. Each file in the directory is assigned 26 spaces making room for 39 en tries. The first 3 are used by ADAM: 1) Volume information; 2) BOOT which is read when the <RESET> is pulled; and 3) DIRECTORY which contains directory information like the length of the directory. Then there is space for 35 user files followed by a 4th system entry, BLOCKS LEFT which tells ADAM how many free blocks are left on the medium.

Lets say you store 35 programs and each of them are 2 blocks long. You have used 70 blocks leaving most of your tape or disk blank but you have filled the directory - there is "No more room" in the directory. If you have less than 35 files and plenty of blocks free then you probably have a lot of deleted files in the directory which must be removed. Refer to the December Newsletter.

If you extend the length of the directory to 2 blocks, you can add 39 more files to the medium; a 3 block directory adds space for 78 more files. More than 3 blocks is not recommended and seldom required.

You can change the length of the directory at the time you INITIALize a new tape or disk by the following procedure:

1-If you are initializing a disk, enter POKE 25305,160 to set the volume length. The default is 255 and is left at 255 for tape.

2-Normally your volume name can only be 10 characters long; you can use 11 characters by POKEing 23328,11 but you must POKE 23328,10 AFTER the medium is INITIALized.

3-Change the directory size by POKEing 25308,2 or 3 depending on desired length.

4-Enter INIT (volume name)

Your medium is now capable of storing 74 or 113 files or programs. It is important to note, however, that not all utility programs will work with a multiple block directory. I have been using the "Media-Aid" utilities without a problem but many others will not work.

INITializing a medium does not erase the programs. The old directory is transferred to block 0 and a new directory constructed in block 1. Therefore, if you accidentally INIT the wrong medium, you can recover the old directory with appropriate utility programs. On a multiple block directory, however, you can only recover the first block making total recovery practically impossible.

The Power of Poking By D. Metcalf

I never like to reset LOMEM: or HIMEM: as some of my larger programs need all of ADAM's memory. Try leaving LOMEM: alone and use this instead for your sound routine- FOR i=0 to 4:READ d:POKE i,d:next:data 62,255,211,255,201. Now just POKE1, sound byte and CALL 0 to generate sounds. This routine will stay at location 0 in SMARTBasic, even if you load and run other programs, as long as they do not use this low area of memory. Getting back to LOMEM:, I have a program that takes up 17233 bytes in just DATA statements alone, leaving only 8721 bytes left for programming. As you can see, I finally ran out of memory pretty quickly. The DATA statements were all for HPLOTS and HCOLORS. All 17233 bytes were used for just 4986 numbers. I then deleted everything but the data statements, reset LOMEM: up 4993 (LOMEM: 32400). I made a loop to READ and POKE in the DATA starting at 27410 and BSAVED the file.

After reloading the original program and deleting the DATA statements, I replaced the READs with PEEKs, BLOADING the file of data I BSAVED. I now have the same program, but with over 12000 bytes of additional memory to play with. An added bonus is the speed of the program.

The use of DATA statements will take more than 2/3 of additional memory then doing the same function with POKES. NOTE: This does not apply if the data numbers are decimals, negative or over 255. The main use is for music routines and HPLOTS.

