



PO Box 1317, Lisle, Il. 60532  
 Phone: (312) 961-3529

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

ISSUE # 21 SEPTEMBER, 1986  
 SINGLE COPY: \$ 3.00

ANNUAL: \$ 18.00 US 3RD CLASS  
 \$24.00 US 1ST CLASS; \$24.00 CANADA

EDITOR: LYLE MARSCHAND

School days...school days !!

Yes, the kids are back in school again - moms rejoice !  
 Continuing our study of Ephesians with Chapter 6 verse 10:

<sup>10</sup> Finally, be strong in the Lord and in the strength of his might. <sup>11</sup> Put on the whole armor of God, that you may be able to stand against the wiles of the devil. <sup>12</sup> For we are not contending against flesh and blood, but against the principalities, against the powers, against the world rulers of this present darkness, against the spiritual hosts of wickedness in the heavenly places. <sup>13</sup> Therefore take the whole armor of God, that you may be able to withstand in the evil day, and having done all, to stand. <sup>14</sup> Stand therefore, having girded your loins with truth, and having put on the breastplate of righteousness, <sup>15</sup> and having shod your feet with the equipment of the gospel of peace; <sup>16</sup> above all taking the shield of faith, with which your can quench all the flaming darts of the evil one. <sup>17</sup> And take the helmet of salvation, and the sword of the Spirit, which is the word of God.

These verses are powerpacked with some very basic principals which we all need to understand. This is the summation of Paul's letter to the Ephesians and he is basically saying that over and above all the other instructions he has given, these principals must be understood and followed. In verse 10 we are told that we must take on the strength of the Lord via "armor", which implies a battle. How true, we are in a battle each day with temptations, strife and various attacks that attempt to keep us from what God wants us to do. Many people don't want to accept the fact that there is a devil who is constantly at work in this world. The evidence is everywhere if we want to see it - drugs that are permanently maiming or killing, violence, child pornography, rock music which openly displays Satan worship via songs, album covers, rock videos, etc. We are definately in a battle, lets admit it and fight to win. Paul says we must put on this armor - i.e. we must take a positive step to acquire it, not just assume it is there when we need it. Verse 12 states we are not fighting against flesh and blood and hence we need this spiritual armor to both defend ourselves and go on the offensive. The key to remember is that Jesus has given us this armor to

enable us to win the fight, it is not our own fortitude or strength that will cause us to win, but what we have available from God - he has given us the equipment to be winners, let's use it:

TRUTH is based in a knowledge of God and salvation through Jesus Christ.

RIGHTEOUSNESS is our breastplate of protection that Jesus has given us. We can ONLY be righteous if we have been made so by confessing our sins and accepting forgiveness from God.

THE GOSPEL OF PEACE is the "good news" from the Bible that must be spread throughout the world. I.E. we need to be witnessing to others about Jesus.

THE SHIELD OF FAITH is the most important piece of armor we have. Verse 16 states that it will "...quench the flaming darts of the evil one." Notice that you will have darts tossed at you from guess who ! Faith is our shield of protection. More about this next month.

THE HELMET OF SALVATION is the piece of armor that the other ones are based on - we must have salvation through accepting Jesus as our personal Lord and saviour.

THE SWORD OF THE SPIRIT, the word of God (Bible) is our offensive weapon. God's Bible contains all the spiritual principals we need to attack Satan and defeat him. When Satan himself tempted Jesus in the desert, Jesus' only response was to quote God's word (read it in Matthew chapter 4) - let's use this as an example for us to follow. The power contained in God's word can overcome anything.

God Bless you all.

INDEX

NIAD News .....	1
UPDATES .....	2
PUBLIC DOMAIN .....	3
BEGINNERS BASIC .....	3
WORKSHOP (SMARTBasic).....	5
WORKSHOP (TELECOMMUNICATIONS) .....	6
WORKSHOP (SMARTFILER) .....	7
WORKSHOP (CP/M 2.2) .....	7
REVIEWS .....	9
Pro Football, 1986 ADAM Resource Directory, Word Processing with Your ADAM, SMARTBasic 2.0	
MEMBER COMMENTS.....	11
SOFTWARE REVIEW SUMMARY.....	12
PRODUCT LIST .....	18
CONTRIBUTORS: W. Motel; C. Kolander; B. Lennes; D. Zimmerman	

## NIAD NEWS

. ADAM ACTIVITIES are hot and heavy these days at NIAD. I am behind on my letter answering as a result. Be patient, I will get back to you. By the way, most letters I receive requesting a reply do not come with a self addressed/ stamped return envelope. PLEASE include a SASE if you want a reply.

This months issue is full of exciting information and articles for you ADAM lovers. Hope you enjoy it !

. Software Piracy is abounding in the ADAM community !! I was appalled to receive a catalog from a company in Canada that is openly selling COPIES of most of the Coleco software and many titles from other vendors ! The vast majority of these products are still available on a retail basis and selling copies is literally stealing the profits from the retail and wholesale outlets ! Evidently, the rationale for this illegal action is that the ADAM is orphaned and the owners are left high and dry with no software available, so people are doing us a favor by illegally copying and distributing this software - BALONEY. The motives are unfortunately quite clear - the almighty dollar. These people are making large profits at the expense of others. I constantly here of complaints like "Why don't we have more new software coming out from other software companies." If this kind of piracy continues NO ONE will put forth the effort to develop software for the ADAM, because they know their profits will be significantly reduced by this attitude of "... it is ok to sell or give copies of programs away cause we own the orphaned ADAM." I am warning each and every ADAM owner out there. Do NOT support this attitude by buying this copied software or taking copies of software from friends - if you do you will KILL the development of ADAM software and hence the ADAM. This is a very serious matter that should not be taken lightly by any ADAM owner. It is up to you. You can save a few dollars by supporting this illegal attitude, but end up drying up the source of quality ADAM software. The ONLY Coleco developed software that is legally in the Public Domain are those titles that were never commercially released. The titles are on our PD catalog listing in this issue. NO other Coleco titles are in the PD and hence can not be copied for sale or give away. NO other ADAM titles developed by third party vendors have fallen in the PD. Most of these programs are still available commercially via mail order.

I feel so strongly about this that I will turn over any cases I see of this happening to the proper authorities. Software piracy is against the law, period. Additionally, we are seriously investigating the use of copy protection software for commercially sold ADAM software. I ask for you cooperation in stopping this piracy.

. The Review Summary of software has been updated and is included in this issue. The intent of this summary

is to give you a brief description about each of the

software titles we have reviewed as well as current price and which issue it was reviewed in if you want to get more detailed information. We have organized them by category to help you find the type of program you need. We think this summary will be a big help in choosing the best software to meet your needs.

. The 64K expander has been basically inaccessible from SMARTBasic V1.0 - until now that is. Thanks to Bob Lennes we now have a program and documentation that allows us to read and write data to the 64K memory expander. See the SMARTBasic workshop in this issue.

. SMARTBasic V2.0 is now in the Public Domain, but it may not be all it has been cracked up to be ! See Wayne's review in this issue.

. 1986 Edition of the ADAM Resource directory is now available. This is one of those handbooks that every ADAM owner should have. See our review.

. Pinball Games I is finally done thanks to Dave Faust, Chuck Kolander and Wayne. We have 9 preconstructed pinball games on this Public Domain disk/ddp that will provide hours of fun and give you some ideas on how to use the Pinball Construction Set PD program to design your own games. We are still trying to find a non-faulty version of this great game (any help would be appreciated).

. Football season is upon us and Murdock games has done a great job on a new ADAM program called PRO FOOTBALL - see our review in this issue.

. Tractor Feeds were mentioned in the last issue. Data Backup (manufacturer) has developed a new mechanism for securing the TF to the ADAM and preventing slippage. All new TF's contain this improvement. For you current owners you may send NIAD a SASE and we will send you the parts and instructions, which require you to remove two plates that are glued on, clean the rod and attach 2 clips and screws. The other option is to return your TF to Data Backup, 2505 Ross Ave, Idaho Falls, ID 83401 WITH \$5.00 and they will add the improvements for you.

. Signshop enhancements for printing via a parallel interface on a dot matrix printer are progressing well. We should have something next month.

. Next month we should have the reviews on Skiing, Amazing Bumpman and the Sega ultimate game system. These items have not arrived yet.

. Modems are in stock and I have a good supply for the future.

. Disk drives are a different story. All of our Coleco drives have been sold and shipped and it is doubtful that we will get anymore. For those of you that have

already paid for the Coleco drives, we will be refunding

your money. I have made arrangements with Ben Wohl at Alpha One for you to purchase Coleco drives from him at his current price of \$225. You can reach Alpha One at 718-336-7612 in the evenings. I am very sorry for this, but believe me, we did our best to find more of the Coleco drives - they just are not around.

. Eve Electronics has informed us that if they do not get substantially more orders for their planned ADAM compatible disk drive, they will cancel the introduction of the product !! This would be a serious blow to the ADAM. We are working diligently on this situation to attempt to rectify it. Eve must produce a minimum of 1000 disk drives to recover their development costs. Please write to Eve and to the other ADAM dealers and indicate your desires that an ADAM disk drive be developed.

. Chicago local chapter meetings are usually held the first Thursday of each month. PLEASE NOTE THAT THE OCTOBER MEETING WILL BE HELD ON THURSDAY OCTOBER 9th, instead of October 2nd. Meetings are held at the Glenside library, 25 East Fullerton in Glendale Hts, IL. Contact us for more information. These meetings are well attended by local ADAM owners because they learn new things about the ADAM and how to use the various software products.

. Renewals - Get your renewals in early to insure you don't miss any issues. If "0986" are the first 4 letters of your members number, this is your last issue.

