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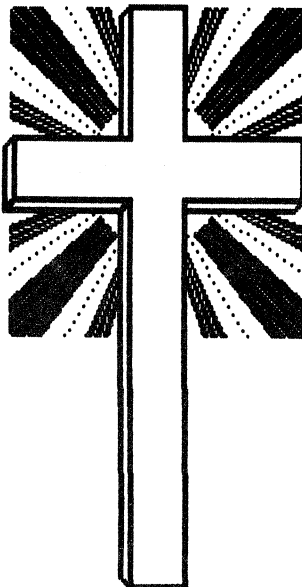
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 Editor: Lyle Marschand
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We wish all of you a Happy Easter and hope you experience the joy of this season. Easter is the time of year when I'm reminded of my need for a savior. We all are too aware of our shortcomings and failures. What most of us need to hear is how we can be free from our guilt feelings, our nervousness, worry, anxiety and hopelessness. My spirit and mind know of only one answer. Hebrews 4 says it this way "For the one who has entered God's rest has himself also rested from his works, as God did from his, let us therefore be diligent to enter God's rest. What is God's rest? Is it just an attitude of do what we want and don't worry about the consequences? Again, the Bible says "Be anxious for nothing, but in everything by prayer and supplication with thanksgiving, let your requests be made known to God and the peace of God which passes all understanding shall guard your hearts and minds in Christ Jesus." (Philippians 4: 4-7). But the Bible tells us we have all sinned and come short of the glory of God (Romans 3:23). So again, we are faced with guilt, anxiety, etc. for all of us have our problems, failures. Paul the apostle says of this dilemma that most find themselves in "For that which I am doing I do not understand for I am not practicing what I would like to do, but I am doing the very thing I hate." (Romans 7:15). "Wretched man that I am! Who will set me free from the body of this death?" (Romans 7:24).

The Bible also says that God gave his only begotten son, that whosoever believes in him shall not perish but have eternal life. Easter is the story of the answer for our sinfulness and all our dilemmas. Jesus is God's answer to man's problems. By speaking with our mouths out loud to God our need for help, we confess our weakness, we confess that Jesus came as our helper, our friend, our mediator. We also take upon ourselves by faith God's REST, STRENGTH, PEACE, SALVATION and LOVE through accepting Jesus.

Jesus is our answer. To know Jesus is to know our Father. When we look to the cross and then beyond the



cross to Jesus' resurrection, we communicate with God and have fellowship with Him. Jesus said "No one comes to the Father, but through me." The risen Christ comes to life inside our hearts when we ask Him in, and we are changed inside as Jesus was when he was raised from the dead. The Father raised Jesus into the Heavens and He there became our eternal intercessor and High Priest. Hebrews 6:18-19 says "by two unchangeable things, in which it is impossible for God to lie, we who have fled for refuge may have strong encouragement. This hope we have as an anchor of the soul." In Hebrews 4: 14-16 it says "We have a great high priest who can sympathize with our weaknesses, one who has been tempted in all things as we are but without sin. Let us therefore draw near with confidence to the throne of grace, that we may receive mercy and may find grace to help in time of need."

The question most have at Easter is twofold: 1. Was Jesus really resurrected from the dead, or is it just a nice story? 2. If so, WHY did he have to die such a horrible death and then be raised? The answer to the second is above - to meet our needs, mend our hurts, reconcile us back to a loving and forgiving God. Jesus made the ultimate sacrifice for us by taking the punishment we deserved for our sins upon himself and giving us the opportunity to have forgiveness and eternal life.

The answer to the first question is an absolute YES. No event of human history has undergone as much scrutiny as the verification of the resurrection of Jesus. Most of those doing the investigation wanted to disprove this fact for their own ends, so to say the investigation was thorough is an understatement. If this fact could have been "proven" to be hoax, there would be no Christian religions today. Christianity is the only religion that has an empty tomb as its origin. Think about it! Our savior died, but was resurrected by the POWER of God's love. You took, can be "re-born" again through this same power, because God loves you so much.

NIAD NEWS/ UPDATES



From the Editor's Desk:



HAPPY EASTER TO YOU ALL

Boy, March sure came fast, especially when we didn't get the newsletter out until the first of March, instead of February !! Sorry, but there are so many things going on in the ADAM world that is hard to keep up. Let me tell you.

We have some great stuff for you in this issue, so much so that we have had to push some planned items off until the April issue. Our survey form will be in the next issue as well as reviews of FILEMANAGER, CHESS CHAMP, MEGASYSTEM XR and others. We will have an article on SMARTBasic 2.0 next month as well.

1988 IS BETTER then ever...

The amount of high quality software that is coming out for the ADAM is almost astounding. I was talking with one of the major ADAM retailers who said that "the ADAM was getting better." Yes, it is true. SPEEDYWRITE is an unbelievable product that will greatly boost the ADAM'S utility. More sophisticated programs in all areas are coming out - graphics, games, utilities, business. In fact it seems that we are entering a new era of more powerful ADAM software. There is more to come !!



Notice



As of April 1, 1988 we have to collect sales tax on all orders for the following states:

WISCONSIN - 5% ON ALL PRODUCTS
 INDIANA - 5% ON ALL PRODUCTS
 MINNESOTA - 6% ON ALL PRODUCTS
 OHIO - 5% ON ALL PRODUCTS
 MICHIGAN - 4% ON ALL PRODUCTS

Note that in these states sales tax must be paid on software, which is not the case in Illinois where only computer hardware is taxable (although that may change this year).

All orders received on and after April 1, 1988 will be required to have sales tax included. Please cooperate with us in this area. Believe me, we don't like it any more then you!!

. Sharon McFarlane begins her CP/M 2.2 Beginners Workshop this month to help all ADAM owners use this powerful operating system that opens up so much additional software for use on the ADAM.

. We are beginning to segregate our ever growing PUBLIC DOMAIN libraries. We have split off the graphics oriented programs and these are covered in the GRAPHICS WORKSHOP this month.

. Our Product List is getting too big and I have to figure out some way of organizing it better. We will have a new section in the NIAD NEWS section to cover titles and prices that are NOT on the 2 product list pages at the back.

. Our Chicago area NIAD User group meetings are held the second Thursday of each month at our store, located at 6460 College Road in Lisle, IL. We start at 7:30 and finish about 10PM. Good discussions ensue and we review new products. Come and meet other ADAM owners and have a good time. Call if you need directions on how to get to the store.

. If 0388 are the first 4 digits of your membership number then this is your last issue.

\$\$ RATES \$\$

. Due to the large postal rate increase our ANNUAL rates will be going up (for new/ renewals) April 15th to \$19 for Third class and \$26 for First Class/ Canadian.

SOFTWARE/ HARDWARE UPDATES

. SPEEDYWRITE is a fantastic piece of software. See our review and note that we will be supporting it by working with the author and E&T Software to provide tips/ enhancements in future issues.

. ADAMLINK III has been completed, which will be a big boon to those who like to use their ADAMs with a bulletin board system.

. See Wayne's review of PHRASE CRAZE for you Wheel of Fortune nuts (no, Vanna is not in the game).

. FILEMANAGER sounds like a fantastic, multi-purpose utility program. We didn't get it in time for a review, but will have one next month.

. CHESS CHAMP is out for you chess fanatics. We have had so many requests for a color graphics chess game, and now thanks to Digital Express you got it ! Review will be next month (it is available now).

. MEGASYSTEM-XR, also from Digital, is a sophisticated utility for managing multiple programs within the 256K memory expander. It is available now, but we didn't get it in time to review.

. PRO GOLF CHAMP is a great graphics game for the ADAM. We're glad to add it to our product list. We will review next month.

. We've added several new graphics Public Domain volumes to our library.

. Walter's Software has just completed a new utility program which contains an enhanced version of their popular MEDIA AID program AND their BASIC RAM DISK program in one package for the price of one. More next month.

. Digital is making progress on their GODOS operating system, which we hope to see soon.

. Mel Ostler, author of the Hacker's Helper volume I reviewed a few months ago, is working on an ADAM book geared for beginners. He would like some volunteers to review some of his chapters and give him feedback. Write to him at 7641 Raasaf Blvd., Las Cruces, NM 88005 or call at (505) 525-3802.

We're out of NEW ADAM disk drives, but should have some reconditioned ones in by the end of May.

. In House Service reps has released their 256k memory expander, which plugs into the expansion slot on the right side of the ADAM memory console. We're waiting for someone to send us in a review on this new product.

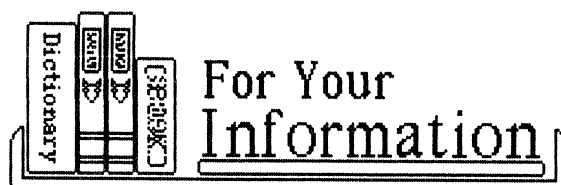
PRODUCT LIST SUPPLEMENT

The following are products or specials that didn't make it to the Product Lists on pages 17 & 18:

. SPEEDYWRITE VERSION 1.0 (Disk/ DDP)	\$ 29.95
. SPEEDYWRITE VERSION 2.0 (Disk/ DDP)	\$ 39.95
. PHASE CRAZE (Disk)	\$ 17.95
(DDP)	\$ 19.95
. PRO GOLF CHAMP (Disk/ DDP)	\$ 14.95

. \$30 CREDIT FOR TRADING IN A 64k MEMORY EXPANDER TOWARDS THE PURCHASE OF A 256k EXPANDER

. See the new Graphics Public Domain titles in the Graphics Workshop.