It took me two years to dawn upon this and I hope it will benefit you as it does me. All of my new programs will not use DATA unless they have to! Let ADAM help you POKE in the data with this little routine -

```
10 LOMEM: 30000:Input starting address;s
20 PRINT s;" ";:INPUT "val ";v
30 POKE s,v:s=s+1:GOTO 20
```

```
1 REM ** PROGRAM FIRST APPEARED IN
2 REM ** "MORE BASIC COMPUTER GAMES," BY DAVID AH
L
3 REM
4 REM ** INSTRUCTIONS:
5 REM ** Just follow the prompts
6 REM ** and create your own
7 REM ** crossword puzzles.
8 REM
9 HOME
10 HOME
20 PRINT TAB(8); "WORD-SEARCH PUZZLE"
21 PRINT
30 PRINT TAB(8); "CREATIVE COMPUTING": PRINT TAB(7)
; "MORRISTOWN, NEW JERSEY"
35 PRINT: PRINT: PRINT
40 PRINT "ADJUST THE PRINTER-PAPER,PLEASE"
280 CLEAR
300 DEF FN a(z) = INT(RND(1)*z+1)
310 INPUT "HOW MANY COLUMNS IS YOUR PRINTER?"
; tw
315 PRINT
320 INPUT "DO YOU WANT A SOLUTION PRINTOUT?"
; x$
325 PRINT
330 INPUT "WIDTH OF PUZZLE? "; w: md = w
331 PRINT
340 IF w*2 <= tw THEN 345
343 PRINT "THAT WILL NOT FIT IN "; tw; " COLUMNS": P
RINT: GOTO 330
344 PRINT
345 IF w < 1 THEN 330
350 INPUT "LENGTH OF PUZZLE? "; l: IF l > w THEN md
= l
351 PRINT
355 IF l < 1 THEN 350
356 PRINT
360 INPUT "WHAT IS THE MAXIMUM NUMBER OF WORDS IN T
HE PUZZLE? "; m
361 PRINT
370 IF m >= 2 THEN 380
375 PRINT "SORRY, THERE MUST BE AT LEAST": PRINT "TW
O WORDS IN THE PUZZLE."
376 PRINT: GOTO 360
380 HOME
390 DIM a$(1, w), w$(m)
400 DIM w(m, 3), dxy(8, 2), dd(28)
410 PRINT "NOW ENTER A HEADING THAT WILL": PRINT "BE
PRINTED OVER THE PUZZLE:"
420 PRINT "( "; tw; " CHARACTERS MAXIMUM! )"
421 PRINT
430 INPUT xy$
435 HOME
440 PRINT "NOW ENTER A WORD AT EACH": PRINT "QUESTIO
N MARK."
450 PRINT: PRINT "TO REDO A WORD:": PRINT "TYPE A HY
PHEN ( - ).": PRINT
```

```

460 PRINT "WHEN YOU RUN OUT OF WORDS:": PRINT "TYPE
A PERIOD ( . )."
461 PRINT: PRINT: PRINT
465 PRINT "PRESS ANY KEY TO BEGIN."
466 GET a$: IF a$ = "" THEN 466
469 HOME
470 FOR i = 1 TO m
480 INPUT t$: IF t$ = "-" THEN i = i-1: PRINT "REDO
"; w$(i); "...": GOTO 480

490 IF t$ = "." THEN m = i-1: GOTO 660
500 IF LEN(t$) = 0 THEN PRINT "INPUT ERROR; REDO:":
GOTO 480
510 j = 1
520 te$ = MID$(t$, j, 1): IF te$ >= "a" AND te$ <= "
z" THEN 570
525 IF te$ < "A" OR te$ > "Z" THEN 530
527 t$ = LEFT$(t$, j-1)+CHR$(ASC(MID$(t$, j, 1))+32)
+RIGHT$(t$, LEN(t$)-j): GO
TO 570
530 IF te$ = t$ THEN t$ = "": GOTO 500
540 IF j = LEN(t$) THEN t$ = LEFT$(t$, j-1): GOTO 5
80
550 IF j = 1 THEN t$ = RIGHT$(t$, LEN(t$)-1): j = j
-1: GOTO 570
560 t$ = LEFT$(t$, j-1)+RIGHT$(t$, LEN(t$)-j): j = j
-1
570 j = j+1: IF j <= LEN(t$) THEN 520
580 PRINT "-"; t$; "-": PRINT
600 IF LEN(t$) <= md THEN 610
605 PRINT: PRINT "THAT WORD IS TOO LONG.": PRINT "TR
Y ANOTHER ONE": PRINT
607 GOTO 480
610 FOR iz = 1 TO i-1: IF w$(iz) <> t$ THEN NEXT: G
OTO 630
620 PRINT: PRINT "YOU ALREADY USED THAT.": PRINT "TR
Y ANOTHER WORD.": PRINT: G
OTO 480
630 w$(i) = t$
640 NEXT i
645 HOME
650 PRINT "THAT'S IT..."; m; " WORDS."
660 PRINT: PRINT "PLEASE WAIT AS THE PUZZLE": PRINT
"IS BEING ASSEMBLED."
680 FOR i = 1 TO m-1
685 FOR j = i+1 TO m
690 IF LEN(w$(i)) < LEN(w$(j)) THEN hz$ = w$(i): w$
(i) = w$(j): w$(j) = hz$
700 NEXT: NEXT
710 FOR i = 1 TO 8: READ dxy(i, 1), dxy(i, 2): NEXT
720 FOR i = 1 TO 28: READ dd(i): NEXT
730 DATA 0,1,1,1,1,0,1,-1,0,-1,-1,-1,-1,0,-1,1
740 DATA 2,4,6,8,2,4,6,8,2,4,6,8,2,4,6,8,2,4,6,8,2
,4,6,8,1,3,5,7
750 FOR i = 1 TO m
760 ln = LEN(w$(i))
770 nt = 0
790 sd = dd(FN a(28))

```

```

800 sx = FN a(w): x1 = sx+(ln-1)*dxy(sd, 1): IF x1 <
1 OR x1 > w THEN 790
810 sy = FN a(l): x1 = sy+(ln-1)*dxy(sd, 2): IF x1 <
1 OR x1 > l THEN 790
820 nt = nt+1: IF nt <> w*1*2 THEN 850
830 PRINT: PRINT "COULDN'T FIT "; w$(i); "": PRIN
T "IN THE PUZZLE.": PRINT
832 INPUT "DO YOU WANT TO START OVER? "; a$
834 IF LEFT$(a$, 1) = "Y" OR LEFT$(a$, 1) = "y" THEN
750
835 HOME: PRINT "CONTINUING..."
836 w$(i) = "": GOTO 950
850 j = sy: k = sx
860 FOR p = 1 TO ln
870 IF LEN(a$(j, k)) AND a$(j, k) <> MID$(w$(i), p,
1) THEN 790
880 j = j+dxy(sd, 2): k = k+dxy(sd, 1): NEXT p
900 j = sy: k = sx
910 FOR p = 1 TO ln: a$(j, k) = MID$(w$(i), p, 1)
920 j = j+dxy(sd, 2): k = k+dxy(sd, 1): NEXT
940 w(i, 1) = sx: w(i, 2) = sy: w(i, 3) = sd
950 NEXT i
970 FOR i = 1 TO 1
975 FOR j = 1 TO w
980 IF a$(i, j) = "" THEN a$(i, j) = CHR$(FN a(26))+
96)
990 NEXT: NEXT
1010 FOR i = 1 TO m-1: FOR j = i+1 TO m
1020 IF w$(i) <= w$(j) THEN 1030
1021 hz$ = w$(i): w$(i) = w$(j): w$(j) = hz$
1025 FOR k = 1 TO 3: hz = w(i, k): w(i, k) = w(j, k):
w(j, k) = hz: NEXT k
1030 NEXT j: NEXT i
1040 HOME
1041 INPUT "HOW MANY COPIES OF THIS PUZZLE DO YOU WAN
T? "; n
1060 FOR c = 1 TO n: GOSUB 1070: NEXT: GOTO 1230
1070 HOME: IF xy$ = "HERE IS THE ANSWER KEY:" THEN 10
72
1071 PRINT "PRESS ANY KEY FOR COPY #"; c: GOTO 1073
1072 PRINT "PRESS ANY KEY FOR ANSWER KEY"
1073 GET a$: IF a$ = "" THEN 1073
1074 HOME
1075 PR #1
1080 t = (tw-2*w)/2
1100 PRINT TAB((tw-LEN(xy$))/2); xy$
1110 PRINT: PRINT
1120 FOR j = 1 TO l: PRINT TAB(t);
1130 FOR k = 1 TO w: IF a$(j, k) = "." THEN PRINT ".
"; : GOTO 1140
1135 PRINT CHR$(ASC(a$(j, k))-32); " ";
1140 NEXT: PRINT: NEXT
1150 PRINT: PRINT
1160 PRINT TAB(7); "FIND THESE HIDDEN WORDS IN THE AB
OVE PUZZLE:"
1170 PRINT
1180 FOR j = 1 TO m STEP 3: IF LEN(w$(j)) = 0 THEN 12
10