#### NIAD product information - SPECIALS

- . New ADAM Keyboards - \$9.95
- . ADAMNET 6 Ft. flat cables for keyboard/disk \$2.95
- . Royal Ambassador Education Pack - a series of 8 excellent educational programs with Christian themes - \$9.95 disk/ \$11.95 DDP
- . New ADAM (tan) 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" 20 LB tractor feed with "clean edge" perforations \$9.95/ 500 or \$16.95/1000
- . Six ribbons for \$25.95
- . Right directory tapes for copying Supergames \$2.50
- . Reconditioned data drives \$19.95
- . Super Zaxxon \$10.95
- . Best of Broderbund \$10.95

#### NEW PRODUCTS

- . 1986 ADAM Resource Directory
- . Pro Football
- . SMARTBasic V2.0 Public Domain
- . Trivia Pack I
- . Jeopardy Question Pack
- . Reedy Entertainment Pack
- . Media Aid Utilities Pack

. Multiwrite word processor

- . Electronic Games Pack
- . PIA2 Parallel printer interface
- . Number Bumper math arcade game
- . Quickcopy backup utility program
- . Paintmaster Hi Res painting program
- . Signshop sign/picture printing program
- . Powerprint print formatting program
- . New Infocom CP/M text adventure games
- . Rocky Super Action Boxing
- . Super Sub Roc PD game
- . 80 Column Video board

#### NIAD Services

- . Disk conversion of Super games - Buck Rogers, Super Zaxxon, Dragon's Lair, 2010: Text Adventure, Donkey Kong and DK Jr., Recipe Filer, Smart Letters & 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 upload and download of programs \$7.00
- . Fix SMARTfiler tapes (send yours in) to provide the ability to print mailing labels by correcting the spacing problem and give you the latest bug free version \$4.00
- . Updates or fixes to damaged Public Domain tapes \$3.00.

#### UPDATES

. A screen graphics dump is a project that I have always thought would be a good one. The ability to print graphics via a parallel interface and a dot matrix printer is a nice feature that many would like. We have some good drawing programs (Paintmaster being the best) but no real way of printing out the work. We are starting up a project to do just that, I am happy to say. We may even develop software that will work on the Okimate 10 color printer ! No promises but we will do our best.

. Strategic software , developers of Paintmaster, Signshop, Multiwrite, are considering coming out with a spelling checker program that will read SMARTwriter documents and check the words. They recently asked my opinion and I told them that I thought this would be a good seller if it was done well.

. Orphanware has lowered the price on their PIA2 parallel printer interface to \$39.95, without cable. They are still working on a RS232 serial interface for 80 column display on monitors under the CP/M 2.2 operating system. I should have an evaluation unit soon.

. Glenn Gabarik is making good progress on his GDOS utilities package that will reside in a 256K memory expander. From what he has been telling me this software will be memory resident and allow one to jump from whatever program they are in to the utilities and back to where they left off. Many goodies are promised as part of the package.

. Bob Tarnowski has completed Kid's Trivia, which we will review next month.

. MMSG is an ADAM software developer that has come out with some excellent utilities. We will review their Backup + 3.0 next month.

## PUBLIC DOMAIN WORKSHOP

People continue to rave about our Public Domain library, which is the most extensive one available for the ADAM. I am really proud of the fine programs you members have contributed and of the thorough work done by our librarians to test, debug, correct and organize these programs. NIAD provides high quality programs for a nominal cost as a service to help you get more out of your ADAM. If you read the documentation files (via SMARTWriter or CP/M as appropriate) you should have no problems obtaining hours of fun and productivity.

Below is part of the documentation file from Basic volume number BNDV14, which is a comprehensive team bowling management program developed by our own Guy Bona. This disk/ddp is self booting and the following should give you some idea of its capabilities:

For NIAD Public Domain February 1986.  
By Guy S. Bona III

This is the Documentation for using the bowling programs. I created these programs when I was elected secretary in my bowling league back during the 1984-85 season. You don't need to be a secretary to use these programs. Anyone can use these to keep track of their average for yourself or for your entire team. There are 10 programs on this tape or disk you should have the following on your disk or data pack,

1. mainmenu
2. bowlupdt
3. teamupdt
4. bcreate
5. tcreate
6. addrec
7. teamprnt
8. bowlprnt
9. bbackup
10. tbackup
11. BowlTitle
12. HELLO
13. Bowl.Doc

BowlTitle is a picture program. Run the HELLO program and you will have a title screen before you. After a short time the mainmenu will load and the menu displayed. The menu will display the following;

BOWLING UPDATE SYSTEM

I CREATE BOWLERS FILE

II CREATE TEAM FILES

III PRINT BOWLERS FILE

IV PRINT TEAM FILE

V END

## BEGINNER'S BASIC WORKSHOP

### SPELLING

by W. MOTEL

Since school is starting, I thought I'd include this program you might want to use as a spelling tutor for children. I originally did it for using with my children right after the ADAM first came out, so there isn't anything too fancy in the program.

The normal drill amounts to you reading the word to your children and they spell it back to you either by saying the letters or writing it on paper.

This works basically the same way, but after you "read" them the word to spell, they type in the number for that word (you give them the corresponding number) and then they type the word in. The computer tells them if it's correct or not, and if incorrect, indicates which letters were incorrect and gives them another chance. A musical tune plays for either a correct or incorrect answer, as does a little graphic display.

At the end, you get the results of the drill as to how many words were tried (you don't have to do all), how many were correct, and if incorrect, how many times they tried that word.

A maximum of 30 words, each up to 15 letters, can be used. The words are stored in the data statements at the end of the program listing, starting at line 9901. You can change these each week or whenever a new list is given out by just entering the line number, the keyword DATA, a space and the new spelling word as follows:  
9901 DATA computer

Refer to the listing below for explanations of how the program keeps track of words, tries, correct and incorrect answers. Note that the last "word" must be "endlist" - this is how the program knows there are no more words in the drill.

This program is good for beginners - it is something most of you can use if you have children and it contains some good programming routines you can learn from.

```

1REM SPELLING by W. Motel
2REM put in spelling words at data start 9900
3REM max of 30 words, 15 letters each
4REM
5REM WL$ is word list
6REM CW$ is current word, SW$ is spelled input
7REM CL$ is current word letter, SL$ is spelled letter
8REM E$ is error flag area
9REM * is wrong letter, # is excess letter
10REM WT is word tried-error counter
11REM 0 is not tried, 1 is tried ok
12REM >1 is total tries till correct
13REM L is current word length SL is spelled word length
14REM NW is total number of words in list, NE is current
word
15REM TW is tried word total
16REM TT,TN,TE, and TG are used in 900 end totals
17DIM v1$(30), wt(30), e$(15)
19 nw=1
20READ v1$(nw)
25IF v1$(nw)="endlist" THEN GOTO 60
30 nw=nw+1: tw=0
40GOTO 20
41HLIN (c), (c+10) AT 6
50REM
60 nw=nw-1
65REM
70FOR i=1 TO 30: wt(i)=0:NEXT i
71? " DO you want list PRINTED"
72? " IF YES, put paper in "
73INPUT " y/n "; a$:IF a$="y" THEN PR #1:GOTO 80
74IF a$="Y" THEN a$="y":PR #1
75REM
80TEXT
85? "the word list is"
86? " "
87IF a$="y" THEN 90
88INVERSE
90FOR i=1 TO nw
100HTAB (10)
105? i; " "; v1$(i)
110NEXT i
111PR #0
113NORMAL
115? " "
120INPUT " hit enter to start"; a$:TEXT
177POKE 17115, 245:POKE 18711, 6:POKE 18607, 11:POKE 18633,
85
200? " "
205IF tw=nw THEN GOTO 900
210? " enter word no. or 99 to stop"
220INPUT ne
225IF ne=99 THEN GOTO 900
230IF ne<=nw THEN GOTO 240
235? " not a valid number"
236GOTO 200
240IF wt(ne)=0 THEN GOTO 290
250? " you already did this word"
260GOTO 200

```

```

290 tw=tw+1
295REM
300 cw$=v1$(ne): l=LEN(cw$)
305TEXT
310FOR i=1 TO 15: e$(i)=" ":NEXT i: e=0
315REM
320? " spell word "; ne; " and hit enter"
330INPUT sv$: vt(ne)=vt(ne)+1
331IF sv$=cw$ THEN GOTO 400
332 sl=LEN(sv$)
333IF sl<=l THEN GOTO 340
335 e=e+1
336FOR i=l+1 TO sl: e$(i)="#":NEXT i
338REM
340FOR i=1 TO l
350 cl$=MID$(cw$, i, 1)
355 sl$=MID$(sv$, i, 1)
360IF cl$=sl$ THEN GOTO 390
365REM
370 e=e+1
380 e$(i)="*"
390NEXT i
395REM
400IF e=0 THEN GOTO 450
405GOSUB 500
410? " "; sv$
420? " ";
422REM
425IF sl>l THEN l=sl
427REM
430FOR i=1 TO l
433? e$(i);
435NEXT i
436REM
439? " "
440INPUT " try again hit enter"; a$:TEXT:GOTO 300
445REM
450GOSUB 600
453INPUT " very good hit enter"; a$:TEXT:GOTO 200
500REM
510 c=15
520GR
530COLOR =8
540HLIN (c), (c+10) AT 5
541HLIN (c), (c+10) AT 6
542HLIN (c), (c+10) AT 7
543HLIN (c), (c+10) AT 8
544HLIN (c), (c+10) AT 9
545HLIN (c), (c+10) AT 10
546HLIN (c), (c+10) AT 11
547HLIN (c), (c+10) AT 12
550COLOR =3
560PLOT (c+3), (6)
562PLOT (c+6), (6)
570COLOR =6
580HLIN (c+2), (c+7) AT 10
581FOR x=1 TO 999:NEXT x
582PLOT (c+7), (11)
583PLOT (c+2), (11)