. SMARTWRITER 1 1/2 LINE SPACE PROBLEM

The NIAD newsletter of DEC/JAN 1988 comments on this problem and offers two solutions. The older less elegant solution suggests placing an inconspicuous character like a period before the CARRIAGE RETURN which is to produce the blank line. When this is done the blank line is a true single spacing, while if only a CARRIAGE RETURN had been used the spacing is 1 1/2. The second solution offered in the newsletter is to use the following sequence of keystrokes instead of a simple carriage return to produce the blank line:

INSERT, CONTROL 6, SPACE BAR, SMART KEY VI(DONE) and, CARRIAGE RETURN. This suggestion works quite well PROVIDING THAT THE LINE PRECEDING THE BLANK LINE DOES NOT BEGIN WITH A SPACE! In this case the line following the blank line is incorrectly printed and may consist of garbage, and when the printing resumes some semblance of correctness the left margin is not in the proper position but very far to the right on the page. While investigating this method of producing a blank line, I felt the method worked as well as it did because it was executing an instruction to print a non-printable character. I therefore had a temporary feeling of success with the following sequence to produce a blank line with correct line spacing:

SMART KEY VI (super/subscript), SMART KEY VI (superscript), SPACE BAR, SMART KEY VI (DONE), CARRIAGE RETURN. This sequence works as well as that suggested in the NIAD newsletter, but fails to correctly print if this sequence follows a line which did not begin with a printed character in column 1. My final solution was to pick a character which I never use in any of my programming in BASIC and WORD PROCESSING and physically break off the type petal of the Daisy wheel. I chose to remove the back slash character which is the lower case character just to the left of the numeral 1 on the keyboard. After performing this modification I installed a Script Daisy wheel which I had purchased from NIAD and discovered that the new Daisy wheel prints an upper case R surrounded by a circle instead of the back slash character. Thus if anyone is interested in making a modification of a Daisy wheel it would be best to check what character the wheel prints before making the irreversible change I have suggested. In hopes that this is the final solution to the 1 1/2 space problem with the work processor, I wish to give credit to the person who first conceived the nature of the problem and proposed the "Inconspicuous Character" solution. I have merely gone from the

Inconspicuous to the "Spiritual Character."

Gerard S. Pawlicki

I am new member and am writing to let you know about a Bulletin Board System in the New Jersey area. It is called the Hudson Adam\Link and is run by Fred Vicente at: P.O. Box 7266 North Bergen, NJ 07047 I have never used this BBS since I do not have a modem. I am a member ID HL74. The phone number is (201) 224-5764 and runs 7 days a week 12pm EST to 8am EST. The modem settings are FULL DUPLEX, 7 DATA BITS, 1 STOP BIT, EVEN PARITY. You must use ID to log on or you may be denied access. Harry Fischer Jr.

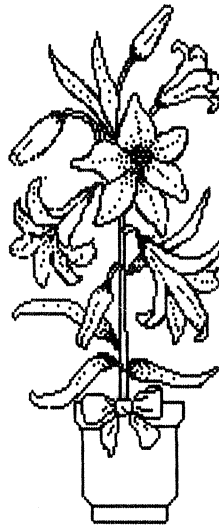
I recently had the pleasure of speaking with a member of your staff in regards to a future issue of your newsletter which may include user group information. In view of this, I would like to submit some information about our group, in hopes that you may include it in any user group list which NIAD may publish. C.U.A.G. is a newly founded user group, which at the current time has a membership of twelve. The group was formed in February 1988, and is currently adding four to five members in the Colorado Springs area each month. We publish a monthly newsletter, have a large software library, offer advice, both technical and non technical, have established a local network to find ADAM items in the local area, offer lessons in basic and logo and are currently installing the group BBS. Yearly dues are \$10.00 per family and include all of the above, and a two day workshop on ADAM which is scheduled for July 1988. I hope that the above information may be of use to you and your organization. C.U.A.G. has some members who also are members of NIAD and they speak quite highly of your group. Should you have any further questions concerning C.U.A.G. please contact me at C.U.A.G. Colorado Adam Users Group 7555 Sunnyview Ln. Colorado Springs, CO. 80911 (719) 392-2330. David Warren, President

THE ADAM'S FAMILY is a new ADAM User's Group in Calgary, Alberta, Canada. A newsletter is published bi-monthly. Annual membership is \$20. I reviewed the first newsletter and was impressed, it was a fine publication. An ADAM based BBS is also supported - NORTHERNLINK is up 24 hrs at (403) 240-0009. Configuration is 7 data bits, 1 stop bit, even parity, line feeds OFF, character filter OFF. Denny Kehoe is the Sysop of NORTHERNLINK which has five message bases and text up/download.

The St. Louis ADAM User's group now has a BBS up and operational. Call 773-1551 from 9PM to 1AM Thursday, Friday and Saturday evenings. Configuration is full duplex, 8 data bits, no parity, auto linefeed on.

Bob Warren writes to tell us of a way to put multiple self booting programs on one tape/disk. First copy the disk manager program to the blank media, then copy SMARTBasic, ADAMLink, ADAMCALC, etc. A file copy program like BACKUP + 3.0 or QUICKCOPY must be used. Boot the media by pulling reset, which will load the disk manager. Then select the FILE options, then the RUN option to select one of the programs to run.

Mark S. Kavanaugh has come up with a way to connect 2 hand controllers to the same game game port to aid in the playing of some of the tougher games. If you like tinkering with splicing wires together, then write us and ask for Mark's instructions.



Thanks for the many helpful ideas and programs that have been published in the NIAD newsletter. It is very valuable to those of us who are depending on the ADAM for our computing.

I have had problems with two NIAD published programs for printing money values:

1. "colfigs" a program in NIAD public domain SMARTBASIC #3. For instance, the number 999 processed by this program results in 999990.
2. The newsletter for October 1987 lists a program on page 10. For example, processing the number 80.089 results in a number less than one in this program.

I have enclosed a program called "cents" that I believe is accurate. A major problem is, of course, the fact that ADAM BASIC will sometimes deliver a value of xxx.xx5 as xxx.xx4999. Consequently, you can not count on the number of decimal places being what you expect. And the addition of .005 will thus not always round a true value of xx.xx5 up to the

next cent. The "cents" program uses standard procedures to round and add zeros but in line 1150 the number to print is defined by printing from the left until the decimal point plus 2 places are identified. (the quantity b+3) Line 1160 returns the negative sign as needed. Line 1170 provides the number of blank spaces to print columns of dollar amounts. Lines 40 and 1190 are temporary lines for testing the program.

I hope this program can be of use to others.

BUD ULRICH

10 REM "cents" ---- is a program for business applications to round to the nearest cent and print two decimal places. 20 REM The value \$xx.xx5 will sometimes round up and sometimes round down due to the "approximating" nature of ADAM BASIC.

30 nb\$ = " ": REM twenty spaces to be used in printing numbers in right justified columns.

40 INPUT "number "; n

1000 REM

1002 REM The number to be processed is n .

1004 REM

1010 IF n >= 10000000 OR n <= -10000000 THEN

PRINT "THE NUMBER IS TOO LARGE TO PROCESS": GOTO

1200 1020 na = ABS (n)

1030 IF na < 5E-03 THEN np\$ = "0.00" : GOTO

1170

1040 IF na <= .01 THEN np\$ = "0.01": GOTO 1160

1060 nt = na+5E-03

1100 nt\$ = STR\$(nt): ni = INT(nt): ni\$ = STR\$(ni)

1110 IF nt < 1 THEN ni\$ = "0": nt\$ = ni\$+nt\$

1120 a = LEN(nt\$) : b = LEN(ni\$)

1130 IF a = b THEN nt\$ = nt\$+"00"

1140 IF a-b = 2 THEN nt\$ = nt\$+"0"

1150 np\$ = LEFT\$(nt\$, b+3)

1160 IF n < 0 THEN np\$ = "-" + np\$

1170 nc\$ = RIGHT\$(nb\$+np\$, 12): REM The column spacing is set by the "12" and can be changed

1180 PRINT nc\$

1190 GOTO 40: REM RETURN here is this is used as a "GOSUB" routine

1200 END



PUBLIC DOMAIN WORKSHOP



. See the GRAPHICS WORKSHOP for several new graphics PD volumes we have recently added.

. ERRATA - The TRUCKERS program on our NIAD GOLD TEXT ADVENTURE volume has a problem that we are still trying to resolve. It occurs after the game is played a few times and involves the file "truckscore", which keeps the names and scores of players. This file gets messed up for some reason. Until we can find the problem, keep your original media and just copy this file if you have a problem.

. Following is a description of the files and programs on BNDY24. The list of SMARTBasic Peeks & Pokes was updated by Sharon last fall and contains many new items.

NIAD PUBLIC DOMAIN

BASIC VOLUME #24

DESCRIPTIONS

by Bob Tarnowski

NOTE: This volume contains a revised version of SmartBASIC. SEE BELOW FOR DETAILS. To use, pull the <RESET>. After a title screen, you will be informed that your ADAM is ready to print on a dot-matrix printer. If you wish to use your ADAM printer, enter "CALL 10". You can access the dot-matrix printer again by entering "CALL 25". IMPORTANT - this SmartBASIC on this media may not be compatible with all programs, particularly utility programs.

*** HELLO - Runs the MODS#3 which contains the SmartBASIC enhancements on this volume.

*** MODS#3 - Contains the SmartBASIC enhancements on this volume and is automatically RUN when you pull the <RESET>.

*** PeekPokeV1 - The latest and most complete PD version of peeks and pokes done by Sharon McFarlane for SmartBASIC V1.0.

*** PeekPokeV2 - An updated listing of peeks and pokes for SmartBASIC V2.0 compiled by Sharon McFarlane.

*** JACKET - Will create a cut-out to fold and glue into a disk sleeve with a listing of the programs on the front.

*** PresQuiz - A fun way for anyone to learn the order and names of the U.S. residents.

*** DecToBase - A fast way to convert any decimal number to a base number from base 2 through base 16.

*** DecToBytes - Well done, menu driven program to quickly convert decimal numbers to bytes or bytes to decimal numbers.

*** BUGGER - Eat the berries, mushrooms and cloves, but beware of the bees, flyswatter and bug spray. Nice graphic game.

*** CROSSPATHS - There are 6 people with schools, hobbies, steady dates, companys and spouses at different ages. Find the person who knew the other 5 - great text game.

*** ARCHIVES5 - Creates a SmartWriter file that contains the programs on your tapes and disks. Can be used with SmartBASIC, SmartWriter, SmartLOGO,

SmartFILER, AdamCALC and CPM.

*** instruct's - Instruction file for ARCHIVES5 - accessed from within the ARCHIVES5 program.

*** HIDNDIGITS - Converted from the March '88 Family Computing Magazine using BASICaide and AUTOWRITER this enhanced game challenges you to discover the random hidden numbers in the shortest * of turns.

*** FANTASY - A sound and graphic design demonstration program with some great routines.

*** MATHGRAPH - A menu driven program that draws 27 different designs using mathematical calculations.

*** INITIATE - Correctly INITs a disk or data pack with 1 to 3 catalog Directories to hold up to 113 files.

*** DIRFIXX - With instructions below, this program helps you to fix a damaged Directory on your media as well as change attributes, names, filetype, etc.

*** 255COLORS - A demonstration program that shows you how to achieve up to 255 colors on your ADAM - well done and interesting.