```

```

1190 IF POS(0)+LEN(w$(j)) > tw-2 THEN PRINT
1200 PRINT TAB(5); w$(j); : IF j+1 > m THEN 1210
1201 IF LEN(w$(j+1)) = 0 THEN 1210
1202 PRINT SPC(25-(LEN(w$(j)))) ; w$(j+1); : IF j+2 >
m THEN 1210
1203 IF LEN(w$(j+2)) = 0 THEN 1210
1204 PRINT SPC(25-(LEN(w$(j+1)))) ; w$(j+2)
1210 NEXT: PRINT: PRINT: PRINT: PRINT
1220 PR #0
1221 RETURN
1230 IF LEFT$(x$, 1) = "Y" OR LEFT$(x$, 1) = "y" THEN
1250
1240 GOTO 1360
1250 REM
1260 FOR i = 1 TO l: FOR j = 1 TO w: a$(i, j) = ".":
NEXT j: NEXT i
1270 FOR i = 1 TO m
1280 ln = LEN(w$(i)): j = w(i, 2): k = w(i, 1)
1290 FOR p = 1 TO ln
1300 a$(j, k) = MID$(w$(i), p, 1)
1310 j = j+dxy(w(i, 3), 2): k = k+dxy(w(i, 3), 1): NE
XT p
1320 NEXT i
1330 xy$ = "HERE IS THE ANSWER KEY:"
1340 GOSUB 1070
1350 PRINT: PRINT
1360 END

```

BOOKS

The First Book of ADAM: The Computer By Arthur Dent

"This book is intended to introduce you to the exciting new ADAM computer from Coleco. It has been written in a manner that should make it useful to a wide range of readers with differing computer backgrounds. Although ADAM is billed as "the Colecovision Family Computer System," its appeal extends beyond home use. ADAM's unique combination of features and price will attract both firsttime and experienced computer users, school teachers and students, small business owners, and even computer hobbyists. ADAM is shaping the future of affordable computing power." This quote from the introduction of this book is interesting from the standpoint that it is just as true today as it was in 1983 when this book was written.

This 202 page book is divided into 4 major sections:

I. In the Beginning

10 pages on what a home computer can be used for and the ADAM specifically as a home system.

II. Welcome to the Machine

44 pages covering how to set the ADAM up; types of computer memory; the digital data drives, care of your data on the digital data packs; keyboard use; printer information; and the ADAM expansion ports. Good step by step instructions and pictures make

this a good section.

III. A Few Words about Word Processing

46 pages on using SMARTwriter for home, school and business. Good instructions and diagrams on how to use the word processor.

IV. Introduction to Programming

106 pages covering some overall information on ADAM SMARTBasic and details on each command with sample programs. This section is really a reference for Basic programming that aids in defining the purpose and use of each of the commands. There is not a good framework for teaching the novice Basic programming, but the sample programs have good explanations with them.

Overall, I found the book a good book for beginners. The introductory information, ADAM setup and word processing sections were especially good for beginners.

Basic BASIC Programs for the ADAM By Timothy Orr Knight

This book is a collection of 20 ADAM SMARTBasic programs with detailed explanations of each. An overview of the purpose of each program is given, followed by a more detailed explanation of the program in groups of lines. Finally, each of the variables used in the program is defined. This is a good way for the beginning programmer to learn about SMARTBasic, since a step by step approach is provided in which you input the program and learn how it works as you do so. This book, coupled with a book providing a good explanation of each command word is what people need to learn how to read Basic programs and write them on their own. Basic is an easy language to learn and use once you get some "basics" down. If you are frustrated by SMARTBasic you'll need to take the time to study and learn it.

The 20 programs are:

- . Fundamental Programs
 - .. Compu-Tutor
 - .. Mortgage
 - .. Cuisine
 - .. Printer Picture
- . Educational
 - .. History Quiz
 - .. Spelling Tester
 - .. French Tutor
 - .. States and Capitols
 - .. Learning the Easy Way
- . Math
 - .. Calculator
 - .. Basic Skill Check-Up
 - .. Geometry
 - .. Length Converter

- . Graphics
 - .. Colorbar
 - .. Shapes
 - .. Drawer
 - .. Graph
- . Games
 - .. Guess My Number
 - .. Simon Says
 - .. Blackjack

There is also a 15 page section on creating your own programs

I like this book because it is a step by step guide that results in you having 20 nice programs to add to you library and some education on Basic programming.