```

```

590RETURN
600REM
601GR
605FOR i=1 TO 100
610COLOR =RND(1)*15
620 c=RND(1)*29
630 r=RND(1)*39
640HLIN (c), (c+10) AT r
645VLIN (c), (c+10) AT r
650NEXT i
660RETURN
900REM end routine
909TEXT
910INVERSE
911INPUT " for print results enter p"; a$
912IF a$(">p" THEN GOTO 915
913PR #1
914REM
915 tt=0: te=0: tn=0: tq=0
916TEXT
919REM
920? " the following is your results"
930? " "
935 ns=0
938REM
940FOR i=1 TO nw
945 ns=ns+1
950? " "; i; " "; vl$(i),
955REM
960IF wt(i)>0 THEN GOTO 1000
965REM
970? " not tried"
980 tn=tn+1:GOTO 1100
990REM
1000 tt=tt+1
1010IF wt(i)>1 THEN GOTO 1050
1015REM
1020? "ok 1st time"
1030 tq=tq+1:GOTO 1100
1040REM
1050? " err "; wt(i)-1; " time"
1060 te=te+1:GOTO 1100
1070REM
1100IF ns=20 THEN GOTO 1110
1105GOTO 1130
1110? " "
1120INPUT " hit enter to continue"; a$:TEXT: ns=0
1130NEXT i
1135? " "
1140INPUT " hit enter to continue"; a$:TEXT
1200? " total words "; nw
1205? " "
1210? " total tried "; tt
1220? " not tried "; tn
1230? " "
1240? " total good "; tq
1250? " with errors "; te
1270PR #0
1300END

```

```

1400REM
9900REM data words here
9901DATA all
9902DATA will
9903DATA tell
9904DATA pull
9905DATA call
9906DATA grass
9907DATA press
9908DATA class
9909DATA guess
9910DATA almost
9911DATA across
9912DATA hill
9913DATA dangerous
9914DATA "Mrs. Favors"
9999DATA endlist

```

## SMARTBASIC WORKSHOP

### Accessing the 64K Memory Expander By Bob Lennes

Many people don't know how to access the 64K memory expander from Basic, so I put together a simple Basic program to do that. I will also explain how it is accessed.

Inside the Adam, there is something called a bank switch that selects which memory Adam will access. This is because its CPU can only refer to 64K at one time. The bank switch selects a certain type of memory for the lower 32K, and also for the upper 32K. Some of the options available are as follows:

VALUE	Lower 32K	Upper 32K
000	*Smartwriter or EOS	Normal 32K
001	Normal 32K	Normal 32K
002	Normal 32K	Memory Expander
003	057 and 24K	Normal 32K
008	Memory Expander	Normal 32K
013	Normal 32K	Cartridge ROM

SmartBASIC's mode is normal upper and lower 32K. It copies a section of 057 to the upper normal 32K. The value is the number that is outputted via machine language to port #127, which is where the bank switch is. In order to select either Smartwriter or EOS for the lower 32K, you must first send either 2 for EOS or 0 (zero) for Smartwriter to port #63.

In order to figure out the 'VALUE' you must understand binary numbers. Here is the format:

Value: 0 0 0 0 U U L L -two bits select upper(U)  
and lower(L).

For Lower:		For Upper:	
Smartwriter, EOS	0 0	Normal 32K RAM	0 0
Normal 32K RAM	0 1	Expansion ROM N/A	0 1
Memory Expander	1 0	Memory Expander	1 0
OS7 and 24K RAM	1 1	Cartridge ROM	1 1

Here is the machine language routine I used in the program below:

BYTE	DECIMAL VALUES	ASSEMBLY CMD.	MEANING
00	33, B1, B2	LD HL, B2*256+B1	;Access Addr
03	17, B1, B2	LD DE, B2*256+B1	;Move toAddr
06	01, 00, 04	LD BC, 1024	;1 block copy
09	62, 02	LD A, 02	;slct.Expans
11	211, 127	OUT (127), A	;Mem.Switch
13	237, 176	LDIR	;Copy mem
15	62, 1	LD A, 01	;slct.Normal
17	211, 127	OUT (127), A	;Mem.Switch
19	201	RET	;end Routine

Because the machine language routine must be residing in the memory that the bank switch is on, you need to have it in both upper and lower 32K. (E.G. If you want to access the upper 32K of expansion memory, you have to have the M.L. in the lower 32K.)

I hope this explanation has been a help for you hackers out there. Some possible projects for those with more time than me could include: improving 'UTILCOPY' to make use of the memory expander, or possibly a Basic word processor or text editor- whatever the program, I'm sure that much use could be made of the extra 64K. Good luck.

Anyhow, here is a short Basic program to read and write blocks to and from the 64K memory expander. In order to make it as short as possible, I limited it to transfer only from upper to lower and vice versa.

```

10% Access 64K Expansion Memory
20% by Bob Lennes
100LDMEM :40000
110FOR a=0 TO 19:READ v:POKE a, v:NEXT:RESTORE
120FOR a=33000 TO 33019:READ v:POKE a, v:NEXT
150DATA 33,0,0,17,232,128,1,0,4,62,2,211,127,137,176,
62,1,211,127,201
190? CHR$(24)
200? " ACCESSING 64K MEMORY EXPANDER":?
210? " Read or Write? (R/W) "; :GET a$:IF a$=CHR$(3) THEN
? " Program Ended.":GOTO 999
220IF a$="r" THEN a$="R"
230IF a$="w" THEN a$="W"
240IF a$("<"R" AND a$("<"W" THEN ? CHR$(7); :HTAB 1: GOTO
210
245? a$
250?:INPUT " Enter Block to Access: "; b
260IF b>63 THEN ? " Block range is 0 to 63.":GOTO 250

```

```

270?:INPUT " Enter Memory Address: "; a
280IF a>64256 THEN ?" Address range is 0 to 64256."
:GOTO 270
300IF (b>31 AND a<=31744)OR(b<32 AND a>=32768)THEN 700
670? " Can't be done. How about using an address ";
680IF b>31 THEN ? "below 31745?":GOTO 699
685? "above 32767?"
698GOTO 270
699END
700& Transfer
710 hm=INT(a/256): lm=a-hm*256: ha=4*b
720IF b<32 THEN POKE 33010, 2:POKE 10, 2
730IF b>31 THEN POKE 33010, 9:POKE 10, 9
740IF a$="M" THEN 800
750POKE 33001, 0:POKE 33002, ha:POKE 1, 0:POKE 2, ha
760POKE 33004, lm:POKE 33005, hm:POKE 4, lm:POKE 5, hm
770IF b>31 THEN CALL 0:GOTO 790
780CALL 33000
790GOTO 999
800POKE 33001, lm:POKE 33002, hm:POKE 1, lm:POKE 2, hm
810POKE 33004, 0:POKE 33005, ha:POKE 4, 0:POKE 5, ha
820IF b>31 THEN CALL 0:GOTO 840
830CALL 33000
999? " OK":END

```

## TELECOMMUNICATIONS WORKSHOP

ADAM Bulletin Boards  
In operation as of 8/86

MA (617) 776-7676 "The Orphanage"	11PM-8AM EST
MA (617) 881-6349 "The Board"	24 Hrs
NJ (201) 842-7644 "Dakom"	24 Hrs
NJ (201) 662-9823	
NY (716) 773-4532 "ADAM Hotline 2.2"	24 Hrs
NY (716) 833-0316 "Tower of Zot"	24 Hrs
NY (315) 594-9372 "Cobra"	24 Hrs
OH (216) 244-9081 "Steel City"	24 Hrs
GA (404) 424-6258 "SMARTLink"	24 Hrs
GA (404) 445-8785 "ADAM Info Xchange"	24 Hrs
(Write to S. Murdock, RTE 9 Box 36, Dallas, GA 30132)	
MI (313) 754-1131 "Tony's Corner"	24 Hrs
AK (501) 442-8777 "The Bread Board"	24 Hrs
KY (606) 249-6291 "Micr 0 Wave"	24 Hrs
UT (801) 626-7906 "Weber State College"	4:30PM-7:30AM MST
NV (702) 873-8056 "LVAC"	24 Hrs
AZ (602) 249-6291 "Computer Stop"	24 Hrs
WA (206) 768 8879 "Seacom 80"	24 Hrs
CA (415) 346-3799 "ADAM/LINK"	24 Hrs
CA (415) 968-7728 "Planet Earth"	24 Hrs
CA (818) 761-1561 "ADAM Hotline"	24 Hrs
CA (916) 338-2352 "Citadel"	24 Hrs
CA (213) 325-0213 "Average Remote"	24 Hrs
CAN(416) 594-2841 "Toronto ADAM-Net"	24 Hrs

Well, this should give you enough to run up your phone bills! We will have an article next month on how to use the ADAMLink modem to up and download programs from the CompuServe National Bulletin Board system.

## SMARTFILER WORKSHOP

This is the first in a series of articles on how to use the SMARTfiler program, which is an excellent general purpose data base program for home and small business use.

(Editor's Note: Many of the earlier versions of SF contained bugs. If your version is other than 27D you should send it in with \$4.00 to obtain the updated version and the correction that will allow printing of mailing labels. You can determine which version you have by holding down the CONTROL key and then pressing the R key after you initially load the SF data pack - a number will appear at the bottom of your screen which is the version number.)

SF is a general purpose database and automated filing system which can be used for almost any application. I will provide the basic information needed before you should attempt to use SF in this article and in future articles go on and explain how to set up some specific applications. First one must understand the terminology used, which can be confusing if you are not familiar with it. Let's use a common address book as a frame of reference for our definitions. Please refer to your SF manual as we go along.

**RECORD** - This is the basic unit of SF. It is what you are trying to "file". In our example it is the name, address and any other information for each person we want to store in SF. Hence, there will be 1 record for each person.