*** GRAPHTEXT - Terrific program that enables you to quickly draw enlarged text characters on a hi-res screen - great routines.



GRAPHICS WORKSHOP



Our PUBLIC DOMAIN library is growing so large that we need to begin splitting it up. Hence, we have set up a separate GRAPHICS PUBLIC DOMAIN LIBRARY. Here is a list of the current volumes (PRICES ARE THE SAME AS OUR REGULAR PD'S - \$5.00 disk, \$7.00 tape):

. NIAD RLE PICTURE FILES (volumes 1 thru 3) - Contains multiple RLE pictures per volume with a conversion program for viewing on the screen. Can be printed with GRAPHIXPAINTER or POWERPAINT.

. NIAD SIGNS (volume 1, 2) - Signs that can be used with SIGNSHOP or NEWSMAKER.

. REEDY ART GALLERIES (volumes 1, 2) - Each contains 13 high res picture files in SMARTPAINT format with a VIEWer program for screen viewing. Can be edited/ printed with either SHOWOFF I or POWERPAINT (from Digital Express).

NOTE: PICTURES PRINTED ON THIS PAGE ARE FROM THIS VOLUME

. PaintMATES (volumes 1,2) - Collections of small art for use with POWERPAINT (sprites, clipart, brushes, etc.)

. PaintFORMS (volumes 1,2) - Contains 1 full page graphic, 3 letterheads, 1 label for use with POWERPAINT.

. N&B PIX (volumes 1- 16) - Each contains 13 high resolution pictures in SMARTPAINT format. Can be viewed with VIEWer program (listed below, from Digital Express) and edited/ printed with SHOWOFF I or POWERPAINT.

100 REM VIEWER

110 REM Displays SmartPAINT (from ShowOFF I) pictures

120 LOMEM :33000: POKE 16149, 255: POKE 16150, 255

130 DATA 1,0,10,17,0,32,33,0,116,205,26,253,201

140 FOR x = 65520 TO 65532: READ m1: POKE x, m1: NEXT

150 HGR

160 INPUT "Input filename (minus .HRP ex- tension):"; pn\$: HGR

170 IF LEN(pn\$) > 0 THEN GOSUB 190

180 GOTO 160

190 VTAB 22: HTAB 1: PRINT CHR\$(4); "bload "; pn\$+".HRP"

200 POKE 65525, 32: CALL 65520

210 VTAB 22: HTAB 1: PRINT CHR\$(4); "bload "; pn\$+".HR2"

220 POKE 65525, 42: CALL 65520

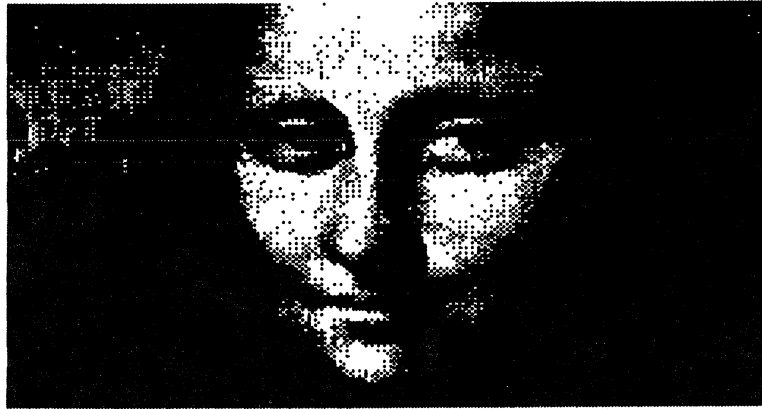
230 VTAB 22: HTAB 1: PRINT CHR\$(4); "bload "; pn\$+".HR3"

240 POKE 65525, 0: CALL 65520

250 VTAB 22: HTAB 1: PRINT CHR\$(4); "bload "; pn\$+".HR4"

260 POKE 65525, 10: CALL 65520: RETURN





SMARTBASIC WORKSHOP

BASIC PROGRAMMING By L. C. Austill

CHAPTER IV

Move on to variables. There was a short discussion earlier, but not enough. Any configuration of characters beginning with a letter may be used as a variable name EXCEPT for reserved words. Reserved words are combinations that are used in SmartBASIC. To demonstrate this type the immediate command: LET

pr = 14 PR is a reserved word used to turn the printer off and on. The computer will indicate that a reserved word has been used. There are programs in which a variables name is several characters long. While ADAM accepts such names, and naming variables is often a convenient way of keeping track of what is being done in a program, ADAM recognizes only the first two characters of a variable. The following exercise is an example. Type the following in the immediate mode:
LET first = 42

```
? first
Let fire = 100
? fire
? first
```

The second time that ADAM was requested to print the value of first, it printed 100 which was assigned as the value of fire. The reason is straight forward. The first command Let first = 42 set the value of fi to 42. The command LET fire = 100 set fire to 100 canceling out the first value of fi. ADAM is not unusual in this trait, but it is something of which to be aware. Arithmetic operations involving variables may be performed. In the immediate mode type:

```
let x = 567
```

```
let y = 32
```

```
let z = 5
```

```
let w = 2
```

```
? x + y
```

```
? x/y
```

```
? y * z
```

```
? w/z
```

```
? z^w
```

? x ^ (1/2) That illustrates the point. Experimentation can be done with many combinations.

String Variables: Thus far it has been assumed that the variable would equal a number assigned to it. That is not always true. ADAM can make other selections. If the variable is followed by the character %, it will save only the integer or whole number part of the value that is given to it.

Thus far the LET has been used to assign a value to a variable. LET does not have to be used. ADAM will recognize the statement: x = 123 as meaning, LET x = 123. This convention will be used.

Return to the % character. This can be illustrated by typing, in the immediate mode:

```
x% = 10/3 then type ? x%
```

It is necessary to use the % sign along with x as it is a different variable from x. "x" has already been assigned a value. Type ? x in the immediate mode. A variable need not even be numbers in any form--it can be a string.

A string consists of one or more characters of any kind and is designated by the character \$. An example would be a\$, or heck\$. Type this exercise:

```
a$ = "12 That's it!" ? a$
```


Strings are usually enclosed in quotation marks although this is not always necessary. ADAM will accept b\$ = Yes since it consists of all letters. If there is any doubt, the use of quotation marks can save time in trouble shooting or debugging. Strings can be added together, but other arithmetic operations can not be performed. An example:

```
a$ = "dogs "      b$ = "and cats"      c$ = a$ + b$
? c$             ? a$ + b$           ? b$ + a$
```

If an expression is expected to be used several times in a program, assign it to a string variable.

Determine how long it is by the command: ? LEN(a\$)

Since a\$ = "dogs ", that command should have returned the number 5. The string is 5 characters long as the space at the end also counts as a character. LEN(a\$) can be used in a program without printing it out. It can be the value of a variable that is used in centering, spacing, tabulating etc. Type:

```
? tab((31-LEN(c$))/2);c$
```

If the string is a number, it must be transferred to a plain number before arithmetic operations can be performed. To illustrate this point type:

```
no$ = "1234"
? no$ + 1000
```

Now an error message should be received as the two items are not compatible. One is a string variable and the other a number. Type:

```
? val(no$) + 1000
```

The answer should be 2234 as VAL(no\$) converted the characters to numbers which can be added to 1000.

A number can be converted to a string. To illustrate, type this exercise

```
g = 32.3245
g$ = str$(g)
? g$ + no$
? g$ no$
```

which is "1234" was added to g\$ which is "32.3245" to yield 32.32451234.

There are definite advantages to converting numbers to strings before they are saved in files. Two applications of strings are in reconciling and rounding numbers. ASCII Character Code: Each key on the keyboard has at least one and sometimes as many as three numbers that describe it. These are known as the ASCII codes. A partial list of these character codes is shown in appendix C, page 12-15, in the Adam instruction manual. The letter p can be used to illustrate three different values. The code for the lower case p is 112, upper case P is 80, and p while simultaneously holding down the control key is 16. This is the way that the computer accepts information from the key board.

The memory console can be addressed directly if

character codes are used. Type: ? CHR\$(112)

A lower case "p" appears. While experimenting with various values for CHR\$(x), caution should be used. For example, if the computer is told to ? chr\$(16), it will print out the information on the screen! Type a few chr\$ to become familiar with the command. Other examples are 2,3,5,6,15, and 17 thru 31. If sound is available, type ? chr\$(7). The command ? ASC(a\$) will return the ASCII code of the first character in the string designated as a\$. This command is useful in menus and other selection processes. Because of this characteristic, it can be determined whether a string is greater than or less than another string. This is useful in sorting programs.

There are three other string related commands that will be reviewed at this point. They are left\$, right\$ and mid\$. All deal with strings and not numerical values. To illustrate these string commands, type:

```
x$ = "Thermodynamics"
```

If the computer is asked ? LEN(x\$), it will return 14. There are 14 characters in the string. Starting from the leftmost character as many characters as desired can be requested. If the first 5 characters are desired, type the command:

```
? left$(x$,5)
```

The screen should display the word Therm. The first identification inside the parentheses was the name of the string while the second was the number of characters wanted. The command that would give you the first 7 characters is:

```
?left$(x$,7)
```

If the last five characters is desired, the command is:

```
? right$(x$,5)
```

If the five letters starting with character number 5 is desired, the command is: ? mid\$(x\$,5,5)

character, and to identify five characters. Start with character number 8 to demonstrate the command again. To write a program to print each character of the string one at a time:

1. Enter the word NEW to clear any other programs from Memory.

2. Type:

```
10 home
20 x$ = "thermodynamics"
30 for x = 1 to 14
40 ? mid$(x$,x,1)
50 next x
```



60 end RUN the program. It is not necessary to SAVE the program as it is only for practice. There is an important point in the above program. There was both a string variable identified as x\$ and a numerical variable called x in steps 30 and 50. ADAM can tolerate the same name

for different types of variables.

Numerical variables: Variables in BASIC as well as in many other computer languages have an interesting capability. This expression can be used: $x = x + 1$

In classical mathematics, there is no way that this can be so. But there is in programming language. It means let a new value of x equal the old value of x plus 1. If x were 10, it would be 11. Other arithmetic operations can be used in these expressions such as $x = x * 10$ etc. There is

no limit, but there is a restriction. The form is always the variable by itself, an equals sign and then the old variable and the operation desired. The first time that ADAM encounters a variable in a program, it will be considered equal to zero unless some other value was set earlier in the program. The command CLEAR will return all variables to the value zero or nothing in the case of a string variable. Nothing can be indicated for a string variable by $x\$=""$.