SMARTFILER BACKISSUE INDEX

external power/review	NIAD, #4, p16, 1985	LasVegasACArch.I/review	NIAD, #7, p14, 1985
Family Feud/review	NIAD, #7, p11, 1985	LearningExpress/reviewA+	NIAD, #10, p15, 1985
Fantasy Gamer/review	NIAD, #6, p12, 1985	Library-file storage/TXT	NIAD, #7, p11, 1985
FDump/PR	NIAD, #3, p.3, 1985	local User's Group/lettr	NIAD, #14, p15, 1986
FDump2,corr'd/PR	NIAD, #5, p03, 1985	LowResol.WS/WS	NIAD, #13, p05, 1986
FDump2/PR	NIAD, #4, p 2, 1985	LowResol.WS/WS	NIAD, #10, p08, 1985
File storage-Squeeze/TXT	NIAD, #7, p11, 1985	M.I.T.E./review	NIAD, #17, p12, 1986
File storage/TXT	NIAD, #7, p11, 1985	machine lang./TXT	NIAD, #15, p05, 1986
Finance/correction	NIAD, #17, p02, 1986	Mad Cube/PR	NIAD, #19, p05, 1986
Finance/PR	NIAD, #15, p06, 1986	Madam7/TXT	NIAD, #10, p11, 1985
Font editor/PR	NIAD, #3, p.6, 1985	Margins in Basic/PR	NIAD, #10, p08, 1985
Fontedit,update/PR	NIAD, #5, p03, 1985	margins w/i doc't/TXT	NIAD, #13, p15, 1986
Game Pack I/review	NIAD, #5, p16, 1985	Margins/TXT	NIAD, #8, p 5, 1985
Graphic Display/PR	NIAD, #13, p07, 1986	MasterCat.Syst.II/review	NIAD, #5, p15, 1985
Graphics,pt.2/PR	NIAD, #20, p06, 1986	mathematics progr/BNDv14	NIAD, #22, p03, 1986
Graphics/TXT	NIAD, #19, p04, 1986	Media-Aid/review	NIAD, #16, p14, 1986
Grog's revenge/review	NIAD, #4, p15, 1985	menu-select/PR	NIAD, #8, p 6, 1985
H file format/TXT	NIAD, #5, p08, 1985	menu-select/PR,corr.	NIAD, #10, p05, 1985
Hacker's Guide,v.1/rev	NIAD, #6, p11, 1985	modems, external/TXT	NIAD, #14, p11, 1986
Hacker's Guide,v.2/rev.	NIAD, #20, p13, 1986	Modern Art/PR	NIAD, #5, p11, 1985
Hello program/TXT	NIAD, #4, p 7, 1985	MultiCart;copy/review	NIAD, #11, p 15,1985
HELLO-Password/PR	NIAD, #18, p09, 1986	MultiWrite/review	NIAD, #17, p10, 1986
Hello/PR	NIAD, #8, p 3, 1985	MultiWrite/review	NIAD, #16, p12, 1986
Home SW Library/review	NIAD, #6, p11, 1985	Musicmaker,BNDv4/corr.	NIAD, #17, p03, 1986
Household II Libr/review	NIAD, #7, p13, 1985	Musicmaker/ BNDv4/corr	NIAD, #14, p04, 1986
Info.ADAM expl./TXT	NIAD, #2, p.11,1985	Nevada Basic,pt1/review	NIAD, #8, p10, 1985
INIT, disk/PR	NIAD, #13, p06, 1986	Nevada Basic,pt2/review	NIAD, #9, p 9,1985
Input Control/PR	NIAD, #11, p 07,1985	New owners WS/WS	NIAD, #12, p03, 1985
Intel-Best 3.3/rev.	NIAD, #20, p12, 1986	New Owners WS/WS	NIAD, #11, p 3, 1985
Intel-Load/review	NIAD, #19, p14, 1986	NIAD PD libr./use of	NIAD, #14, p04, 1986
Interfaces/TXT	NIAD, #16, p02, 1986	Nibbles&Bits/review	NIAD, #19, p02, 1986
Inventory/PR	NIAD, #6, p 7, 1985	NIM,Logo game/PR	NIAD, #12, p04, 1985
Jeopardy/correction	NIAD, #18, p01, 1986	Nintendo/review	NIAD, #19, p14, 1986
Keyboard scan,clear/PR	NIAD, #1, p02, 1985	NNDv4, MCat-41/corr	NIAD, #14, p04, 1986
		Noise drum demo/PR	NIAD, #4, p 6, 1985
		One on One/review	NIAD,#2,p10,11,1985
		One-armed Bandit/PR	NIAD, #6, p 7, 1985
		overlays, CP/M/TXT	NIAD, #15, p09, 1986
		PackCopy/letter,editor	NIAD, #5, p17, 1985
		PackCopy/review	NIAD, #4, p13, 1985
		Paint/PR	NIAD, #19, p09, 1986
		PaintMaster/review	NIAD, #14, p12, 1986
		peeks,pokes,calls/TXT	NIAD, #15, p05, 1986
		Peeks,Pokes-11/PR	NIAD, #11, p 05,1985
		Pers.Accountant/reviewA+	NIAD, #10, p13, 1985
		Phonebook, BNDv7/TXT	NIAD, #14, p08, 1986
		Phonebook/PR	NIAD, #13, p10, 1986
		PIA2 interface/review	NIAD, #17, p10, 1986
		PowerPrint/review	NIAD, #15, p15, 1986
		powers of numbers/TXT	NIAD, #15, p05, 1986