**FIELD** - Each record is made up of several different pieces of information i.e. first name, last name, street, city, state, ZIP, etc.. Each of these items is a field to SF.

**FIELDNAME** - Each of the unique fields we want to store must have a unique name so SF can keep track of it. E.G. CITY is the fieldname and Chicago is the specific field value associated with that fieldname for a particular record.

**SEARCH** - There are certain fields that you will want to specify as "searchable". This means that you will want to obtain the record based on one of these searchable fields. SF allows you up to 4 searchable fields per data base. In our example, we might want to make last name, city, state and Zip as our searchable fields. Hence, if we enter last name the record for that person will be displayed. If we enter the state of Illinois all records with this state will be displayed. More on this in future articles. Search capabilities are one the strongest points of SF.

Ok, these are the basics you need before you start. The first thing you need to do is decide on the specific items you are going to put on SF. In general, I recommend you only use SF or any data base program for applications having both large numbers of records and fields. I would not recommend you put your 50 record albums on SF, you could find one of them faster than it would take you to load the program! However, if you have 200 records and want to organize them by title, artist, songs, etc., SF

would be a perfect program to use. As an example, if you set up the SF data base correctly and wanted to know what albums you already had for a particular artist, it would be a snap. These same principals apply to any application. The SF manual lists several possible applications for home use.

I know that many of you have used SF for all different kinds of applications - send in a print out of your field names and a little about your application so we can share these ideas with others.

## CP/M 2.2 WORKSHOP

PATCHES By C. Kolander

I own a 64k expander for my Adam and use it mostly as a ram disk (M:) under CP/M. I have found this to be most useful. Before starting my session I usually move all my utilities I will be needing, such as PIP, ASM, LOAD ect., onto the ram disk. This saves disk space, makes them run faster, and gives me access to them at all times. The only thing that I don't like is sitting around waiting to pip each program to the disk one at a time at start up. So the following patch is to make it possible to have all the files moved to the ram disk automatically by use of SUBMIT, XSUB and PIP. As all good little CP/Mer's know, the use of pip is terminated by a empty carriage return. Well Submit doesn't accept blank lines, so this makes the use of pip with submit hang up when it comes time to finish, not a big problem, but one that does exist. The following patch to pip will allow it to accept a single period (.) as a terminator. So with a copy of PIP and DDT on a disk type the following:

```
A> DDT PIP.COM
```

```
DDT VERS 2.2  <= You will see this
NEXT PC
2000 0100
```

The first section will show what would normally be in pip at this address by using the List command (L).

```
-L54F  <= Type this
054F  CPI 00
0551  JNZ 055E
0554  LHL 1DFC
```

Now to patch in the new code with the Assemble command (A).

```
-A54F
054F  CPI 2  <= Don't type in the
0551  JNC 55E  Address
0554  .  <= this to exit
-60  <= 6 ZERO
A> SAVE 31 PIP.COM
```



That's it now to terminate PIP just type a period. So when you set up your submit file just end it with a period like this:

```
A> ED LOAD.SUB
NEW FILE
      : * I
1 : XSUB
2 : PIP
3 : M:=ED.COM
4 : M:=ASM.COM
5 : M:=LOAD.COM
6 : M:=SQ.COM
7 : . <= This will end pip.
8 :
* :E
```

And that's it, of course make sure your disk with the submit file contains at the files your submitting plus submit,xsub and pip. To make it work just type at the prompt:

```
A>SUBMIT LOAD
```

You should now see your drives turning, so it's time to get some coffee. I hope everyone finds this to be of help, if you do let us know.

#### NIAD CP/M PUBLIC DOMAIN By C. Kolander

This month I will be writing mostly about PD Disk #15, but I will tell a little about PD Disk #12 which is a complete pascal programming language.

Let's get started with Disk #12 first. First off, the programs contained on Disk #12 are all librated and squeezed, so make sure you have the programs needed to unsqueeze and delibrary them. Secondly, all these programs take up a lot of space so you should plan on setting them up on a couple of disks, yes I said disks, the compile time on data pack will be too much to handle. Now you have a couple of options, you can run the compiler manually typing in the drive designator for such things as your source code, the compiler etc, or you can set up the supplied programming "shell" and have all this done for you. What the shell does is when you call up the compiler it will search the logged disk for it first and if not found, then search the A: drive. The major advantage to this is that you can set up all the files needed for the compile on drive A: and then write your actual program on drive B: (which should have more work space) and when you're ready to compile you simply type the command and the shell will find the programs needed from which drive by itself. This will also allow you to have the finished program put on your b: drive, which again has more space. I know this all seems confusing, but will make much more sense once you have gone through a compile. To set up the shell takes a little work and knowledge on the part of the user, all the needed documentation is enclosed in the library. The actual compiler is not a true compile, but creates an intermediate code that must be run with a run-time package that is

included with the disk. Everything needed to use this system, including the shell are completely documented and enclosed on the disk. This programming system is very good and excellent for people who would like to learn how to program in pascal, but for serious development I would recommend a different programming system.

Here is a program by program run down on PD Disk #15. OTHELLO.COM - This is the game of Othello written and compiled in Fortran 80. It has been modified to work with the standard Adam 30 column screen. The computer gives the user a very challenging game. For those who work in Fortran and would like a copy of the source, send me a letter. VDOVIDED.DQC/VDO-OVR.AQM - These files are for use with a program that can be found on an eariler PD Disk (#5 - VDO25.COM). They allow the user to make modify the video out put of the program. The program is a very good full screen text editor. All necessary documentation can be found in the doc file.

RCPM.LST - This text file contains all the phone numbers and other useful information on the RCP/M's around the country. These are Remote CP/M Bulletin Boards, a very good source for public domain programs for the modem owner. CASTLE.LBR - This is a text adventure written in Microsoft Basic. There is full documentation enclosed in the library. This is a very good game along the lines of Adventure found on PD Disk #6, except this one is a little more random sothat each game is different. The user does need to have the basic interpreter in order to play.

COBOL.LBR - This library contains everything needed to start programming in COBOL. Again, like the above mentioned pascal, this is a semi-compiler that produces an intermediate code that must be run with the enclosed run-time package. All the documentation and needed files (compiler, interpreter and loader) including example programs are enclosed with the library. The only advantage to this package would be to those who learned COBOL in college or at work and want to use this knowledge at home on their Adams. There are much better programming languages in the PD such as the C disk (#8). But all in all for those who COBOL this is a very good set of programs.

That's it for this month, next month I will write about the programs on disks #14 and #16, which should catch us up on all the disks we have skipped.

#### 64K RAM Drive Patch By D. Zimmerman

This patch to any CP/M sysgened disk will increase the usable space of a 64K memory expander from 55K to 62K.

In block 1 (1\$) change byte number 970 (3CA\$) from 55 (37\$) to 61 (3D\$) and byte number 976 (3D0\$) from 8 (08\$) to 0 (00\$). In block number 3 (3\$) change byte number 1017 (3F9\$) from 56 (38\$) to 62 (3E\$).

## REVIEWS

### PRO FOOTBALL By L. Marschand

This game was developed by Sherman Murdock (Murdock Games) and is an example of fine ADAM SMARTBasic programming that you ADAM owners need to encourage. This football simulation (it is more than just a game in my opinion) had to take 100's of hours to develop and test. It represents not only creativity but a desire to serve us ADAM owners with quality software. Let's support these 3rd party software developers.

This is a Pro Football simulation game. You can play against the ADAM, against another player or let the ADAM play itself. You select to play a "short" game, which will take about an hour or a "regular" game which will finish based on the plays entered, as a real game would.

The coin is flipped by the visitor and the game begins. A good rendition of a field is displayed in Hires graphics, complete with 10 yard stripes, ball/down markers and even a US Flag. This screen is used to display the result of each play - the ball is shown moving down field and the bottom of the screen gives game and play statistics.

For each play the opposing teams choose their plays. On offense there are 9 pass plays, 9 running plays, punt and field goal to choose from. On defense there are 9 plays. Hence, based on field position, downs and your experience as a coach you make your pick via the joystick. The plays are not displayed until both players pick. Now the best part, the ADAM will read in data based on the plays picked and determine the result using actual Pro game statistics! There are no random selections as in many games of this type, rather the offensive and defensive plays are compared and the results given based on average game statistics from Pro games played since 1983. This is where strategy and knowledge of football come in. As an example, if a "Pass 84-7 Square Out" is intercepted an average of 1 out of 20 times in the Pros, then that is what will happen in this simulation. Each running play gains an average # of yards and fumbles occur at a set interval. Since averages are used, your skill as a coach will determine whether you win or not. As Sherman states in his instructions, you may not criticize the real life coaches so much after playing this simulation!

The documentation supplied with Pro Football is well done and includes a strategy section describing each of the play options and giving hints as to when to use them. With the large number of play options, you can see that this game has a lot of variability and staying power to provide you football buffs an excellent challenge.

RATING - A

### ADAM Resource Directory - 2ND Edition By L. Marschand

This is a second and improved edition of the ADAM Resource Directory which was first published in 1985. Keith Burrows is to be congratulated for the fine work he has done to publish this comprehensive directory.

What is the ADAM Resource directory? It is not a book in the normal sense, but is a complete reference manual for the ADAM owner containing invaluable information that meets many needs. The Resource Directory is a 8 1/2 by 11, spiral bound booklet of 111 pages. This booklet has been professionally printed and is very attractive with many graphics and pictures throughout. This 1986 directory will have free updates done until the '87 directory is completed - all you have to do is send in stamped return mailers to register for the updates.

The Table of Contents contains 26 sections. Below are descriptions of some of them:

**SOFTWARE** - Two lists of software are included; one by alphabetized name and the second by category (business, education, etc.). The company, average price and a brief description are given for over 300 titles. Some of these titles are no longer available, however.