When the command RUN is used, all variables are returned to zero or nothing.

```

1 & ADAM'S HOUSE INVOICER
5 & by Terry R. Fowler
6 & February 3, 1988
7 POKE 40, 27: POKE 41, 64: POKE 42, 3: CALL 90: REM Reset Printer
10 DIM c(30), s(30), q(30): su = 0: ta = 0: sh = 0: cl = 0: ba = 0: t = 0: tx = 0: as = 0
1000 TEXT: INVERSE: PRINT "          INVOICER          ": NORMAL
1010 INPUT " INVOICE #: "; iv%
1020 INPUT " DATE: "; da$
1030 INPUT " LAST NAME: "; ln$
1040 INPUT " FIRST NAME: "; f$
1050 INPUT " ADDRESS: "; ad$
1060 INPUT " CITY STATE ZIP: "; ci$
1070 INPUT " PAYMENT MEANS: "; pa$
1080 IF pa$ = "v" OR pa$ = "V" OR pa$ = "mc" OR pa$ = "MC" THEN INPUT " CARD #: "; ca$
1090 PRINT " TAXABLE?: ": GET a$
1100 IF a$ = "Y" OR a$ = "y" THEN ta = .06
1110 PRINT " MEMBERSHIP?: ": GET a$
1120 IF a$ = "Y" OR a$ = "y" THEN INPUT " AMOUNT?: "; cl
1130 PRINT " BALANCE DUE?: ": GET a$
1140 IF a$ = "Y" OR a$ = "y" THEN INPUT " AMOUNT?: "; ba
1150 PRINT " ADDITIONAL SHIPPING?: ": GET ab$
1160 IF ab$ = "Y" OR ab$ = "y" THEN INPUT " AMOUNT?: "; as
1170 PRINT " DISCOUNTS?: ": GET di$
1180 IF di$ = "Y" OR di$ = "y" THEN INPUT " AMOUNT?: "; di
1200 FOR x = 1 TO 30
1210 PRINT x: INPUT " ITEM #: "; st%: s(x) = st%
1215 IF st% = 0 THEN x = 30: GOTO 2000
1220 INPUT " HOW MANY?: "; q(x)
1300 NEXT
2000 & PRINT ROUTINE
2005 PR #1
2010 FOR i = 1 TO 12
2020 IF i = 1 THEN PRINT "          ADAM'S HOUSE": NEXT
2030 IF i = 2 THEN PRINT " Route 2 Box 2756": NEXT
2040 IF i = 3 THEN PRINT " Pearlland, Texas 77581": NEXT
2050 IF i = 7 THEN PRINT f$; " "; ln$; "          ": iv%: NEXT
2060 IF i = 8 THEN PRINT ad$; "          ": da$: NEXT
2070 IF i = 9 THEN PRINT ci$; "          ": pa$; " "; ca$: NEXT
2080 PRINT
2100 IF i = 12 THEN PRINT " STOCK #: |          ITEM NAME:          | QUANTITY: | PRICE EA: |
COST:          "

```

continued on page 12



CP/M 2.2 WORKSHOP



This month Sharon starts her CP/M workshop for beginners. CP/M 2.2 gives the ADAM a lot of potential in the area of opening up the availability for new software, BUT it is not that easy to use for the novice computer user. Sharon's workshop series will provide the basic information needed for the novice to use CP/M to operate programs. First, here is a description the programs in CP/M PD volume 35:

NIAD CP/M PUBLIC DOMAIN DISK #35 *by S. McFarlane*

This disk collection includes several supporting files for the BRADFORD printer utility program <CNDV*33> as well as *P*R*N*, a terrific graphics processor for WordStar or any other ASCII file that will accept embedded control characters. Two other versatile printer utilities complete this Library collection.

A reminder that most of the NIAD CP/M Library Disks contain .LBR files which must be de-librared with NULU, DELIB etc. And if the extracted files have been 'crunched' they must be uncrunched with UNCR. In the case of .ARC



or .ARK files, the library must be opened & files extracted with UNARC. ** NOTE: The latest releases of CRUNCH/UNCRUNCH Version 24 & NULU Version 152A can be found in CNDV*36.

As the standard SS/DD ADAM Disk is limited to 145K storage capacity, using .LBR or .ARK files is the only way several different programs can be placed in each collection disk. Also, as the .LBR files usually contain the source code for the particular program, you can easily change/modify the program to suit.

+-----+

ALLFONTS.101 - A sample printout of the various Bradford font styles. This file must be printed with

Bradford & is a useful reference guide.

BRADFONT.LBR [09/87] - An add-on program to Bradford V1.2x which allows you to disassemble Bradford binary font files & create the corresponding source in a text file format. Any existing font file can then be modified with ease. You must have the Bradford & Bradcon .COM files, both of which are included in CNDV*33, to properly use Bradford. DOC file.

BRADLIST.001 [08/07/87] - Is a complete catalog of all the BRADFORD files & related programs released by various authors into the public domain; accompanied by a brief description of each file.

BRFONTS.LBR [10/02/86] - Contains several revised/new fonts for use with Bradford including FONTM.BIN which is a miniature typeface created specifically for label-making applications. DOC file.

PRN-V36.LBR [02/86] - An excellent graphics processor that allows the user to easily design any graphic character/symbol, combine graphics into pictures, and automatically print these graphic characters/pictures where desired within the body of a text file. Configured for Epson compatible dot-matrix printers <Panasonic KX series etc.>, the program makes



full use of all special printer functions.

PRN matches printer control sequences; thus detecting any coding errors. PRN prints all WordStar document & ASCII <non-document> files, formatting and paging them as desired. Overall printer options can be changed to suit; special print characters can be defined/edited; CHARACTER files can be viewed for quick reference; on-line help is available for all print & format commands along with current margin values etc. <these values are reset to default values every time a new document is printed>; and as an added bonus, an intriguing 54 CHARACTER file is included with the Library to get you started!

The comprehensive 20 page DOC file must be printed with PRN. In addition to providing detailed instructions on how to use PRN, this file illustrates many of PRN's versatile features as well as all of the 54 characters/symbols included in the CHARacter file. PRN is a 'must-have' printer utility!

PRNTXT13.LBR [09/14/87] - A message display utility designed to assist in the creation of 'instant' text display .COM files. Text added to PRNTXT with a word processor, or contained in the command line tail, is then sent to the console or printer. Text directed to the console is automatically paged every 23 lines, or a paging character may be inserted into the text to create more specifically formatted displays. A few applications of PRNTXT include: <1> README or HELP files that can be run instead of typed. <2> Program startup instruction and/or message files. <3> Status reporting message files which can accept a command line tail parameter such as a filename or video attributes. <4> Console and/or printer programming files. Detailed DOC file.

TYPEQZ17.LBR [12/16/86] - Is a multi-file, unqueezing, uncrunching 'Type' program which is designed to be the principal utility for listing files although it does not entirely replace the library-type programs such as TYPELZ. TYPEQZ accepts multiple <ambiguous> filenames on the command line & lists these files on the console/printer regardless of whether they are plain text, squeezed or crunched. In addition, TYPEQZ will refuse to type certain files which are generally known to contain unprintable characters. DOC File.

+-----+

A BEGINNER'S LOOK AT ADAM CP/M....a basic teaching guide by Sharon McFarlane

Along with the basic operating system <EOS>, ADAM owners are fortunate to have an additional operating system - CP/M - which allows access to the outside computer world. CP/M though, is not a particularly 'friendly' operating system and many ADAM owners have shied away from it; which is unfortunate. For personal use and/or small business there are programs available for almost every conceivable application. As well as commercial software programs such as WordStar,

SuperCalc, dBase etc., there are literally thousands of public domain CP/M programs available to the ADAM user, which can be obtained from various user groups such as NIAD, or from CP/M dedicated BBS systems by modem. NIAD alone has released 42 Library Disks to date, with almost 400 individual programs <over 6 Meg!>. And a significant number of these PD programs are equal to or better than many commercial software packages.

A computer can be awfully dumb. Without step-by-step instructions <a program>, it doesn't know a keyboard from a keyhole! But that's where CP/M <Control Program for MicroComputers> comes in. It's a program that

CP/M 2.2 IS GREAT

teaches ADAM the basics: how to accept commands from the keyboard, how to display information on the video console, and how to use external peripheral devices such as a printer or modem. This basic workshop series is not intended to be a technical workshop for experienced CP/M users. Hopefully though, it will encourage the uninitiated to give it a try and maybe even spark enough interest to advance even further into the versatile world of CP/M.



The heart of CP/M is its ability to control a disk drive device. That's why CP/M is also known as a Disk Operating System or DOS for short. With a disk drive you can quickly save or retrieve individual programs or data on magnetically-sensitive recording disks. This all means that CP/M makes ADAM instantly intelligent; capable of communicating with you through its peripheral devices & capable of accessing virtually any information it needs from the disk drive. But CP/M has one other extremely important advantage; it makes ADAM compatible with other computers!

Computers come in 2 parts: the Hardware & the Software. The hardware is easy to recognize. You can see and touch it. But you didn't buy your ADAM for the hardware - you bought it for the things it was supposed to do for you; and that of course is determined by the software.

This series is designed to introduce you to the fundamentals of ADAM's CP/M operating system, starting with what exactly an operating system is. THE OPERATING SYSTEM is much like an Office Manager. Office managers set up filing systems, organize & re-organize them, move them around, and give us information from them and about them - and that's what CP/M does.

Certainly these articles won't teach you everything you can learn about CP/M, but they will teach you enough to at least use commercial software & the multiplicity of PD programs available at little or no cost - wordprocessors, text editors, printer utilities, accounting, databases, communications, spreadsheets, utilities & even games. The list is endless. These programs are referred to as 'application' programs. But they will not execute by themselves, and depend on an operating system such as CP/M to communicate with ADAM.

We'll learn all about CP/M: Loading the system, Resident Commands, Disk Drives & other Peripherals, Error Messages and the like. Then we'll cover the application of the utilities provided with ADAM CP/M 2.2 & Assembler - FORMAT, SYSGEN, PIP, STAT etc.

Before you can use CP/M you have to load it into ADAM. Do this by putting a disk that has the CP/M system on it into Drive 1 <A:>, thus designating Drive 2 as <B:> & pull Reset. The system will boot itself & the symbol A> will appear on the screen.