Printer-problems/letter	NIAD, #7, p16, 1985	SmartBasic-20/WS	NIAD, #20, p05, 1986
Printer-problems/letter	NIAD, #7, p15, 1985	SmartBasic-21/WS	NIAD, #21, p05, 1986
Printer-problems/letter	NIAD, #9, p16, 1985	SmartBasic-22/WS	NIAD, #22, p06, 1986
Printers/review	NIAD, #6, p14, 1985	SmartBest v1.0/review	NIAD, #11, p 13, 1985
Printers/review	NIAD, #7, p15, 1985	SmartBest-15/WS	NIAD, #15, p06, 1986
Problems;Procedure/TXT	NIAD, #8, p09, 1985	SmartBest/TXT	NIAD, #14, p09, 1986
PS-1powersupply/review	NIAD, #11, p16, 1985	SmartFiler-02/WS	NIAD, #2, p7, 1985
QBert Qubes/review	NIAD, #2,p10, 1985	SmartFiler-03/WS	NIAD, #3, p11, 1985
Quickcopy/review	NIAD, #15, p14, 1986	SmartFiler-04/WS	NIAD, #4, p10, 1985
QuikFax Quest 1/review	NIAD, #9, p10, 1985	SmartFiler-05/WS;struct	NIAD, #5, p12, 1985
raising to powers/TXT	NIAD, #15, p05, 1986	SmartFiler-07/WS	NIAD, #7, p10, 1985
Random access/TXT	NIAD, #18, p07, 1986	SmartFiler-08;struct/WS	NIAD, #8, p 7, 1985
Random number/PR	NIAD, #20, p06, 1986	SmartFiler-21/WS	NIAD, #21, p07, 1986
Random numbers/PR	NIAD, #16, p04, 1986	SmartFiler-22/WS	NIAD, #22, p10, 1986
RecipeFiler/TXT	NIAD, #5, p12, 1985	SmartFiler-tip/letter	NIAD, #14, p15, 1986
recovering files/TXT	NIAD, #18, p09, 1986	SmartFiler/correction	NIAD, #19, p01, 1986
Reedy Entert't Pack/rev.	NIAD, #18, p11, 1986	SmartGames Pack/review	NIAD, #9, p11, 1985
Reedy library/review	NIAD, #9, p 9, 1985	SmartLogo-02/WS	NIAD, #2, p05, 1985
REM problem/TXT;PR	NIAD, #8, p 5, 1985	SmartLogo-03/WS	NIAD, #3, p08, 1985
REM,DATA fix/PR	NIAD, #20, p05, 1986	SmartLogo-05/WS	NIAD, #5, p10, 1985
reserved words/TXT	NIAD, #8, p 6, 1985	SmartLogo-07/WS	NIAD, #7, p07, 1985
RIB I,RIB II/review	NIAD, #4, p12, 1985	SmartLogo-09/WS	NIAD, #9, p03, 1985
Root Beer Tapper/review	NIAD, #5, p15, 1985	SmartLogo-12/WS	NIAD, #12, p04, 1985
RS232/TXT	NIAD, #16, p02, 1986	SmartLogo-19/WS	NIAD, #19, p10, 1986
RSvsSD function/TXT	NIAD, #2, p.13, 1985	SmartSpeller/letter	NIAD, #6, p15, 1985
Rubik's Cube/PR	NIAD, #19, p05, 1986	SmartTrix I/review	NIAD, #15, p13, 1986
Saving Lo Mem./TXT	NIAD, #8, p 4, 1985	SmartType v1.1/review	NIAD, #13, p16, 1986
SB prompt/PR	NIAD, #8, p06, 1985	SmartType/review	NIAD, #8, p12, 1985
SB reserved words/TXT	NIAD, #8, p06, 1985	SmartWriter tips/TXT	NIAD, #12, p10, 1985
screen pokes/TXT;PR	NIAD, #16, p07, 1986	SmartWriter-11/tips	NIAD, #11, p 10, 1985
screenmargins/TXT	NIAD, #7, p 5, 1985	SmartWriter-13/tips	NIAD, #13, p15, 1986
serial;parallel i.f./TXT	NIAD, #16, p02, 1986	SmartWriter-14/WS	NIAD, #14, p11, 1986
SignShop/review	NIAD, #16, p13, 1986	SmartWriter-15/tips	NIAD, #15, p10, 1986
Sinewave/PR	NIAD, #2, p2, 1985	SmartWriter-16/tips	NIAD, #16, p11, 1986
Sm.Logo wrkshop/TXT	NIAD, #4, p 9, 1985	SmartWriter-17/tips	NIAD, #17, p09, 1986
Smart Type/review	NIAD, #8, p12, 1985	SmartWriter-20/WS	NIAD, #20, p11, 1986
SmartBas.Bonanza/review	NIAD, #3, p13, 1985	SoftPack I/review	NIAD, #7, p12, 1985
SmartBasic 2.0/review	NIAD, #21, p10, 1986	Sort/TXT	NIAD, #19, p10, 1986
SmartBasic Boot/PR	NIAD, #20, p09, 1986	Sound, SmartBest/TXT	NIAD, #14, p09, 1986
SmartBasic-06/WS	NIAD, #6, p 5, 1985	sound/WS	NIAD, #15, p06, 1986
SmartBasic-08/WS	NIAD, #8, p 5, 1985	SP-1E0Spatch/TXT	NIAD, #11, p 08, 1985
SmartBasic-09/WS;PR	NIAD, #9, p 7, 1985	SP-1P;PIA2/TXT	NIAD, #16, p02, 1986
SmartBasic-10/WS	NIAD, #10, p03, 1985	SP-1Ser./paral./review	NIAD, #6, p13, 1985
SmartBasic-11/WS;PD	NIAD, #11, p 05, 1985	Speech syn.Clock/review	NIAD, #10, p16, 1985
SmartBasic-12/WS	NIAD, #12, p06, 1985	Speech synth./TXT	NIAD, #11, p 08, 1985
SmartBasic-13/WS	NIAD, #13, p08, 1986	Speed Maze/PR	NIAD, #13, p08, 1986
SmartBasic-15/WS	NIAD, #15, p05, 1986	Speed;slow-down/PR;WS	NIAD, #14, p07, 1986
SmartBasic-16/WS	NIAD, #16, p04, 1986	Sprites/PR	NIAD, #8, p 3, 1985
SmartBasic-17/WS	NIAD, #17, p06, 1986	Sprites/TXT;PR	NIAD, #7, p 3, 1985
SmartBasic-18/WS	NIAD, #18, p05, 1986	Spyhunter/review	NIAD, #4, p16, 1985
SmartBasic-19/WS	NIAD, #19, p04, 1986	Squeeze-file storage/TXT	NIAD, #7, p11, 1985