**HARDWARE** - Same information as above for several hardware items.

**BOOKS/PUBLICATIONS** are listed by title.

**RETAILERS** - An alphabetical list of ADAM dealers with notes as to types of products carried.

**USER GROUPS** - A list of 84 ADAM user groups from around the country with address, presidents name and data as to meetings, services, etc.

**BULLETIN BOARDS** - General information on using modems to access bulletin board systems and a list of ADAM BBS (21 as of now) as well as general computer BBS **TIPS** - There are 8 pages of general tips and 11 more pages of tips/information on specific topics.

**ADVERTISING** - There are 24 pages of ads from the major ADAM retailers/User Groups.

As far as I am concerned this book is exactly what it's title states - a directory of resources ADAM owners need. It is a nice central repository of reference information.

RATING - A

### WORD PROCESSING WITH YOUR ADAM By L. Marschand

This book, published by TAB books is a new one I ran across that covers the use of SMARTWriter in a little bit different fashion - through practical examples. Samples with specific instructions down to the level of when to press return, what tabs to set, which line to start on, etc. This is a step by step book for generating specific types of letters with SMARTWriter. Sections include:

SCHOOL REPORTS - title page, table of contents, body,  
footnotes, appendix, bibliography.  
COLLEGE SEARCH - letters to colleges, interview requests,  
tips.  
CHILDREN & SMARTWRITER - Ideas on how children can use SW  
for learning letters/words. Samples of party invitations,  
paper route records, pen pals and a diary are included.  
PERSONAL & BUSINESS LETTERS  
HOUSEHOLD - family calendar, valuable listing for  
insurance, garage sales, gardening, home improvements,  
moving, club minutes, recipe cards, holiday invitations,  
letter addressing.  
RESUMES for job hunting

A nice glossary listing all the SW commands with an  
explanation is also included as a good reference.  
This 150 page book is unique in the fact that it is not a  
general description of SW, but a practical reference for  
creating the documents most likely needed by ADAM owners.  
This book should be used as a supplement to the SW book  
supplied with the ADAM, not a replacement.

RATING - B

SmartBASIC V 2.0  
Review: W. Motel

This is a brief explanation of SmartBASIC V2.0, which  
is now available from our Public Domain Library. I know  
most of the ADAM owners have heard the rumors about V2.0  
and were anxious to get it. First the not so great news,  
(actually its the only news, neither good nor bad), V2.0  
Basic DOES NOT contain any radical enhancements, but is  
more a CORRECTED version of SmartBASIC V1.0. It does  
contain a few new commands, but nothing that is really  
unavailable from other sources. The one big drawback is  
that the BASIC compiler is different, therefore, all the  
known PEEK/POKE addresses are different, I.E., the text  
color poke to 17115 in V1.0 Basic programs written under  
V1.0 will work under V2.0, as far as the normal Basic  
commands are concerned. Where you run into a problem is the  
Peek/Pokes. If your Basic V1.0 program contains any peeks  
and/or pokes it will not run under V2.0. It ALSO contains a  
revised EOS (operating system) which is loaded in each time  
you boot V2.0. This revised operating system further  
compounds the incompatibility problem. It is in the enhanced  
EOS, that I believe a lot of the real enhancements are  
located. Basic V2.0 uses up less space, approximately 550  
bytes, than V1.0. This is after the enhancements they have  
put in, but as I said before, I think the real power is in  
the new EOS. I think they made it work better and compacted  
the code.

V2.0 does allow use of the 64K expander to give you  
+90K of available memory for your Basic program, however,  
it does have problems. I, plus others, have found that  
variables sometime do not contain the correct values. For  
example, I have run my Baseball card program under V2.0,  
and get incorrect card counts ON SOME values when using

V2.0 WITH THE 64K expander option, yet they are correct  
under V2.0 when NOT using the 64K expander option.

They also have included a MERGE command which allows  
you to combine 2 or more BASIC programs together, they have  
corrected the DATA/REM extra space bug, and you can  
correctly INIT a disk with 160K instead of the tape 256K.  
They have also set up the keyboard so that some of the  
special keys are recognized under Basic input, I.E., PRINT  
(for CTL-P), INSERT and DELETE for line editing.

They have allowed you, somewhat, access to Sprite  
usage, but not with special commands, nor what I think is a  
really user-friendly fashion. The documentation file that  
comes on the PD disk/ddp contains an explanation of how to  
use the sprite options that are available in V2.0 in  
combination with SMARTLogo as the sprite editor ! They DO  
NOT include any special sound commands.

One big advantage is that sequential file access works  
correctly, as does RANDOM ACCESS. They have eliminated  
wasted file space on I/O. (see my article in June, 86 about  
random access).

Color bleeding in Hi-res "seems" to be less of a  
problem, however, this also works in a strange way. For the  
most part, HPLOTTing 2 different colors within the same 8  
pixel zone, will usually not produce bleeding. When you do  
a "3rd" color, then you sometimes have problems. Sometimes  
the area is "filled" in with the 3rd color, other times  
only the original lines get changed to the new color.  
Drawing a "4th" color over the filled in area usually works  
O.K. It also seems that different results are obtained from  
certain color combinations. Overall, bleeding seems to be  
less.

Overall, you have to make the decision if it's worth  
the money. Obviously the cost is not the issue, but I just  
want everyone to realize that this IS NOT, in my opinion  
the SmartBasic 2.0 that I had anticipated (I.E. Sprite,  
Sound, etc.). You also have the different memory map layout  
to contend with for Peek/Pokes. The correct handling of  
Random Access is a plus as is the ability to load a program  
in under V2.0 and have all the extra spaces in DATA and REM  
statements removed.

The fixes to SmartBASIC V1.0 are nice, but 2 already  
available packages exist that also do MOST of what  
SmartBASIC V2.0 does and MORE. These are INTEL-BEST 3.3 and  
HACKER'S GUIDE VOL 2 enhancements, both reviewed within the  
last few months. These both provide many of the same  
enhancements, plus run under V1.0 Basic's known memory map.  
Intel-Best provides sound commands, along with nice block  
read/write routines to use. The Hackers Guide gives you  
enhancements also, does sound (with one command) AND SPRITE  
commands, AND 40 COL mode text. You also get the EXCELLENT  
book that explains BASICs memory and routines. You decide  
which would suit your needs better. V2.0 is OK, but I think  
you will also want one of the other 2 packages.

A comprehensive documentation file is contained on the PD  
disk/ddp that gives required information and has some  
sample programs as well. I do NOT recommend V2.0 be used  
by the novice due to the incompatibility problem and that  
many of the new features are for the advanced programmers.

Next month, I will have the V2.0 EDS addresses from it's jump table. This may prove to be the more useful part of V2.0. I am also going to see if the V2.0 EDS can be used with V1.0 Basic. If the V2.0 EDS is the real enhancement and we can use it, this may help us correct some V1.0 problems.

#### MEMBERS COMMENTS / QUESTIONS & ANSWERS

. Well, I received my first package from you the other day and i was really pleased. It is really nice belonging to an organization that has a mutual concern, the continued welfare of the ADAM and it's users.

I wrote to Family Computing after the issue that completely left out he ADAM. They were courteous enough to answer with their apologies and vowed continued support. I agree with you that the only way we will be recognized is to voice our objections when necessary.

I received my copy of Jeopardy and I agree with your statement. It is the best game I have ever seen. The graphics are fantastic and the game is very realistic. I hope you are busy working on additional question packs. I, for one, will buy everyone produced.

Out of curiosity, how many people belong to NIAD ? Perhaps you could publish this information in a future issue of the newsletter.

- D. Bueltmann

Thank you for the support. We need to all think like this and support our ADAMs. NIAD has about 1700 members at this point and growing every month. We should top 2000 before Christmas ! The other two large ADAM user groups don't seem too anxious to share their membership numbers for some strange reason.

. What are you no good commies up to ? I place an order and get just what I wanted when I should have received it. This is not the American way. You should have cashed my check and run for the hills.

Seriously, I appreciate the prompt service. All the other ads I've gathered for ADAM stuff are going in the trash. All my busines will be done with you.

- J. Kirkwood

This letter was so cute, I had to publish it. I have to admit the first sentence had me going for a minute ! Thanks for writing with some positives - we appreciate it.

. Thanks alot for the new copy of the utility copy program that you sent me. It works great - no problems.

I get the impression from the sheet on the PD programs that you included with my last order, that you have had some complaints about the programs. Well, I'd just like to say that I think the programs are great! Maybe some of them are not 100% perfect, but anyone who works with any kind of electronic media and expects 100% perfection is in for a big shock. How do you think my friend at work with hgis \$2500.00 Apple system feels when his \$250.00 programs won't run ? I don't think some of these people that complain about the PD programs know how good they have it.

So, having said that, I have a couple of questions that I'd like to see addressed in the newsletter. It is probably basic stuff, but it has me bewildered. I've either heard or read that you can use the game controller as a calculator. Is this true ?

The other thing is in SMARTBasic, when you call up a catalog, and it is a long one, it scrolls off the top of the screen. How do you scroll the catalog back down so you can read the first few files ? Right now I print out a hardcopy of the catalog and refer to it. Is there a better way. I suppose that these answers are in the ADAM manual, but I've never had much luck with the manual. It is not very well written and is poorly organized. I took 2 semesters of Basic in college and without that I don't think I could figure out anything with just the manual. By accident in a local book store I ran across a book titled "Using and Programming ADAM" by Timothy Orr Knight. I think that it is an excellent book and highly recommend it. It's not highly advanced, but after a week or so of not using the computer, when I've become rusty, it's an excellent straight forward source for review. That last thing I would like to say is that the local Radio Shack is selling the complete keyboard for the ADAM for only \$5.95. I didn't need one but for that price I couldn't pass up having a spare.