An A> prompt on the screen tells you two things. First, it lets you know that CP/M is alive & well <is booted OK> and ready for use. Second, it tells you that you are

LOGGED onto Drive A. What does being logged onto Drive A mean? It means that anytime you tell CP/M to do something for you, it will assume you want it to go to Drive A: <Default Drive> until you, or your applications program, tell it otherwise. You can, of course, log onto another Drive by typing the drive name & a colon then pressing <RETURN> - eg. B:<RET>.

When you boot CP/M, you automatically place a variety of tools at your disposal. These tools are referred to as the RESIDENT COMMANDS:

 COMMAND WHAT IT DOES & THE RESULT

DIR - The DIRectory tool, gives you a list of all disk files on any drive you choose. Each file consists of 2 words - eg. MyFile.TXT. The 1st word is the 'filename' <up to 8 characters> & the 2nd is the 'filetype' <up to 3 characters>.

USAGE: DIR<RET> or DIR B:<RET> gives you a directory of drive A or drive B respectively. To get a directory listing of all .COM files in Drive A input DIR *.COM<RET>. Use of the * requests all files with the .COM extension. To list all files on Drive B that start with an 'S' input DIR B:S??????.*<RET>. Here, the * is used to request files with any or all extensions.

ERA - ERAses a file or multiple files.

USAGE: ERA Myfile.TXT<RET> erases MyFile.TXT. Similarly, ERA *.TXT<RET> will erase all TXT files found on the media. ERA *.* will erase ALL files on a chosen media - but will verify this command so as not to accidentally ERAsE a file you might wish to keep. Don't panic if you do make a mistake though. There are utilities that will recover these 'lost' file<s> if used immediately, but more on that later.

REN - RENames a file

USAGE: REN NewFile.TXT=OldFile.TXT<RET> USER - In computer terms, you're called a 'User'. Rather impersonal but to the point. And when CP/M is first loaded into ADAM, it is assumed that User 0 is in control. To use the same disk to create or store a separate set of programs, simply change User Areas.

USAGE:



USER 1: <RET> - CP/M will respond with an A> prompt, but the original files become inactive & only the files created/stored in User Area 1 will be in use.

ADAM CP/M 2.2 supports 16 User Areas <0-15>. However, you are still limited to the normal 64 directory entries. But - it's a very effective way to keep your files separate for tidier house-keeping.

SAVE - <Advanced Command> Save xx pages <256 byte blocks> onto a Disk/DDP. Usually files are automatically created or saved on a disk by various utilities or programs <eg. An Editor creates a TEXT file>. But for more advanced programming, CP/M allows you to save a file directly with its .SAVE Command. However, for normal CP/M operations, this Command is very seldom used.

USAGE: SAVE 6 NewFile.HLP <RET> - will save 6 blocks of data presently residing in memory. To determine the number of blocks to save, simply multiply the size of the file you are about to SAVE by 4. A 2K file will require 8 blocks to save it.

TYPE - Types file contents on the video console or sends the file to the printer. Only files that contain conventional letters & numbers can be displayed/printed. A Cntl <S> will temporarily Stop/Start the display so it can be read without taking a speed-reading course.

Pressing Cntl <P> before executing the TYPE Command will send the file to the printer. After the file has been printed, another Cntl <P> will turn the printer off.

USAGE: TYPE MyFile.TXT <RET>

That's all there is to it - these are the 6 RESIDENT COMMANDS which are all quite easy to use. Try them out <they won't bite> & until next month..... Sharon McFarlane

continued from page 8

```

2110 NEXT i
3000 FOR x = 1 TO 30
3050 IF s(x) = 0 THEN FOR d = x TO 30: PRINT "          |          |
      |          |          ": NEXT x = 30
3100 IF s(x) = 101 THEN c(x) = q(x)*14.95: PRINT "    101 | FILE PRINTER |
      "; q(x); "    | $14.95 | $"; c(x)
4999 NEXT
5000 PRINT "-----"
5100 FOR x = 1 TO 30: su = su+c(x): NEXT
5120 IF di$ = "Y" OR di$ = "y" THEN PRINT "
      | DISCOUNT: | $"; su*di
5130 IF di$ = "Y" OR di$ = "y" THEN su = su-(su*di)
5150 PRINT "                                | SUBTOTAL: | $"; su
5200 tx = su*ta: PRINT "                                | TX 6% TAX | $"
; tx
5250 IF ab$ = "L" OR ab$ = "l" THEN sh = 0: GOTO 5310
5300 sh = (su*.1)+as: IF sh-as < 3 THEN sh = 3+as
5310 PRINT "                                | SHIPPING | $"; sh
5400 PRINT "                                | CLUB DUES | $"; cl
5500 PRINT "                                | CR / DR: | $"; ba
6000 t = su+tx+sh+cl+ba: PRINT "                                | TOTAL:
      | $"; t
7000 PRINT: PRINT: PRINT: PRINT: PRINT: PRINT
7010 PRINT "          "; f$; " "; ln$
7020 PRINT "          "; ad$
7030 PRINT "          "; ci$
10000 PR #0: POKE 40, 12: POKE 41, 3: CALL 90: REM FORM FEED
10010 PRINT " Do you wish another copy? ": GET a$
10020 IF a$ = "Y" OR a$ = "y" THEN su = 0: t = 0: GOTO 2000
10030 PRINT " Do you wish another invoice? ": GET a$
10040 IF a$ = "Y" OR a$ = "y" THEN CLEAR: GOTO 10
10050 END
    
```



REVIEWS



SPEEDY WRITE By L. Marschand & W. Wissner

SPEEDYWRITE IS FANTASTIC !!!

I think this is the best way to start out this review. SPEEDYWRITE (SW) is a VERY comprehensive word processor for the ADAM that makes SMARTWriter look amateurish in comparison (and I love SMARTWriter so, if anything I am very critical of new word processors)!! This word processor offers so many features that one doesn't know where to start to describe them all. SW is an innovative piece of software that is one of the new breed of highly sophisticated software for the ADAM. It is even more amazing considering the fact that it was written by a 13 year old boy. Evidently David White spent close to a year designing, writing and testing SW. My hat is off to him !! SW provides all the functions of SMARTWriter and those functions not provided by SMARTWriter that most people have been asking for. Specifically - . Variable line spacing within a document . Variable margins within a document . Full justification (even left and right margins) . Linking of multiple documents when printing . Mail merge for printing form letters

SW comes on either tape or disk and is self booting by pulling the computer reset. Here is a list of the major features provided by SW and a comparison against SMARTWriter where appropriate.

. Displays 40 characters per line and 24 lines per screen (SMARTWriter: 35 characters per line and 19 lines in moving window format).

. Can select from 16 colors for background and 16 colors for text (SMARTWriter: select from 5 colors for background only).

. Forward or backwards search and replace of a phrase or a word, including global search/replace and wildcard search/replace where you can enter "*" 's for general matches (SMARTWriter: search/replace with option to find next occurrence; only forward search).

. Supports underline, super/sub

script, bold print by overstriking the same character (SMARTWriter: does not have bold).

. Supports variable margins and line spacing in the same document (SMARTWriter: only supports one setting per document).

. Individual character delete as well as ability to highlight a portion of a document and delete it. All deleted sections are stored in a delete buffer which can be used to insert previously deleted text in the document.

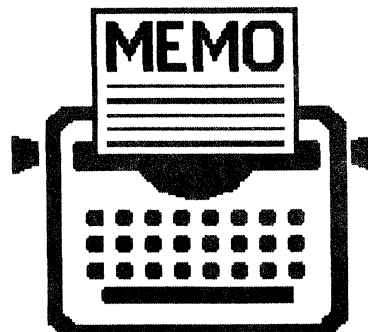
. Functions for moving around a document-last/next character word, sentence, paragraph; beginning/ end of screen; beginning/ end of document (SMARTWriter: doesn't support movement by word, sentence or paragraph. Can't go directly to the beginning/ end of a document).

SW has a wealth of additional functions NOT provided by SMARTWriter:

. PRINTING OPTIONS Special print commands can be placed in the document to center a line, fully justify, right justify, automatic indents. These commands can be placed so as to effect only 1 line, paragraph or the entire document and may be turned on and off multiple times within a document. As mentioned above, variable margins and line spacing is also supported. Even two-column printing is provided (you must re-insert the paper to print the second column on the same page). A preview option is provided that will display the text on the screen as it will be printed. Headers and footers can be automatically printed on each page as well. The entire document can be printed or just a specific page. A page can be reprinted for a second copy if desired. Page numbers can be changed at the time of printing. Different files can be chained together at the time of printing as well. The only feature not supported is multiple page printing -each page is printed and then the print stops until you indicate you want to start again.

. SPLIT SCREEN

SW allows you to split the screen horizontally to create a special "WINDOW" that can be used to hold any text you like. As an example the beginning of your document can be displayed in the window



while you are working on the bottom of the screen with another portion of the document. You can even display another file or directory in this window.

. FILE UTILITIES

In addition to saving/ loading files, functions are provided for renaming a file, protecting a file so it can't be written over and/ or read, initializing a tape, getting a catalog and determining the number of free blocks on the tape/ disk (a life saver at times). A control command provides the number of words in the document or the number of lines and pages. The amount of available memory left is constantly displayed at the top of the screen. There is room for about 7 pages of single spaced text in memory at one time (about the same as SMARTWriter).

. CONFIGURATION OPTIONS

SW uses a unique concept of configuration files that modify SW to provide additional or optional functions to customize the base program. Several configuration files are provided on the SW media, but you can also build your own !! Yes, SW is a word processor that you can modify to meet your needs. Configuration files are provided for German, French and two Spanish keyboards. An additional text font is also provided. Accented characters for math and French are also available. A CONFIG program is provided for running under SMARTBasic that allows you to make your own configuration files. Options are provided for assigning any printing character to any keyboard key to customize the keyboard. Also, you can print an accent for any character if desired or print one character on top of another if desired. A complete font editor program is supplied that allows you to customize how the characters appear on the screen. This is useful for creating the accented characters to match what will be printed if you are using a configuration file that has special characters. Also, it is useful for modifying any character to make it easier to read on the screen. A modified font is supplied with bolder characters that are easier to read on the screen, although the regular character set looked fine to me on a color monitor.