Stellar5/review	NIAD, #11, p 14,1985
Strategy Strain I/review	NIAD, #12, p11, 1985
Super Quick Sort/PR	NIAD, #16, p04, 1986
Super Zaxxon/review	NIAD, #1, p09, 1985
SW to AdanCalc/PR	NIAD, #2, p3, 1985
The Logo Link/PR	NIAD, #12, p04, 1985
The Visitor/review	NIAD, #6, p12, 1985
The Word Plus/review	NIAD, #9, p10,1985
TicTacToe/PR	NIAD, #5, p08, 1985
time delay/PR	NIAD, #16, p16, 1986
ToolBox/TXT;PR	NIAD, #7, p 5, 1985
Tournament Tennis/review	NIAD, #5, p15, 1985
Tractor feed/review	NIAD, #8, p12, 1985
Traveller,PNDvB/corr	NIAD, #17, p02, 1986
Trek/review	NIAD, #2, p9, 1985
Trivia Pack/review	NIAD, #19, p14, 1986
Tune generator/PR	NIAD, #12, p06, 1985
TurboLoad/review	NIAD, #14, p13, 1986
Turtlehop/PR	NIAD, #3, p.9, 1985
TV,vert.col.cutoff/TXT	NIAD, #8, p05, 1985
Uncle Ernie's /reviewA+	NIAD, #10, p13, 1985
UNDv1, UtilCopy/corr	NIAD, #14, p04, 1986
UNDv1,UtilCopy/corr	NIAD, #15, p03, 1986
UNDv2/TXT	NIAD, #20, p04, 1986
Use of NIAD PD libr./PD	NIAD, #14, p04, 1986
User's Group, local/letr	NIAD, #14, p15, 1986
UtilCopy, PD/correction	NIAD, #14, p04, 1986
UtilCopy,UNDv1/corr	NIAD, #15, p03, 1986
UtilCopy,UNDv1/corr	NIAD, #15, p03, 1986
UtilCopy/PR	NIAD, #5, p05, 1985
UtilCopy/PR	NIAD, #14, p07, 1986
UtilCopy/PR	NIAD, #14, p07, 1986
UtilDump,FDump2/TXT	NIAD, #8, p13, 1985
UtilDump/PR	NIAD, #6, p 4, 1985
Utilities WrkShp/TXT	NIAD, #7, p 3, 1985
Utilities-10/PR;colour	NIAD, #10, p06, 1985
utilities/WS	NIAD, #5, p03, 1985
Video titles/PR	NIAD, #1, p05, 1985
Videotunes/review	NIAD, #3, p13, 1985
Viewload/review	NIAD, #11, p15, 1985
WordStar, fastload/PD	NIAD, #19, p13, 1986
Wordstar/review	NIAD, #8, p11, 1985
Workshop/intro	NIAD, #1, p07, 1985
XMAS card/PR	NIAD, #11, p 08,1985
Zenji/review	NIAD, #2,p10, 1985

SEGA UPDATES

Several new games have come in over the last month. To review them briefly -

ACTION FIGHTER is a souped up version of Spy Hunter. It is a very action filled game with super graphics. You start off as a motorcyle, change to a car and finally to a plane. The scene is looking down from the top, like Spy Hunter. There are many "bad guys" after you and you have a number of James Bond types of weapons at your disposal. This is a tough game, but a very good one.

BLACK BELT pits you against a formidable set of enemies. You can punch, kick, jump and do combinations of all of these. The opponents get increasingly more difficult, with a master at the end of each of 8 levels. Graphics are great, with alot of action. This is one of my sons favorites. **PRO WRESTLING** pits you against the computer or against another opponent if two players. You have various holds at your disposal and must tag your partner if your energy level is too low. You can also select from 4 teams, each having different types of special holds. This one is alot of fun, with many variations. They even can jump out of the ring and fight.

MY HERO is a game in which some ruffians steal your girl and you must battle them to get them back. This is in a tough neighborhood so people are even throwing things at you from the windows above ! Good graphics, but Black Belt is better.

TEDDY BOY is a cute game, geared for the younger children. You are a little boy, in a maze with various bad guys pursuing you. You have a weapon to defend yourself, but must be agile, running and jumping as well. Alot of variations and twists in this fun game.

MARKSMAN/ TRAP SHOOTING is a game that uses the Light Gun. In trap shooting you are given increasingly more difficult clay pigeons in varying scenes to improve your shooting skill. Marksman is a separate game in which you are in training for police work. You are given various targets that move and turn and must only shoot the bad guys, as the speed of the game increases. A good set of games.

TENNIS is a good tennis match that pits you and a partner if you choose two player option, against the computer in a classic match. There are 5 levels of play (speed of the game). You must serve, can use forehand, backhand, lobs and overhead smashes. A very realistic game that is really fun. (Sports Pad NOT required).

PRODUCT LIST

MEMBERS ONLY

HARDWARE & ACCESSORIES

NOTE: SEE SPECIALS ON NEXT PAGE AS WELL

DOUBLE SIDED DISK DRIVE UPGRADE \$ 139.95
 Send in your Coleco disk drive to be upgraded to 320K (270K in CP/M 2.2) capacity. Send in your complete drive with cables. If your drive requires repair you will be charged \$39.95 plus parts.
 NOTE: Due to a limitation of CP/M you can not mix single and double sided drives while using CP/M.

ADAM LINK MODEM 7818 \$ 69.95
 ADAM phone modem which provides capability, with included software, to interface with other ADAM computers or large bulletin board systems such as CompuServe. Includes coupon for receiving advanced communications software for uploading and downloading of programs.

COMPUSERVE STARTER KIT \$ 25.95
 Includes account number, password and five free hours of connect time to the popular compuserve information system.

EVE 64K MEMORY EXPANDER ME-64 \$ 49.95
 Provides additional 64K of memory for SMARTwriter, CPM programs. Provides print buffer spooling for ADAMCalc.

EVE RS232/PARALLEL INTERFACE SP-1 \$139.95
 Allows the connection of the ADAM to any popular printer and other devices requiring either serial or parallel interface connections. Includes software for directing print to additional printers directly from SMARTwriter, SMARFiler, BASIC, CPM programs.
 Includes EITHER parallel or serial cable - specify which one desired.