J. Stronger

- Thanks for the comments on the PD library. I think we have the best PD library going. The number of prograams per data pack/ disk at the price is a fantastic bargain that many people are taking advantage of. Even those with modems that can download programs from bulletin board systems realize that it is much more expensive to do this then purchase the NIAD PD volumes.

The hand controller can be used in SMARTWriter to move the cursor and enter numbers as an option to using the numbers on the top of the keyboard. It can also be used this way in ADAMCalc which has a built in calculator - perhaps this is what you were thinking about. However, you would still have to use the keyboard to enter the \*,+,-,= keys for the ADAMCalc calculator.

We agree that the SMARTBasic book supplied with the ADAM is poor. I'm not familiar with the book you mentioned, could you send me the publisher ? I think that the book "Basic ADAM: A Self Teaching Guide" is the best book on SMARTBasic for both beginners and advcanced programmers.

# NIAD SOFTWARE REVIEW SUMMARY

Prices are average as of 8/86. Note that NIAD may not carry all the products listed below. Editor's Choices represent those products that will provide the best value/ enjoyment for the price in our opinion.

## CATEGORY: Books

NAME: 1986 ADAM Resource Directory  
REVIEWED: Sep 86 # 21 PRICE: \$12.95  
RATING: A \*EDITOR'S CHOICE\*

An excellent book containing much needed information on software, user groups, ADAM retailers, repair and helpful hints that every ADAM owner needs from time to time. Complete list of ADAM BBS' also included. Free quarterly updates also included.

## CATEGORY: Books

NAME: Basic ADAM: Self Teaching Guide  
REVIEWED: Feb 86 # 14 PRICE: \$14.95  
RATING: A+ \*EDITOR'S CHOICE\*

Probably the best book on ADAM SMARTBasic. Oriented for the beginner, intermediate and advanced. Step by step guide with many sample programs. Full programs for shape tables, music, sorting, graphic figures, etc. A Basic reference book that every ADAM owner should have.

## CATEGORY: Books

NAME: Cassette to DDP Conversion  
REVIEWED: Apr 86 # 16 PRICE: \$19.95  
RATING: A

Complete manual providing instructions on how to make your own formatted ADAM data packs from audio cassettes using a stereo dual deck tape player and some tools.

## CATEGORY: Books

NAME: Coleco ADAM User's Handbook  
REVIEWED: Feb 86 # 14 PRICE: \$8.95  
RATING: B

Good book geared for the novice - covers setting up the ADAM, SMARTWriter and SMARTBasic. Four programs included and various sample routines.

## CATEGORY: Books

NAME: Hacker's Guide to ADAM I  
REVIEWED: Feb 85 # 2 PRICE: \$11.95  
RATING: A \*EDITOR'S CHOICE\*

Good reference manual on the ADAM in general and Basic specifically. Video, sound capabilities are explained well. Includes good programs as well. Hardware information also included. This is a basic source book for ADAMites.

## CATEGORY: Books

NAME: Hacker's Guide to ADAM II  
REVIEWED: Aug 86 # 20 PRICE: \$11.95  
RATING: A++ \*EDITOR'S CHOICE\*

See also Smartbasic Enhancements. This book is a full analysis of ADAM SMARTBasic 1.0. All Basic routines are explained in detail. Improvement programs are also provided that enhance Basic. Hardware schematics are also provided.

## CATEGORY: Books

NAME: Learning Express Audio Training  
REVIEWED: Oct 85 # 10 PRICE: \$32.95  
RATING: A+

A training course for beginners that uses both a book and audio tapes to explain the basic operation of ADAM and specifics on SMARTWriter and SMARTBasic. Requirement for the novice.

## CATEGORY: CP/M 2.2 Programs

NAME: ASCOM  
REVIEWED: Jun 85 # 6 PRICE: \$139.00  
RATING: B

ASCOM is a modem communications program that supports various file transfer techniques. Comprehensive program but overpriced.

## CATEGORY: CP/M 2.2 Programs

NAME: Master Cat  
REVIEWED: May 85 # 5 PRICE: \$15.50  
RATING: A

This program sets up a master catalog of the individual catalogs on each of your CP/M disks. Various reports can then be printed to keep track of your various programs.

## CATEGORY: CP/M 2.2 Programs

NAME: MITE  
REVIEWED: May 86 # 16 PRICE: \$125.00  
RATING: A

MITE is a modem communications program that supports many file transfer techniques as well as direct computer to computer communications. Very easy to learn and use. May be used to connect ADAM to other computers via direct wiring.

## CATEGORY: CP/M 2.2 Programs

NAME: Nevada CP/M Basic  
REVIEWED: Aug 85 # 9/10 PRICE: \$39.95  
RATING: A+

Nevada Basic is a CP/M Basic interpreter for writing and running Basic programs under ADAM CP/M 2.2. This program has been modified to run on the ADAM and includes many advanced programming features.

CATEGORY: Education  
NAME: Expertype  
REVIEWED: Jan 85 # 1           PRICE: \$19.95  
RATING: B  
A touch typing drill program for both the beginner and intermediate. Twelve lessons and drills with analysis of error percentages by keys. Does the job

CATEGORY: Education  
NAME: Flashcard Maker  
REVIEWED: Mar 85 # 3           PRICE: \$15.95  
RATING: A  
FC Maker creates "electronic" flashcards for study and drilling purposes. Cards can be shown in either a set or random pattern.  
"Pre-done" FC sets can be purchased separately for History, Trivia, Vocabulary.

CATEGORY: Education  
NAME: Spanish Vocabularyian  
REVIEWED: May 86 # 18          PRICE: \$15.95  
RATING: A  
Basic program that aids the Spanish student thru drill practice. Contains 1600 words with english to spanish translation. Well done.

CATEGORY: Education  
NAME: Stellar 5  
REVIEWED: Nov 85 # 11          PRICE: \$34.95  
RATING: A  
A program for astronomy buffs providing a comprehensive set of programs for constellations, stars, planets, comets and the moon. Even draws constellations on the screen and prints them.

CATEGORY: Education/ Entertainment  
NAME: Cabbage Patch Picture Show  
REVIEWED: Jan 86 # 13          PRICE: \$18.95  
RATING: B+ \*EDITOR'S CHOICE\*  
Similar to the Smurf Paint N Play game this is a creative learning program for ages 4 to 8. The child moves various characters thru different scenes and can use objects to create a play area.

CATEGORY: Education/ Entertainment  
NAME: Dr. Seuss Fix up Puzzle  
REVIEWED: Oct 85 # 10          PRICE: \$18.95  
RATING: A \*EDITOR'S CHOICE\*  
An excellent puzzle program using the Dr. Seuss characters in which the child must rearrange a scrambled picture. Excellent color graphics with 5 levels of play for 4 to 10 years of age.

CATEGORY: Education/ Entertainment  
NAME: LVAC Archives I  
REVIEWED: Jul 85 # 7           PRICE: \$9.95  
RATING: A \*EDITOR'S CHOICE\*  
A series of 8 Basic programs that are all educational oriented. Excellent color and graphics with good variety of programs. The graphic I.Q. test is fantastic; trivia game, card game, etc.

CATEGORY: Education/ Entertainment  
NAME: Monkey Academy  
REVIEWED: Nov 85 # 11          PRICE: \$18.95  
RATING: B  
A math program in the context of an arcade game which motivates the player to learn while they "play" a game.

CATEGORY: Education/ Entertainment  
NAME: Number Bumper  
REVIEWED: May 86 # 17          PRICE: \$18.95  
RATING: A  
A math educational program using an arcade game theme. Player must manipulate numbers on the screen to answer problems while being pursued by the bad guys. Reinforces math skills.

CATEGORY: Education/ Entertainment  
NAME: R. Scarry's Elec Wordbook  
REVIEWED: Jan 85 # 1           PRICE: \$20.95  
RATING: A+ \*EDITOR'S CHOICE\*  
A cartoonish word/picture association program for ages 3 to 8. Characters from the R. Scarry books are displayed and manipulated to teach word association. Color graphics and music are excellent. Four levels of play with 24 screens.

CATEGORY: Education/ Entertainment  
NAME: RA Education Pack I  
REVIEWED: Oct 85 # 10          PRICE: \$9.95  
RATING: A  
Contains 8 educational programs written in Basic, all containing a Christian theme. Color drawing, Bible scrabble, mathquiz, alphabet and music programs are included.

CATEGORY: Education/ Entertainment  
NAME: Smurf Paint 'N Play  
REVIEWED: Oct 85 # 10          PRICE: \$18.95  
RATING: A \*EDITOR'S CHOICE\*  
A creative playing program for ages 3 to 10. Child picks and "paints" various scenes using pre-drawn objects. Smurf characters are moved by child in the scenes created. Hours of creative learning fun.

CATEGORY: Education/ Entertainment

NAME: Telly Turtle

REVIEWED: Nov 85 # 11 PRICE: \$18.95

RATING: A \*EDITOR'S CHOICE\*

A set of programs that teach a child how to use and do their own programming in the LOGO color graphics language. Easy to use format leads the child into quickly making their own pictures. Ages 4 to 15.

CATEGORY: Education/ Entertainment

NAME: Wacky Word Game

REVIEWED: Jun 86 # 19 PRICE: \$15.95

RATING: B

Game like set of 22 files that are used via ADAM's built in wordprocessor. These games are designed to teach one how to use the basic and some of the advanced features of SMARTWriter. Some neat puzzles are included.

CATEGORY: Entertainment

NAME: 2010: Graphic Adventure

REVIEWED: Dec 85 # 12 PRICE: \$18.95

RATING: B

A maze oriented game in which you must make the appropriate connections to get ship repaired in time to prevent disaster. Nice graphics.