. MACROS

Yes, SW even supports macros which are little routines that allow you to store a set of keystrokes and then execute them by hitting one key. Macros coupled with the many special commands available in SW allow one to

program a host of special functions that greatly enhance the utility of SW. Also, it provides for individual customization to each users needs. Several macros are supplied on the SW tape/disk that provide most functions needed. Macros are invoked by hitting the SHIFT and SMARTKEY. The standard set of macros provide the following:

KEY	FUNCTION
Shift I	Types 13 returns
Shift II	Makes a line across the page
Shift III	Deletes the word behind the cursor
Shift IV	Switches 1st/ 2nd word
Shift V	Inserts printing command that prints page numbers

Here is a list of some of the special SW commands that can be invoked by hitting the CONTROL key and the letter specified. These commands can be used singly or in combination in a macro:

- A - Insert mode
- B - Inserts contents of delete buffer at cursor location
- C - Clears workspace
- D - Deletes a block of text
- E - Removes spaces after use of Control Q
- F - Enter phrase to find
- G - Deletes character after the cursor
- H - Backspace
- I - Tab J - Resets the ADAM printer, keyboard and tape drives WITHOUT losing the document in memory. This command can also recover a jammed printer in the middle of printing !!
- K - Captures any data on the screen and puts it into the Copy Window for viewing while editing your text. This useful feature can be used for viewing one document while editing another or viewing a catalog from tape/ disk.
- L - Search
- M - Return
- N - Erases the delete buffer
- O - Inserts a space
- P - Print command
- Q - Inserts 255 spaces at cursor location. Useful prior to inserting a lot of text.
- R - Replace phrase for search function
- S - Search forward or backwards
- T - Jump to filer menu
- U - Replaces phrase entered with control F with the one entered with control R
- V - Allows the entering of a print format command
- W - Displays the number of words in the document
- X - Exchanges the previous character with the current one (transposition)
- Y - Global replace function

- Z - Moves cursor to next space
-] - Computes length of document in pages and lines
- \ - Turns delete buffer on and off
- ^ - Switches between the standard QWERTY keyboard and the DVORAK keyboard or any alternate keyboard loaded as a configuration file (German, Spanish, French, etc.)

Many of the above are also provided by single keys such as Insert, Backspace, Delete, etc.

I found the program generally easy to use, but the wealth of options may be somewhat overwhelming to someone who has only used SMARTwriter. The 47 page manual supplied is well written and very complete, but somewhat confusing at first reading. I strongly recommend that the manual be read a couple of times to get the full use out of the program.

Also, I would recommend that the new user stay away from the configuration and macro options until they get a good understanding of the basic functions of SW.

SW is compatible with SMARTwriter and will convert files from it to SW. It is also compatible with PROOFREADER, for spell checking.

NIAD and E&T Software will be working together with the author to create standard configuration files and macros that SW owners can use. We will print some in next months issue.

VERSIONS

All of the above applies to SPEEDYWRITE Version 1.0, which now sells for \$29.95 from NIAD. David White has just completed Version 2.0, containing many enhancements, which sells for \$39.95. Mr. White stated in our correspondence that the upgrade for the Speedywrite v 2.0 will be easily accomplished by just sending a data pack for him to put it on. This applies only to those who have already purchased Version 1.0 at the old price of \$39.95.

In v 2.0 there will be even more excellent features including -

- . Capability to edit two files at once ! . A column display next to the bytes display
- . A wildcard file handling in the Delete file and copy file commands which will handle multiple files
- . The new 360K and 720K drives will be optimized .
- Online HELP screens instead of the Menu system which will greatly help the new user
- . A pocket Database for storing a screen full of data for fast retrieval

- . A RamDisk program which will provide an internal RamDisk of 10K if you don't have a 64K memory expander, and a larger RamDisk if you do
- . Support for dot matrix printers as well as the ADAM printer
- . Several new configuration files are provided as well

Speedywrite may actually have more that you may need, but it was sure nice to see extra features than not enough. If you are looking for a powerful word processing program then look to SPEEDYWRITE, as it is by far the best that Adam has seen.

RATING - A+

PHRASE CRAZE By W. Motel

Reedy Software has hit on an innovative graphics/ word game for the ADAM. PHRASE CRAZE is a Wheel of Fortune type game. Two or Three players (or teams) compete in guessing the hidden phrase, thing, event, etc. The game consists of a wheel of money values, lose a turn, or bankrupt spot. On your turn, you can roll (roll a ball around the wheel), buy a vowel, or guess the puzzle. Vowels cost \$250 dollars. If you roll and the ball lands on a money value, you can guess a letter. If that letter appears in the puzzle, you get the money value times the number of times the letter appears.

If you buy a vowel, and it appears in the puzzle, you simply see where it goes in the puzzle. Either way, you get another turn. If the letter or vowel you pick is not in the puzzle, or you incorrectly guess the puzzle, the next player gets a turn. The game consists of 3 puzzles.

The players each enter their names. The screen shows the puzzle board, showing the puzzle tiles in grey. If a



letter is guessed, the tile shows the letter. The letter board is shown under the puzzle board. Unused letters are shown in larger size. Used letters are shown in smaller size.

You pick a letter or vowel by moving the box with your joystick. On the roll,

the ball spins around the wheel and randomly stops at one of the positions. From the time I played, the ball did seem to randomly stop without seeing any pattern of certain places stopped at.

If you win a round (puzzle), any money earned in that round is yours to keep, the other players lose their money from that puzzle round. At the end of the game (3 rounds), the player with the highest amount wins. If your amount is high enough, your name is saved on the Hall of Fame.

Overall the game is colorful, nicely done, and fun to play. High resolution color graphics with multiple text fonts are used. The "WHEEL" is very well done. They have made the game so that you can load optional game packs in, which they plan to sell. This will extend the life of the game. This one includes over a 100 of 3 rounds each, according to the instruction sheet. When all are used, the program will let you know and prompt you so that it can reuse them. If you like Wheel of Fortune, ADAM now has a great version of it for you.

Rating: A

ADAMLINK III By L. Marschand



This is not actually a new program, but a modification to the ADAMLINK II program.

Some background may help- a software program called ADAMLINK I comes with the ADAMLINK modem. This software allows the ADAM to "talk" to other computers, but does not provide for the transmitting and receiving of files. ADAMLINK II was released by Coleco and it does all that I did but with the addition of providing for file transfer of ONLY ASCII files (meaning only text files like SMARTwriter or SMARTBASIC files, etc.)

ADAMLINK II doesn't provide for the transmitting or receiving of machine language files such as games, CP/M "com" programs or "bsaved" SMARTBasic programs. Up until now, the only way this could be done on the ADAM was by using CP/M 2.2 modem programs.

ADAMLINK III now provides for the transmitting/receiving of any ADAM "A" or "H" type of file using something called XMODEM protocol. This is a special

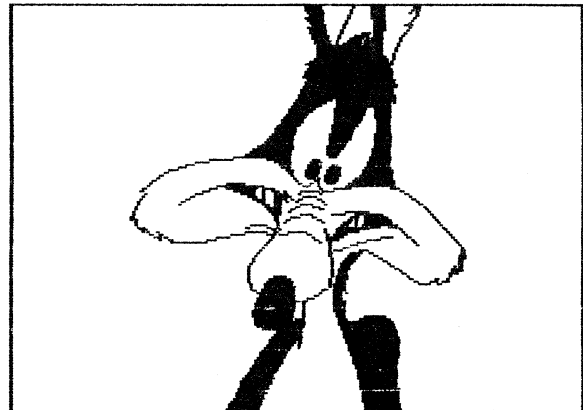
method of sending files over phone lines with higher reliability than the method used by ADAMLINK II. Plus, it handles any "H" type file, not just ASCII text "A" type files.

All major BBS' support XMODEM protocol, which will make it a lot easier to get/ send files via the ADAM. Tom Clary (author of ALIII) modified ADAMLINK II to provide the XMODEM facility. Hence, the basic use of ADAMLINK III is the same as II.

A good documentation file is supplied on the tape/disk for reference. Tom has really taken ADAMLINK II apart and done the ADAM community a great service by providing this enhanced version to support the thousands of ADAMITES who heavily use their modems.

NOTE: An earlier version of AL III did not support both up and down loading of files via XMODEM. The current version, which sells for \$19.95 does support both.

RATING - A



PRODUCT LIST

PRICES EFFECTIVE: 4/1/88 and

MEMBERS ONLY

SUBJECT TO CHANGE without notice

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OTHER SOFTWARE
Specify DDP or Disk

VIDEOLINES	\$ 28.95	
FANTASY GAMER	\$ 22.95	
BASIC BONANZA	\$ 18.95	
SOFTPACK I	\$ 9.95	
LVAC ARCHIVE I	\$ 15.95	(DDP)
PERSONAL ACCOUNTANT	\$ 18.95	(DDP)
BUSINESS PACK	\$ 22.95	(DDP)
PAINTMASTER	\$ 15.95	(DDP)
URBOLAND	\$ 15.95	(DDP)
QUICK COPY	\$ 15.95	(DDP)
MULTIWRITE	\$ 38.95	(DDP)
ELECTRIC GAME PACK	\$ 17.95	(Disk)
Specify I or II	\$ 19.95	(DDP)
NUMBER BUMPER	\$ 15.95	
REEDY	\$ 15.95	
ENTERTAINMENT PACK	\$ 17.95	(DDP)
JEEPARDY QUESTION PACK	\$ 14.95	SPECIAL
FAMILY FEUD QUESTION PACK	\$ 14.95	SPECIAL
TRIVIA PACK I	\$ 12.95	(Disk)
(DDP)	\$ 14.95	(DDP)
KIDS TRIVIA	\$ 12.95	(Disk)
(DDP)	\$ 14.95	(DDP)
PRO FOOTBALL	\$ 18.95	
BACKUP 3.0 (COPY ONLY)	\$ 18.95	DISK ONLY
BACKUP 3.0 (COPY/UTILITY)	\$ 24.95	SPECIAL
SMARTGAMES PACK	\$ 11.95	(Disk)
ROYAL AMBS, EDUC PCK (Disk)	\$ 9.95	
CPN NEVADA BASIC	\$ 39.95	(DDP)
SP-1 CUSTOM SOFTWARE for	\$ 7.00	Smartwriter/Filer (Specify printer)
GRAPHXP/PAINTER	\$ 19.95	NEW
For Dot Matrix printers		
GRAPHIX I	\$ 14.95	
ADDRESS BOOK/CALENDAR	\$ 9.95	
SPRITE MASTER	\$ 18.95	
JEEPARDY QUESTION MAKER	\$ 24.95	
FAMILY FEUD QUEST MAKER	\$ 24.95	
Each of Quest Makers (Disk)	\$ 7.95	
BASIC RAM DISK Use	\$ 28.95	(DDP)
64k, 256k in BASIC (Disk)	\$ 28.95	(DDP)
(Specify Basic V1.0 or V2.0)		
PRINTINGS	\$ 7.95	(Disk)
Specify Vol 1, 2, 3 (Disk)	\$ 7.95	(Disk)
SIGNS	\$ 9.95	(DDP)
JANES'S RECIPES 25 rec/vol	\$ 7.00	
(Specify Disk or DDP and VOLUME)		
V1. Deserts, V2. Salad, V3. Outdoor, V4. Holiday)		
MICROWORKS	\$ 29.95	(DDP)
Filer, Calc, Graph, Text		
EASY COME, EASY GO	\$ 19.95	
WIZARD'S PINBALL ARCADE	\$ 19.95	
ADAMTALK	\$ 19.95	
Interpreter for EVE Speech		
SOLAR SYSTEM Quiz	\$ 9.95	(DDP)
AMERICA AT WAR Quiz	\$ 9.95	(DDP)
WORLD GEO. Quiz	\$ 9.95	(DDP)
HOME FILE MANAGER	\$ 9.95	(DDP)
PERSONAL CHECKBOOK	\$ 9.95	(DDP)
HOME BUDGET	\$ 9.95	(DDP)
BASIC SYSTEM MGR/FASTRUN	\$ 18.95	
LAB MOUSE	\$ 12.95	(DDP)
STATES and CAPITOLS	\$ 8.95	(DDP)
WORLD CAPITOLS	\$ 8.95	(DDP)
MOBILE CONVENTIONS	\$ 8.95	(DDP)
BASIC-AID PLUS	\$ 9.95	NEW
MEDIA-AID PLUS	\$ 18.95	NEW
(Specify Basic V1.0 or V2.0)		
SMART TYPE 2.0	\$ 17.95	NEW