EVE SP-1 PARALLEL INTERFACE ONLY \$ 79.95
 (Includes parallel cable)

ORPHANWARE PIA2 PARALLEL INTERFACE \$ 39.95
 (Parallel cable required - see next item)

PARALLEL OR SERIAL CABLE SP-1C \$ 15.95
 Second cable required to attach SP-1 or PIA2 interface to other printers.

SPEECH SYNTHESIZER/CLK CAL SS-CC \$109.95
 Output voice speech and words via Basic and CPM programs. Includes software to construct words. Real time clock calendar provides continuous date and time accessible from Basic and CPM.

EVE 80-COLUMN VIDEO/MOTHER BOARD VD-MB
 With Power Supply \$329.95
 W/O Power supply \$309.95
 With trade in of PS-1 \$299.95
 Provides 80-column video output from the ADAM to a monochrome 80-column monitor. Also includes separate power supply & expansion slots for attaching other EVE products. Expands ADAM's capability for CP/M SOFTWARE ONLY requiring 80-column display.
 ** Includes Word Processing and Basic software programs **

EVE MON-80 \$329.95
 80 Column video board and monochrome monitor assembly. Includes cable to attach to inside of ADAM console. Does NOT include independent power supply or motherboard
 ** Includes Word Processing and Basic software programs **

ORPHANWARE 80 COL VIDEO UNIT
 . Standalone unit \$199.95
 . Unit to attach to Eve Serial Port \$179.95
 Provides 80 column video output for CP/M software. Emulates various terminals.

EVE POWER SUPPLY FOR ADAM PS-1A \$ 79.95

EVE MULTI-UNIT ADAPTER MA-3 \$ 44.95
 Special adapter cable required to attach both the SP-1 and SS-CC to the ADAM. NOTE: Not required for 80-column video board.

CARD EDGE ADAPTER CEA-1 \$ 24.95
 For attaching ADAM Autodialer to MA-3 cable.

ADAM PRINTER TRACTOR FEED \$ 72.95
 Hooks unto the ADAM printer as originally designed to provide for feeding of pin-fed continuous form paper. Provides consistent alignment and advancing of paper. All metal design - guaranteed.

PRINTER STAND/ON/OFF SWITCH \$ 15.95
 Provides raised legs for the ADAM printer and relocates the on/off switch to the front of the printer for easier access when loading paper.

MONITOR CABLE 7830 \$ 9.95
 Required to hook complete ADAM console to a video monitor. Supports both picture and sound signals.

EXPANSION MOD MONITOR KIT \$ 29.95
 Kit to modify colecovision unit to allow it to be connected to a monitor via 7830 cable above. Requires soldering skill - see review in 2/85 issue.

ADAM REPLACEMENT RIBBONS 7806 \$ 4.95

ADAM DUST COVERS
 3 pieces for complete ADAM system \$ 18.95
 Disk Drive Only Cover \$ 8.95
 3 pieces for ADAM Colecovision Expansion Unit \$ 23.95

PRINTER WHEELS \$ 5.55
 Replacement printer wheels for the ADAM printer - Gothic 12 /Script 12 /Elite 12 /Emphasis /Courier 72/Pica. Specify font desired.

TAPE DRIVE HEAD CLEANING KITS \$.50

COLECO/LORAN DATA PKS \$ 4.75 @
 10 for \$ 39.95

NIAD/LORAN DATA PKS \$ 4.25 @
 10 for \$ 34.95

NIAD UNFORMATTED DISKS - DS/DD 1-9 \$1.50 @
 10 or more \$.99 @
 50 or more \$.85 @

PRICES EFFECTIVE 2/15/87

PRODUCT LIST - MEMBERS ONLY

SOFTWARE

(DDP unless noted)

SMART LOGO	7600	\$ 29.95	SPECIAL
EXPERTYPE	7602	\$ 19.95	SPECIAL
SMART FILER	7813	\$ 15.95	
RECIPE FILER	7814	\$ 10.95	SPECIAL
SMART LTRS/FORMS	7805	\$ 15.95	
FLASHCARD MAKER	7662	\$ 15.95	
FLASHFACTS (TRIVIA 2902, HISTORY 2901,VOCAB 2900)		\$ 11.95	EACH
CP/M 2.2	7832	\$ 29.95	
ADAMCALC	7831	\$ 24.95	
R. SCARRY WORDBOOK	7658	\$ 20.95	
WACKY WORD GAME	7834	\$ 15.95	
DONKEY KONG		\$ 19.95	
DONKEY KONG JR.		\$ 19.95	
SUPER ZAAXON	2632	\$ 12.95	SPECIAL
2010: TEXT ADVENTURE	7849	\$ 20.95	
FAMILY FEUD	7710	\$ 20.95	
BEST OF BRODERBUND		\$ 20.95	