CATEGORY: Entertainment

NAME: 2010: Text Adventure

REVIEWED: Dec 85 # 12 PRICE: \$20.95

RATING: A+

A text adventure game based on the recent movie of the same name. You must get the ship fixed and back on course before you are pulled Jupiter's moon. Very challenging, with 2 superp graphic screens and music. NOTE: NIAD has hints available.

CATEGORY: Entertainment

NAME: Best of Broderbund

REVIEWED: Feb 85 # 2 PRICE: \$10.95

RATING: B

Two top quality arcade game adaptations. Choplifter is well done and close to the arcade game. A.E. is a multi-screen game in which you must shoot invading alien ships before they get you. Excellent graphics.

CATEGORY: Entertainment

NAME: Dragon's Lair

REVIEWED: Jan 85 # 1 PRICE: \$20.95

RATING: C

Adaptation of the arcade game. Graphics are great, but game is overly difficult and can become frustrating.

CATEGORY: Entertainment

NAME: Electronic Game Pack

REVIEWED: Mar 86 # 15 PRICE: \$19.95

RATING: A \*EDITOR'S CHOICE\*

Five unique games in Basic: Backgammon, Battleship, mastermind, 3D Tic Tac Toe, Miner. Excellent use of color, sprites and sound. Games are challenging and require good logic.

CATEGORY: Entertainment

NAME: Family Feud

REVIEWED: Jul 85 # 7 PRICE: \$20.95

RATING: A \*EDITOR'S CHOICE\*

A great family game based on the popular TV game show. Players become members of a family on ADAM which are done in excellent color graphics. Game board is just like the TV show. Large variety of questions included.

CATEGORY: Entertainment

NAME: Fantasy Gamer

REVIEWED: Jun 85 # 6 PRICE: \$29.95

RATING: A+ \*EDITOR'S CHOICE\*

Excellent graphics/text adventure game written in Basic. Two games are included plus a program that you can use to make your own graphic/text adventure games. Manual contains complete documentation on creating sprites in Basic.

CATEGORY: Entertainment

NAME: Pro Football

REVIEWED: Sep 86 # 21 PRICE: \$18.95

RATING: A \*EDITOR'S CHOICE\*

Top notch football simulation game in Basic. Actual statistics from all pro games from 1985 on were used to create the data for this game. Multiple defensive and offensive plays can be chosen by you the "coach". Graphics representation of a field is excellent.

CATEGORY: Entertainment

NAME: Reedy Entertainment Pack

REVIEWED: Jun 86 # 19 PRICE: \$18.95

RATING: B+

Three well done Basic games using advanced sound and graphics - Blockade is a breakout game, connect is the ADAM version of this popular kids game and slide puzzle is a neat adaptation of the those little hand puzzles.

CATEGORY: Entertainment

NAME: Reedy Library

REVIEWED: Sep 85 # 9 PRICE: \$15.95

RATING: A

Top notch set of 7 Basic programs including low res drawing, text adventure and programming aids for putting graphics in your programs.

CATEGORY: Entertainment  
NAME: SMARTGames Pack  
REVIEWED: Sep 85 # 9           PRICE: \$9.95  
RATING: A \*EDITOR'S CHOICE\*  
Three top notch arcade type games written in Basic. Includes Maze, with over 1000 variations, Treasure Search with multiple rooms and SpaceChase - arcade graphics, defend your ship with lasers against attacking robot ships.

CATEGORY: Entertainment  
NAME: Super Zaxxon  
REVIEWED: Jan 85 # 1           PRICE: \$10.95 DDP  
RATING: A+ \*EDITOR'S CHOICE\*  
Excellent adaption of the classic arcade game. One of the best games for the ADAM. This tape is nothing like the Colecovision cartridge, but a truly high quality game.

CATEGORY: Entertainment  
NAME: Videotunes  
REVIEWED: Mar 85 # 3           PRICE: \$26.95  
RATING: A-  
A musical composition program that uses the full capabilities of the ADAM's musical functions. You compose your own music via a scrolling screen. Sophisticated program uses up to 1000 notes and 3 voices!

CATEGORY: Entertainment/ Education  
NAME: Trivia Pack I  
REVIEWED: Jul 86 # 19          PRICE: \$14.95  
RATING: A \*EDITOR'S CHOICE\*  
Excellent program written in Basic. Contains 1200 questions in 6 categories with randomness built in. Advanced sound and graphics enhance this multi player game. A lot more fun than the board game.

CATEGORY: Home / Business  
NAME: ADAMCalc  
REVIEWED: Jan 85 # 1           PRICE: \$24.95  
RATING: A+ \*EDITOR'S CHOICE\*  
ADAMCalc is a full function electronic spreadsheet program - allows up to 255 rows or 255 columns. All the features of popular spreadsheets are available including "windowing"; only limitation is size of the spreadsheet. A must for every ADAMite.

CATEGORY: Home / Business  
NAME: Personal Accountant  
REVIEWED: Oct 85 # 10          PRICE: \$19.95  
RATING: A  
A home/small business budgeting system. Income and expense items are entered by account using double entry accounting. Printed outputs of balance sheets, trial balances, chart of acct's are provided.

CATEGORY: Home / Business  
NAME: Recipe Filer  
REVIEWED:                   #           PRICE: \$15.95  
RATING: N/A  
A nice program for creating, storing, retrieving and printing recipes. You can search by the recipe name, category or main ingredient. Produces a shopping list of ingredients for recipes chosen.

CATEGORY: Home / Business  
NAME: Recipes By Jane  
REVIEWED: Apr 86 # 16          PRICE: \$7.00  
RATING: A  
A collection of recipes for use in the Recipe Filer program.  
Volume I - Desserts  
Volume II - Summer Salads

CATEGORY: Home / Business  
NAME: Signshop  
REVIEWED: Apr 86 # 16          PRICE: \$22.95  
RATING: A \*EDITOR'S CHOICE\*  
Signshop produces signs, notices and greeting cards on the ADAM printer. Unique printing techniques are used. A picture editor is used to create the designs which can be stored for later changes and printed. Two sizes of large letters can also be printed.

CATEGORY: Home / Business  
NAME: SMARTfiler  
REVIEWED: Jan 85 # 1           PRICE: \$15.95  
RATING: A \*EDITOR'S CHOICE\*  
SMARTfiler is a general purpose data base program. It supports up to 1000 records and 255 characters per record. Four search fields are allowed per data base. Excellent and easy to learn and use for many applications.

CATEGORY: Home / Business  
NAME: Softpack I  
REVIEWED: Jul 85 # 7           PRICE: \$18.95  
RATING: A \*EDITOR'S CHOICE\*  
A series of 4 Basic programs for managing your check-book. Checks, deposits, credits, cleared checks are entered and ADAM reconciles automatically. A name and address database is also included.

CATEGORY: Home/ Business  
NAME: Business Pack I  
REVIEWED: Dec 85 # 12          PRICE: \$18.95  
RATING: A \*EDITOR'S CHOICE\*  
Business Pack includes a full fledged inventory management system, including automatic reorder flagging, cost and retail price data recording. A database and printing program are also included. Well designed - good support.



CATEGORY: Home/ Business  
NAME: Chart/Graph  
REVIEWED: Sep 85 # 9           PRICE: \$24.95  
RATING: F

Basic program for printing out bar and pie charts on the screen and ADAM printer. Poorly done.

CATEGORY: Multi-Purpose  
NAME: Home Software Library  
REVIEWED: Jun 85 # 6           PRICE: \$29.95  
RATING: C

Collection of 32 Basic programs of various types. Includes a 275 page book as well which explains each program. Very good math programs.

CATEGORY: Multi-Purpose  
NAME: SMARTBasic Bonanza  
REVIEWED: Mar 85 # 3           PRICE: \$29.95  
RATING: A

A collection of 18 Basic programs including games, utilities, education and routines for use in writing programs. Good collection for every ADAM owner.

CATEGORY: Operating Systems/ Languages  
NAME: CP/M 2.2 and Assembler  
REVIEWED: Jan 85 # 1/2       PRICE: \$29.95  
RATING: A+

CP/M is a standard operating system for many computers and hence allows the ADAM to run many of the standard CP/M programs available. An assembler/debugger are included. Recommended for the more technically minded, not the novice.

CATEGORY: SMARTBasic Enhancements  
NAME: Auto Aid  
REVIEWED: Jun 85 # 6           PRICE: \$29.95  
RATING: A

Auto Aid adds enhancements to ADAM SMARTBasic - line numbering, defining function keys, sound, graphics, sprites, color. Recommended for the advanced programmer only.

CATEGORY: SMARTBasic Enhancements  
NAME: Basic Manager  
REVIEWED: Dec 85 # 12       PRICE: \$29.95  
RATING: B+

Enhancements include automatic loading parallel printer drivers, a "fastload" converter for Basic programs, INIT program for disks and a nice menu that allows selecting, running, deleting files and a screen color option.

CATEGORY: SMARTBasic Enhancements  
NAME: Basic Manager  
REVIEWED: Dec 85 # 12       PRICE: \$29.95  
RATING: B+

Includes program to load Eve printer drivers, fast run converter enabling programs to load 12 times faster, utilities to init, rename, change screen color, run/load specific files. Good set of utilities.

CATEGORY: SMARTBasic Enhancements  
NAME: Hacker's Guide to ADAM Vol II  
REVIEWED: Aug 86 # 20       PRICE: \$11.95 (book)  
RATING: A++ \*EDITOR'S CHOICE\*

See "Books" section for more info. Several programs included that make significant enhancements to Basic. Can purchase book only with program listings and/or disk(\$3)/ddp(\$5).

CATEGORY: SMARTBasic Enhancements  
NAME: INTEL-BEST 3.3  
REVIEWED: Aug 86 # 20       PRICE: \$16.95  
RATING: A

INTEL-Best provides the same functions as SMARTBest and provides some nice additional functions such as correcting the DATA and REM space problems. A good program for enhancing and upgrading Basic.