OTHER SOFTWARE
CONTINUED

PROF READER	\$ 34.95	NEW
LIBRARIAN	\$ 19.95	NEW
NIAD GOLD SERIES		
GAMES 1	\$ 9.95	NEW
TEXT ADVENTURE	\$ 9.95	NEW
HOME/BUSINESS	\$ 9.95	NEW
SCIENCE/EDUCATION	\$ 9.95	NEW
MICRODIAL	\$ 19.95	NEW
(Requires speech synthesizer)		
STAGE FRIGHT	\$ 19.95	NEW
ADAMTALK	\$ 9.95	NEW
ADAMTALK DOT MATRIX PATCH	\$ 9.95	NEW
ADAMTALK	\$ 9.95	NEW
SPRITE POWER	\$ 14.95	NEW
CLIPPER	\$ 14.95	NEW
POWER PAINT	\$ 34.95	NEW
CLIP ART	\$ 12.95	NEW
BEYOND TREK	\$ 14.95	NEW
AUTO WRITER	\$ 26.95	NEW
NEWSMAKER	\$ 10.95	NEW
SNAPSHOT	\$ 18.95	NEW
SMARTSK (Req 64k/256k Mem)	\$ 17.95	NEW
FILE MANAGER	\$ 15.95	NEW
CHESS CHAMPION	\$ 18.95	NEW
ADAMLINK III	\$ 35.95	NEW
MEGASYSTEM XR	\$ 35.95	NEW

COLECO SOFTWARE
(DDP, unless noted)

SMART LOGO	7600	\$ 28.95	SPECIAL
EXPERTISE	7602	\$ 18.95	SPECIAL
SMART FILER	7813	\$ 15.95	
RECIPE FILER	7814	\$ 10.95	SPECIAL
SMART LTRS/FORMS	7805	\$ 15.95	
FLASHCARD MAKER	7662	\$ 15.95	
For Dot Matrix printers			
FLASHFACTS (TRIVIA 2902)			
HISTORY 2901, VOCAB 2900)			
ADAMC 4.2	7832	\$ 28.95	
R. SCARRY WORDBOOK	7851	\$ 24.95	
WACKY WORD GAME	7834	\$ 15.95	
DONKEY KING		\$ 18.95	
DONKEY KING JR.		\$ 18.95	
SUPER ZAXON	2632	\$ 12.95	SPECIAL
2010: TEXT ADVENTURE	7849	\$ 20.95	
FAMILY FEUD	7710	\$ 20.95	
BEST OF BROTHERBUND		\$ 20.95	
ADDR. BOOK FILER/AUTO DIAL.		\$ 18.95	NEW

ACTIVATION SOFTWARE
(Specify DDP or Disk)

ALCAZAR	\$ 27.95	NEW
ROCK n' BOLT	\$ 27.95	NEW
BOULDER DASH	\$ 27.95	NEW
KEYSTONE	\$ 22.95	NEW
KEYSTONE 2	\$ 22.95	NEW
PITFALL I	\$ 22.95	NEW
DECATHLON	\$ 18.95	NEW

IMAGIC SOFTWARE

TENNIS	\$ 27.95	NEW
MOONKEEPER	\$ 19.95	NEW

INTERSEVER SOFTWARE

SEWER SAM	\$ 22.95	NEW
AQUA ATTACK	\$ 22.95	NEW
BLOCKADE RUNNER	\$ 19.95	NEW
SQUISH'M SAM	\$ 18.95	NEW

NEW PUBLIC DOMAIN (\$7.00 DDP, \$5.00 Disk)

CABBAGE PATCH ADV.	IN PARK 726k version
FALL GUY	and
YOKES ON YOU	and
MATH WIZ	

NIAD USER GROUP PRODUCTS
PUBLIC DOMAIN

PLEASE Specify VOLUME and Disk/DDP
NOTE: \$ 5.00 Disk, \$ 7.00 DDP

SMARTBASIC # 1 - 25 (35 Different)		
# ANDV1 - 25 (Vol numbers)		
SMARTLOGO # 1 - 3 (3 Volumes)		
# LNDV1 - 3		
ADAMCALC # 1 - 2 (2 Volumes)		
# ANDV1 - 2		
BASIC UTILITIES # 1 - 2 (2 Volumes)		
# UNDV1 - 2		
(Vol 1 includes backup utility)		
CPM4.2 # 1 - 42 (42 Volumes)		
# CNDV1 - 42		
JEEPARDY		
PIBALL/HARDHAT MACK		
New BUG FREE vers with 2 DEMO games		
Add \$ 2.00 for 40 page manual		
PINGBALL GAMES 5 (Volumes 1 and 2)		
SUPER SUBROCK (Pinball/Hardhat Mack)		
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 PICTURE FILE # 1-3 (3 volumes available)		
CUSTOM PRINTER SOFTWARE		
NIAD PD SIGNS Volume 1		
VIDEOTUNE SONGS Volumes 1 and 2		
1 MINUTE FORMATTER (Disk)		

SUPPLIES

RIBBONS		
ADAM REPLACEMENT	\$ 4.95	EACH
PANASONIC 1080/1080I	\$ 9.95	EACH
DKIMATE 20 RIBBONS	\$ 4.95	EACH
Color	\$ 5.95	EACH
COVERS		
3 PIECE FOR COMPLETE ADAM	\$ 18.95	
DISK DRIVE ONLY	\$ 8.95	
3 PIECE FOR EXPANSION ADAM	\$ 23.95	
PRINTER WHEELS	\$ 5.55	
SPECIFY FONT STYLE for the ADAM printer		
Gothic 12, Script 12, Elite 12, Emphasis,		
Courier 72, Pica		
TAPE DRIVE HEAD CLEANING KIT	\$.50	
DISK DRIVE HEAD CLEANING KIT	\$ 19.95	
Contains 2 cleaning diskettes/Fluid		
DISK/DIGITAL DATA PACKS		
COLECO/LORAN DDP	\$ 4.75	EACH
10 for	\$ 39.95	EACH
NIAD/LORAN DDP	\$ 4.25	EACH
10 for	\$ 34.95	EACH
NIAD (Non LORAN) DDP	\$ 4.25	EACH
10 for	\$ 34.95	EACH
BOX of 10 LORAN DS/DD Diskettes	\$ 9.95	SPECIAL
5 Boxes 50 Diskettes	\$ 34.95	SPECIAL
PINPEED PAPER/LABELS		
9 1/2 x 11 20/4 MICROPERF PAPER	\$ 8.95	/500
9 1/2 x 11 OKI 20 THERMAL PAPER	\$ 18.95	/1000
3 1/2 x 15/16 PIN FEED ADDR LABEL	\$ 8.95	/250
	\$ 8.95	/1000

NIAD SPECIALS
Collection/Adam

GRAPHIX I and EITHER PAINTINGS	\$ 19.95
Vois 1, 2, or 3	
PAINTMASTER and EITHER PAINTINGS	\$ 27.95
Vois 1, 2, or 3	
BOX of 10 LORAN DS/DD Diskettes	\$ 9.95
NIAD Economy DDP - Non LORAN 10 for	\$ 19.00
SUPERACTION CONTROLLERS 2491	\$ 49.95
EXPANSION MODULE 2 (Deliver 293)	\$ 49.95
ORPHANWARE #12 PARALLEL INTERFACE	\$ 269.95
PANASONIC PINBALL PRINTER/CABLE	\$ 269.95
Expanded to hook up cable	
ORPHANWARE #12 PARALLEL INTERFACE	NEW LOW PRICE
8 OKI 20 PRINTER-ADAM PLUG/PRINT	\$ 249.95
Everything you need to hook it up	
OKI 20 PRINTER-ADAM PLUG/PRINT	\$ 199.95
No interfaces or cables	
NEW ADAM (tan) HAND CNTL'S	\$ 9.95
NEW ADAM KEYBOARDS	\$ 19.95
ADAMNET CABLES for KEYBOARD/DISK	\$ 2.95
3 1/2 x 15/16 PIN FEED ADDR. LBL'S	\$ 8.95/1000
9 1/2 x 11 20 LB PIN FEED PAPER	\$ 18.95/1000
SUPER GAME CONVERSION TO DISK	\$ 4.00 EACH
NOTE: You must send label card from game as	
proof of purch: Family Feud, Best of Brotherbund	
can be copied directly by most copy programs	
SMARTFILER COPY WITH LATEST VERS. \$ 4.00	
Includes Label Printing Disk/Docp	
Send Label File to Disk/Docp	
BACK ISSUES of NIAD from 1/85	\$ 3.00 EACH
RIGHT DIR TAPES for SUPERGAME COPY	\$ 2.50 EACH
UPDATES on FIXES to PD tapes	\$ 3.00 EACH