OTHER SOFTWARE

Specify DDP or DISK

VIDEOTUNES	(DDP)	\$ 26.95	
FANTASY GAMER	(DDP)	\$ 22.95	SPECIAL
BASIC BONANZA		\$ 22.95	SPECIAL
SOFTPACK I		\$ 18.95	
LVAC ARCHIVE I		\$ 9.95	SPECIAL
REEDY SOFTWARE LIB		\$ 15.95	
QUICKFAX QUEST		\$ 9.95	SPECIAL
PERSONAL ACCOUNTANT		\$ 19.95	
STRATEGY STRAINER I		\$ 9.95	SPECIAL
BUSINESS PACK		\$ 18.95	
PAINTMASTER		\$ 22.95	
TURBOLOAD		\$ 26.95	
POWERPRINT		\$ 15.95	
SIGNSHOP		\$ 22.95	
QUICKCOPY		\$ 15.95	
MULTIWRITE		\$ 36.95	
MEDIA AID		\$ 19.95	
ELECTRIC GAME PACK	(DISK)	\$ 17.95	
Specify I or II	(DDP)	\$ 19.95	II NEW
NUMBER BUMPER		\$ 15.95	SPECIAL
REEDY	(DISK)	\$ 15.95	NEW
ENTERTAINMENT PACK	(DDP)	\$ 17.95	
JEOPARDY QUESTION PACK		\$ 19.95	NEW
FAMILY FEUD QUESTION PACK		\$ 19.95	NEW
TRIVIA PACK I	(DISK)	\$ 14.95	NEW
	(DDP)	\$ 16.95	
KIDS TRIVIA	(DISK)	\$ 14.95	NEW
	(DDP)	\$ 16.95	
PRO FOOTBALL		\$ 18.95	NEW
BACKUP 3.0 (COPY ONLY)		\$ 16.95	NEW
BACKUP +3.0 (COPY/UTILITY)		\$ 29.95	NEW
SMARTGAMES PACK	(DISK)	\$ 9.95	
	(DDP)	\$ 11.95	
ROYAL AMBS. EDUC PCK	(DISK)	\$ 9.95	SPECIAL
(Christian pgms)	(DDP)	\$ 11.95	
CPM NEVADA BASIC		\$ 39.95	
SP-1 CUSTOM SOFTWARE for		\$ 7.00	
Smartwriter/Filer (Specify printer)			
GRAPHIXPAINTER		\$ 19.95	NEW
For Dot Matrix printers			
GRAPHIXPIX I		\$ 14.95	NEW
ADDRESS BOOK/CALENDAR		\$ 9.95	NEW
SPRITE MASTER		\$ 18.95	NEW
JEOPARDY QUESTION MAKER			NEW
FAMILY FEUD QUEST MAKER			NEW
Each of Quest Makers	(DISK)	\$ 24.95	
	(DDP)	\$ 26.95	
BASIC RAM DISK	(DISK)	\$ 24.95	
	(DDP)	\$ 26.95	
PAINTINGS	(DISK)	\$ 7.95	
Specify Vol 1,2, 3	(DDP)	\$ 9.95	
SIGNS	(DISK)	\$ 7.95	
Specify Vol 1 or 2	(DDP)	\$ 9.95	

PRICES EFFECTIVE: 2/15/87
and are SUBJECT TO CHANGE without notice

CARTRIDGE SOFTWARE

Colecovsion/Adam

SMURF PAINT/PLAY	2697	\$ 18.95
SUESS FIXUP PUZZLE	2699	\$ 18.95
MONKEY ACADEMY	2694	\$ 18.95
T.TURTLE LOGO/GRPHICS	2698	\$ 18.95
SPYHUNTER		\$ 24.95

CP/M 2.2 COMML SOFTWARE INFOCOM PRODUCTS

Requires ADAM CP/M software

DISK only		
PLANETFALL		\$ 34.95
ZORK II		\$ 39.95
ZORK III		\$ 39.95
STARCROSS		\$ 39.95
DEADLINE		\$ 39.95
HITCHHIKERS GUIDE		\$ 34.95 NEW

NIAD USER GROUP PRODUCTS

PUBLIC DOMAIN

PLEASE Specify VOLUME # and DISK/DDP
NOTE: COST per VOLUME:

\$ 5.00 DISK - \$ 7.00 DDP		
SMARTBASIC # 1 - 17	(17 Different)	
# BNDV1 - 17	(Vol numbers)	
SMARTLOGO # 1 - 2	(2 Volumes)	
# LNDV1 - 2		
ADAMCALC # 1 - 2	(2 Volumes)	
# ANDV1 - 2		
BASIC UTILITIES # 1 - 2	(2 Volumes)	
# UNDV1 - 2		
(Vol 1 includes backup utility)		
CPM2.2 # 1 - 28	(28 Volumes)	
# CNDV1 - 28		
JEOPARDY		
PINBALL/HARDHAT MACK		
New BUG FREE vers with 2 DEMO games		
Add \$ 2.00 for 40 page manual		
PINBALL GAMES VOL 1		
Requires Pinball/Hardhat Mack		
SUPER SUBROC		
TROLLS TALE		
ADAM DIAGNOSTIC		
Requires 64K expander		
ADAMLINK II TELECOMMUNICATIONS		
SMARTBASIC REPLACEMENT DDP		
SMARTBASIC V2.0 with Doc. file		
NIAD BACK ISSUE INDEX - Smartfiler file		
EOS DISK MANAGER - (Replacement on Disk or DDP)		

NIAD SPECIALS

SUPERACTION CONTROLLERS	2491	\$ 49.95
EXPANSION MODULE 1 (Atari 2405)		\$ 44.95
EXPANSION MODULE 2 (Driver 2413)		\$ 49.95
ORPHANWARE PIA2 PARALLEL INTERFACE		
& PANASONIC 1080I PRINTER W/CABLE		\$ 309.95
NEW ADAM (tan) HAND CNTL'S 2 for		\$ 10.00
NEW ADAM KEYBOARDS		\$ 9.95
ADAMNET CABLES for KEYBOARD/DISK		\$ 2.95
3 1/2 x 15/16 PIN FEED ADDR. LBLs		\$ 6.95/1000
9 1/2 x 11 20 Lb PIN FEED PAPER		\$ 9.95/ 500
		\$ 16.95/1000
JANES'S RECIPES 25 recipes/vol		\$ 7.00
(Specify DISK or DDP and VOLUME		
V1 Deserts, V2 Salad, V3 Outdoor, V4 Holiday)		
SUPER GAME CONVERSION to DISK		\$ 4.00 EACH
NOTE: You must send label card from game as		
proof of purch: Family Feud, Best of Broderbund		
can be copied directly by most copy programs		
SMARTFILER COPY WITH LATEST VERS.		\$ 4.00
Includes Label Print Fix		
Send in your Filer Disk/DDP		
BACK ISSUES of NIAD from 1/85		\$ 3.00 EACH
10 or more		\$ 2.50 EACH
RIGHT DIR TAPES for SUPERGAME COPY		\$ 2.50 EACH