CATEGORY: SMARTBasic Enhancements  
NAME: Intel-LOAD  
REVIEWED: Jul 86 # 19       PRICE: \$16.95  
RATING: A

Intel-LOAD adds the capability to save SMARTBasic programs so they can be loaded back 12-15 times faster then normal. A good program that permanently resides in memory for use at any time.

CATEGORY: SMARTBasic Enhancements  
NAME: SmartBEST 1.0  
REVIEWED: Nov 85 # 11       PRICE: \$16.95  
RATING: A+

SmartBEST adds additional commands to SMARTBasic for color and sound that result in much easier use of these features by the novice programmer.

CATEGORY: SMARTBasic Enhancements  
NAME: SmartTRIX I  
REVIEWED: Mar 86 # 15       PRICE: \$28.95  
RATING: A+ \*EDITOR'S CHOICE\*

Programs as well as an excellent 70 page manual documenting many features of SMARTBasic are included. Programs for Sprite creation/animation, shape construction, sound and music composition plus utilities for modifying Basic, read/write blocks and "fastload".

CATEGORY: SMARTBasic Enhancements

NAME: Turboload

REVIEWED: Feb 86 # 14 PRICE: \$26.95

RATING: B

Turboload provides a facility to save SMARTBasic programs so they can be loaded back 12-15 times faster. Two utility programs are also included which provide useful functions, including an alphabetical index of program names on your DDPS.

CATEGORY: Utilities/Copy

NAME: Backup +2.0

REVIEWED: Jun 85 # 6 PRICE: \$34.95

RATING: A

A very fast (machine language) backup copy program that allows both block and file copying.

CATEGORY: Utilities/Copy

NAME: MediaAid

REVIEWED: Apr 86 # 16 PRICE: \$19.95

RATING: A

A multi-purpose utility package - block and file copy; volume name; init; menu; block read/edit/dump; purge deleted files; creates A files from H for modem transfer.

CATEGORY: Utilities/Copy

NAME: Multicart BU

REVIEWED: Nov 85 # 11 PRICE: \$10.95

RATING: A

A copy program that copies game cartridges to tape or disk and creates a menu for subsequent playing. Will not copy all cartridges (Spyhunter, Dambusters, etc.)

CATEGORY: Utilities/Copy

NAME: NIAD Basic Utilities I

REVIEWED: # PRICE: \$5.00 disk/ \$7.

RATING:

This Public Domain set of programs includes a backup copy program, block read/write/dump, directory display, font editor, screen color, etc.

CATEGORY: Utilities/Copy

NAME: Packcopy

REVIEWED: Apr 85 # 4 PRICE: \$34.95

RATING: D

Backup copy program written in Basic. Has limited function and overpriced.

CATEGORY: Utilities/Copy

NAME: QuickKopy

REVIEWED: Mar 86 # 15 PRICE: \$9.95 Disk/ \$11

RATING: A \*EDITOR'S CHOICE\*

A very fast (machine language) backup copy program that allows both block and individual file copying. Excellent manual included. Copies Supergames also.

CATEGORY: Utilities/Copy

NAME: Uncle Ernie's Toolkit

REVIEWED: Oct 85 # 10 PRICE: \$25.00

RATING: A+

A utility program written in Basic to read/dump/modify blocks of data from tape/disk. Also includes a backup copy program.

CATEGORY: Word Processing

NAME: SmartType 1.1

REVIEWED: Jan 86 # 13 PRICE: \$24.95

RATING: B+

Written in SMARTBasic, performs right justification, centering, two column printing. Limited to small documents - 60 rows of 79 columns per file.

CATEGORY: Wordprocessing

NAME: Multiwrite

REVIEWED: Apr 86 # 16 PRICE: \$36.95

RATING: B+

Multiwrite is a wordprocessing program written in Basic that provides special functions - 64 column display, right justification, variable margins. Requires monochrome monitor for display. Document size is limited to 7 pages.

CATEGORY: Wordprocessing

NAME: Powerprint

REVIEWED: Mar 86 # 15 PRICE: \$22.95

RATING: B+

Basic program that provides some printing enhancements to files entered via SMARTWriter such as centering, right justification, variable margins and line spacing. Good for small files that require special formatting, but somewhat slow

\*\*\* PRINTERS \*\*\*

\*\* MONITORS \*\*

PANASONIC KX-1080 \$ 249.95  
 . TYPE: 9x9 DOT MATRIX  
 . SPEED: DRAFT MODE -100 CPS (PICA & ELITE);  
 NEAR LTR QUAL - 20 CPS; PROPRTIONL -75  
 . PRINT CHAR:BI-DIRECTIONAL; 96 CHAR W/ASCII DEC'S  
 NORMAL, ELONGATED,CONDENSED,IBM GRAPHICS  
 ITALICS, IBM SPECIAL CHAR'S  
 . MEDIA HNDL:ADJ TRACTOR FEED, FRICTION FEED  
 4" to 10" PAPER  
 . INTERFACE: CENTRONICS 8 BIT PARALLEL  
 . BUFFER: 1K STANDARD - 4K ADD'L OPTIONAL (\$ 69.95)  
 . SIZE: 4.5"x15.9"x11.3"; WEIGHT 14.6 LBS  
 . FEATURES: 2 YEAR LIMITED WARRANTY

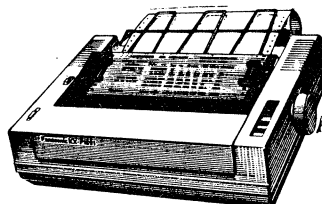
PANASONIC KX-1091 \$ 299.95  
 . TYPE: 9x9 DOT MATRIX  
 . SPEED: DRAFT MODE -120 CPS (PICA & ELITE);  
 NEAR LTR QUAL - 29 CPS; PROPRTIONL -75  
 . PRINT CHAR:BI-DIRECTIONAL; 96 CHAR W/ASCII DEC'S  
 NORMAL, ELONGATED,CONDENSED,IBM GRAPHICS  
 ITALICS, IBM SPECIAL CHAR'S  
 . MEDIA HNDL:ADJ TRACTOR FEED, FRICTION FEED  
 4" to 10" PAPER  
 . INTERFACE: CENTRONICS 8 BIT PARALLEL  
 . BUFFER: 1K STANDARD - 4K ADD'L OPTIONAL (\$ 69.95)  
 . SIZE: 4.5"x15.9"x11.3"; WEIGHT 14.6 LBS  
 . FEATURES: 2 YEAR LIMITED WARRANTY

PANASONIC KX-1092 \$ 399.95  
 . TYPE: 9x9 DOT MATRIX  
 . SPEED: DRAFT MODE -180 CPS (PICA & ELITE);  
 NEAR LTR QUAL - 33 CPS; PROPRTIONL -112  
 . PRINT CHAR:BI-DIRECTIONAL; 96 CHAR W/ASCII DEC'S  
 NORMAL, ELONGATED,CONDENSED,IBM GRAPHICS  
 ITALICS, IBM SPECIAL CHAR'S  
 . MEDIA HNDL:ADJ TRACTOR FEED, FRICTION FEED  
 4" to 10" PAPER  
 . INTERFACE: CENTRONICS 8 BIT PARALLEL  
 . BUFFER: 7K STANDARD - 4K ADD'L OPTIONAL  
 . SIZE: 5.4"x16.3"x13.8"; WEIGHT 19.6 LBS  
 . FEATURES: 2 YEAR LIMITED WARRANTY

PANASONIC RIBBONS # P110 (ALL MODELS) \$ 9.95

STAR SG10 \$ 279.95  
 . TYPE: 9x9 DOT MATRIX  
 . SPEED: DRAFT MODE - 120 CPS; NLQ -30 CPS  
 . PRINT CHAR:BI-DIRECTIONAL, NORMAL,ELONGATED, CONDSD  
 ITALICS, IBM GRAPHICS/ SPECIAL CHAR'S  
 . MEDIA HNDL:ADJ TRACTOR FEED,FRICTION FEED  
 4" TO 8 1/2 "  
 . INTERFACE :CENTRONICS 8 BIT PARALLEL  
 . BUFFER: 2K STANDARD  
 . FEATURES: 140 DOWNLOADABLE CUSTOM CHARACTERS  
 . ACCESSORTES: RIBBONS \$ 2.95 n  
 4K BUFFER \$ 109.95

PANASONIC COLOR DT-S101 COMPOSITE \$ 199.95  
 . CRT TYPE: 10" 90 DEG INLINE DARK; P22  
 . DOT PITCH: .63 MM  
 . RESOLUTION: 250 HOR x 300 VERTICAL  
 . SIZE: 10.3 x 11.2 x 13.4 "  
 . AUDIO: YES  
 . FEATURES: BLK & WHITE DISPLAY  
 . OPTIONS: TILT SWIVEL STAND \$ 19.95



TRAINING MANUALS/ BOOKS

LEARNING EXPRESS AUDIO TRAINER \$ 32.95  
 CP/M USER'S GUIDE BY T. HOGAN \$ 15.95  
 WORD PROCESSING WITH YOUR ADAM  
 BY TAB BOOKS \$ 8.95  
 THE COLECO ADAM USER'S HANDBOOK \$ 8.95  
 THE BASIC ADAM : A SELF TEACHING  
 GUIDE BY ABIKOFF & CORNELL \$ 14.95  
 HACKER'S GUIDE TO ADAM VOL I \$ 11.95  
 HACKER'S GUIDE TO ADAM VOL II \$ 11.95

PROGRAMS FROM BOTH VOL I&II OF  
 HACKER'S GUIDE ON 1 TAPE/DISK \$ 3.00 DISK  
 \$ 5.00 DDP  
 1986 ADAM RESOURCE DIRECTORY \$ 13.95