CP/M 2.2 COMM L SOFTWARE
INFOCOM PRODUCTS
Requires ADAM CP/M software

PLANETFALL	\$ 34.95	SPECIAL
ZORK I	\$ 29.95	SPECIAL
ZORK III	\$ 39.95	
STARCROSS	\$ 39.95	
DEADLINE	\$ 39.95	
HITCHHIKERS GUIDE	\$ 29.95	SPECIAL
SUPERCALC	\$ 48.95	

PRODUCT LIST 3/1/88

HARDWARE & ACCESSORIES
NOTE: SEE SPECIALS ON NEXT PAGE AS WELL

- ADAM_DISK_DRIVE_7817 \$225.00
- ***** TWO FOR \$399.95
- 3 1/4 high-capacity disk drive for the Coleco Adam.
- Provides expanded capability for faster storage and retrieval and increased reliability. Requires standard diskettes.
- ADAM_LINK_MODEM_7818 \$ 49.95
- ADAM phone modem which provides capability, with included software, to interface with other IBM computers or other bulletin board systems such as CompuServe.
- NOTE: Order IBMLink II software from public domain list which will allow upload/download of programs.
- COMPENSERVE_STARTER_KIT \$ 29.95
- Includes manual, poster, and five hours of correct file to be put on computer's hard-disk system.
- LEGATL_DATA_DRIVE_2409 \$ 29.95
- New (but no brand) digital data drive which can be used as a replacement or as a second drive.
- 54K_MEMORY_EXPANDER_DE-64 \$ 49.95
- Provides additional bit of memory for SMARTwriter, CP/M programs. Provides built-in buffering for IBMLink, CP/M.
- 256K_MEMORY_EXPANDER \$ 149.95
- Provides 256K ram disk which CP/M 2.11 requires decrease cost (add'l \$11.11) to send to file for modification if you have it.
- EYE_REL_2/PARALLEL_INTERFACE_SF-1 \$139.95
- Allows the connection of the Adam to any parallel printer and other devices requiring either serial or parallel interface connections. Includes software for directing print to additional printers directly from SMARTwriter, SMARTlet, BASIC, CP/M programs.
- EYE_SF-1/PARALLEL_INTERFACE_ONLY \$ 79.95
- ORHANW/SE_PLAZ_PARALLEL_INTERFACES_32_95
- Parallel cable required - see next item
- PARALLEL_OR_SER/M/CABLE_SF-1C \$ 15.95
- Cable required to attach SF-1 or PIM interface to other printers.
- SHLEDEL_PARALLEL_CABLE \$ 24.95
- Parallel cable containing extra shielding to prevent interference with TV sets.
- ORHANW/SE_80_COL_VIDEO_UNIT \$19.95
- Standalone unit
- Unit to attach to Eye Serial Peripherals
- Provides 80 column video output for CP/M software. Emulates various terminals.
- EYE_MULTI-UNIT_ADAPTER_MA-3 \$ 44.95
- Special adapter cable required to attach both the SF-1 and SF-0C to the Adam. NOTE: Not required for 80-column video board.
- ADAM_PRINTER_TACTOR_FEED \$ 72.95
- Feeds into the Adam printer as originally designed to provide for feeding of pin-fed continuous form paper.

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- PRINTER_ON/OFF_SWITCH \$ 12.95
- 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.
- skill - see review in 7/85 issue.
- * SPECIFY DDP OR DISK FOR SOFTWARE PROVIDED
- SPECIALS/ NEW PRODUCTS
- 54K_MEMORY_EXPANDER_4_SMARTDSK \$ 49.95
- Provides full ability to use 4th expansion from SMART. Basic as a ram disk. Specify whether you want the basic ramdisk program for basic V1.0 or 1.4
- POWER_SUPPLY_FOR_COLECO_DISK_DRIVE \$ 19.95
- POWER_SUPPLY_FOR_COLECO_VISION \$ 9.95
- MAGNAVOX_CM8505_COLOR_MONITOR \$249.95
- Use with the Adam for better color. Also compatible with all other computers as well.
- Great 40 column color in RGB mode.
- Requires IBM monitor cable above.
- MAGNAVOX_TV_TUNER_FOR_MONITORS \$ 79.95
- Requires the standard TV.
- MAGNAVOX_SC8515_COLOR_MONITOR \$369.95
- Same as CM8505 above, but will display 40 columns on 800 computers (not the Adam).
- 3_OUTLET_SURGE_PROTECTOR
- Protect your hardware from power surges.
- COLECO_MONITOR_PROTECTOR_W/SWIVEL_STAND \$ 69.95
- 3_OUTLET_SURGE_PROTECTOR_W/MASTER_SWITCH
- Integrated small unit organizes your computer files and files surge protection. Fits on all computers with one switch or individually.
- NIAD_PRODUCT_REVIEW_BOOK \$ 19.95
- Contains detail reviews of 100 Adam products, organized alphabetically for quick reference.
- MICROSTUFFER_64K_PRINTER_BUFFER \$ 59.95
- For any computer/parallel dot matrix printer. Press computer by controlling the printer.

PRINTERS

- PANASONIC_1080I-2 \$219.95
- 9x9 DOT MATRIX
- TYPE: DRAFT MODE - 144 CPS
- SPEED: NEAR LTR QUALITY - 28 CPS
- PRINT CHR: COMPATIBLE W/ EPSON RX80,
- IBM, FULL GRAPHICS
- MEDIA HNDL: ADJ TRACTOR FEED
- INTERFACE: CENTRONICS PARALLEL
- FEATURES: 2 YEAR LIMITED WARRANTY
- PANASONIC_1091I-2 \$269.95
- 9x9 DOT MATRIX
- TYPE: DRAFT MODE - 192 CPS
- SPEED: NEAR LTR QUALITY - 38 CPS
- PRINT CHR: COMPATIBLE W/ EPSON RX80,
- IBM, FULL GRAPHICS
- MEDIA HNDL: ADJ TRACTOR FEED
- INTERFACE: CENTRONICS PARALLEL
- FEATURES: 2 YEAR LIMITED WARRANTY
- OKIMATE_20_COLOR_PRINTER \$199.95
- 24 PIN THERMAL
- TYPE: DRAFT MODE - 80 CPS
- SPEED: NEAR LTR QUALITY - 40CPS
- MEDIA HNDL: LIMITED ADJ TRACTOR FEED
- INTERFACE: NONE STD - PARALLEL PLUG N
- PRINT MODULE SUPPLIED THAT ATTACHES TO EVE OR ORPHANWARE
- PARALLEL INTERFACE
- FEATURES: BLACK & WHITE OR COLOR PRINTING, 8K BUFFER, SPECIAL PAPER REQ'D
- PANASONIC_RIBBONS \$9.95
- OKIMATE_20_RIBBONS \$4.95 BLACK
- \$5.95 COLOR
- TRAINING_MANUALS_BOOKS
- NIAD_PRODUCT_REVIEW_BOOK \$ 19.95
- LEARNING EXPRESS AUDIO TRAINER \$ 19.95
- CP/M USER'S GUIDE BY T. HOGAN \$ 15.95
- WORD PROCESSING WITH YOUR ADAM \$ 8.95
- FIRST BOOK OF ADAM, THE COMPUTER \$ 8.95
- TAB BOOKS
- BASIC BASIC PROGRAMS FOR THE ADAM \$ 8.25
- BY KNIGHT, TIMOTHY OR
- DISCOVERING SCIENCE ON YOUR ADAM, WITH 25 PROGRAMS BY TAL MOUNTAIN \$ 9.95
- SCIENCE CENTER
- THE COLECO ADAM ENTERTAINER BY BRIAN SAWYER TO ADAM VOL I \$ 12.95
- HACKER'S GUIDE TO ADAM VOL I \$ 11.95
- HACKER'S GUIDE TO ADAM VOL II \$ 11.95
- PROGRAMS FOR BOTH VOL I & II OF HACKER'S GUIDE ON 1 TAPE OR DISK \$ 3.00 DISK \$ 5.00 DDP
- 2ND EDITION ADAM RESOURCE DIRECTORY \$ 13.95
- USING & PROGRAMMING ADAM BY KNIGHT \$ 7.95

SEGA GAME SYSTEM

- BASE_GAME_SYSTEM \$79.95
- 2 HAND CONTROLLERS
- COMBO MEGA CARTRIDGE
- HANG ON GAME
- ASTRO WARRIORS
- MASTER_GAME_SYSTEM \$ 99.95
- 2 HAND CONTROLLERS
- LIGHT PHASER GUN
- COMBO MEGA CARTRIDGE
- HANG ON GAME
- SAFARI HUNT GAME
- SEGA_SPORTS_PAD_CONTROLLER \$49.95
- SEGA_CONTROL_STICK \$13.95 NEW
- SEGA_3D_GLASSES \$41.95 NEW
- SEGA_CARD_SOFTWARE_(255K) \$24.95
- F-16 FIGHTING FALCON
- MY HERO
- TEDDY BOY
- TRANSBOT
- SUPER TENNIS (sports pad not req'd)
- SEGA_MEGA_CARTRIDGES_(1048K) \$29.95
- CHOPLIFTER
- FOOTBALL NEW
- ACTION FIGHTER
- VOLLEYBALL NEW
- BLACK BELT
- ALEX IN MIRACLE WRLD NEW
- FANTASY ZONE
- GHOSTBUSTERS
- WORLD GP
- SOCCER
- PRO WRESTLING
- ZILLION
- MARKSMAN/ TRAP
- GOLF
- GREAT HOCKEY(SP)
- WONDERBOY
- RABBO
- BASKETBALL *NEW*
- BASEBALL(NO SP)
- GANGSTER TOWN
- QUARTET
- SHOOTING GALLERY (FOR USE WITH GUN)
- MISSILE DEFENSE 3D (REQ'S 3D GLASSES & GUN)
- SPACE_HARRIER_(TWO MEGA) >>>>> \$ 34.95
- ROCKY BOXING (TWO MEGA) >>>>> \$ 34.95
- OUTRUN (TWO MEGA) >>>>> \$ 34.95
- FANTASY_ZONE_2(TWO MEGA) >>>>> \$ 34.95

