



**MULTI-FUNCTION USER GROUP**  
 MONTHLY NEWSLETTER-PUBLIC DOMAIN LIBRARY  
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Continuing our study of Romans, Chapter 7.. Do you not know, brethren - for I am speaking to those who know the law - that the law is binding on a person only during his life? 2Thus a married woman is bound by law to her husband as long as he lives; but if her husband dies she is discharged from the law concerning the husband. 3Accordingly, she will be called an adulteress if she lives with another man while her husband is alive. But if her husband dies she is free from the law, and if she marries another man she is not an adulteress. 4Likewise, my brethren, you have died to the law through the body of Christ, so that you may belong to another, to him who has been raised from the dead in order that we may bear fruit for God. 5While we were living in the flesh, our sinful passions, aroused by the law, were at work in our members to bear fruit for death. 6But now we are discharged from the law, dead to that which held us captive, so that we serve not under the old written code but in the new life of the spirit. 7What then shall we say? That the law is sin? By no means! yet, if it had not been for the law, I should not have known sin. I should not have known what it is to covet if the law had not said, "You shall not covet. 8But sin, finding opportunity in the commandments, wrought in me all kinds of covetousness. Apart from the law sin lies dead.

Paul is continuing his explanation of sin and righteousness. He gives the analogy of marriage and the law - the law of Moses is binding on all mankind as long as we are alive, just as a marriage is binding while both husband and wife are alive. However, when one of the spouses dies, the marriage bond releases the other to marry again. Correspondingly, when Christ died and paid the price for all of our sins, the bond of the law was broken for anyone who has accepted this gift from God. The person who has accepted the sacrifice of Jesus in his life is free from the bondage of the law which results in spiritual death because Jesus paid the price for our sin by dying for us. Once a person has accepted the fact that Jesus died for his sins, he can participate in Christ's resurrection from the standpoint that he can have eternal life, being born again just as Jesus was. So, our sinful nature can die with Jesus and we can have a new righteous nature, being one with the resurrected Jesus. Paul goes on to explain that the purpose of the law was to

make our sin evident. Just as parents must establish rules for their children so they learn right from wrong, God gave us the Ten Commandments. Any violation of the commandments was defined as sin and guess what, we all are sinners! I heard a philosophy instructor who debated this and stated that if a person could go without sinning for 1 minute (which we could all do), then this proved that man was capable of meeting the demands of the Ten Commandments. This is a cute try, but I could say that because I can go without eating for one minute, that it proves that I don't need food! No, man is incapable of meeting God's law. God knew this when he gave it to us, but the law was necessary for man to recognize this fact. Man is very stubborn and prideful by nature. Just as Adam's pride resulted in his disobedience to God, we think we can get along on our own, without God. Hence, God gave man the law as a "test" of sorts, challenging man to be sinless on their own. Man of course could not, and sin was defined. However, God had a perfect plan because he loves his children so much. His plan was to give us the gift of forgiveness, and eternal life. All we have to do is ask for this gift and receive it to become righteous before God. Don't hesitate, do it now if you haven't already. God bless you all.

*INDEX*

NIAD NEWS/ UPDATES.....	1
TELECOMMUNICATIONS WORKSHOP .....	4
PUBLIC DOMAIN WORKSHOP .....	5
GRAPHICS WORKSHOP .....	9
SMARTBASIC WORKSHOP .....	10
CP/M 2.2 WORKSHOP .....	11
PRODUCT REVIEWS .....	11
(POWERPAINT, SMARTDSK, BEYOND TREK, NIAD GOLD SCIENCE & EDUCATION)	
SEGA UPDATES .....	15
GAMES .....	15
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# NIAD NEWS/ UPDATES



## From the Editor's Desk:



Spring is starting to "sprung" in the Chicago area lately. Early March means Easter can't be far away and then Spring is really here.

We think we have another NIAD issue jam packed with goodies for you. Please let us know what things you would like to see in our newsletter. We welcome your suggestions.

### 1988 will be BETTER then ever...

. New software products are coming out fast and furious for the ADAM. Our little orphan system is hanging on and getting better all the time. The quality of the new products is improving as is their sophistication. I bet those who "wrote off" their ADAM's some time ago are sorry now!

Aren't you continually amazed at the staying power of our ADAM? Who would have thought the ADAM would still have the support it does in 1988? Consider the significant new software and hardware products that have come out in just the last six months. Look at our SOFTWARE/ HARDWARE section and you'll see the trend continuing. It is almost unbelievable. This Christmas there were the naysayers who said it would absolutely be the last for the ADAM (the same ones who said it last year) - wrong again my friends.

## ADAM IS ALIVE AND WELL !!

I received a letter in which the writer was relating a story of one person on Compuserve who was leaving messages saying that many people were selling their ADAMS. The writer replied that if they were selling them, then someone was obviously buying them! Hence, the ADAM continues to survive.

I believe that the reason for this is the variety of new products that have been and are still being released for the ADAM. There are a number of fine companies producing excellent products for our ADAM. I thank God for them and the User Groups that aid ADAM owners in general.

. Sorry this issue is late. We're working hard to catch up, but it's a tough fight. Putting together this much material each month is quite a chore.

. I've put the NIAD BBS on hold until sometime this

summer when I will have more time to devote to it. I want to do it right or not at all.



## 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!!

. Our very capable CP/M 2.2 librarian has been hard at work adding many new PD volumes. Due to a required surgery, she has not completed the CP/M training course we mentioned last month. Sharon should have it done soon.

. We mentioned last month that we now have a CP/M disk conversion service available. To clarify, we can take almost any CP/M disk format (Kaypro, Zenith, TRS-80, etc.) and convert them to/ from an ADAM CP/M format. Hence, if have picked up some public domain or commercial software for any other CP/M computer, we can supply this same software in ADAM CP /M disk format. The nice thing about CP/M is that most programs will run on many different types of hardware. We can also convert TEXT programs to and from IBM PC formatted disks - files such as word processing or Basic text programs can be converted. However, no executable programs can be converted from an IBM PC.

. 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 us if you need directions to the store)

. If your member number starts with "0288", this is your last issue. Send in your membership renewal to avoid missing any issues.

### \*\*\*SPECIALS\*\*\*

. Rob Friedman has written an article on the COMPUSERVE information network, which has a large ADAM following on its BBS system. In conjunction with this we are offering a special - the ADAMLINK modem and the COMPUSERVE STARTER KIT, both for \$69.95!

The COMPUSERVE STARTER KIT contains the complete manual on how to use CS and what services are available, your ID and password and \$25 credit towards connect time!

. See our review of the SMARTDSK in this issue. We are offering a combination special for you SMARTWriter users - SMARTDSK and the 64K Memory expander, both for only \$59.95!

### \$\$\$ PRICES \$\$\$

We get several calls asking us to reduce our price on a product to match another suppliers price. I want to emphatically state that NIAD is not attempting to be the lowest price supplier of ADAM products. My personal opinion is that if you shop hard and long enough you can always find a better price for anything. However, the old adage that "you get what you pay for" always holds true!! NIAD's prices are fair and competitive, but you'll never see us advertise that we'll beat any other price. NIAD is based on providing product, service and support which is what you should consider when buying any product. If you want the cheapest price, with no support then good luck!



## SOFTWARE/HARDWARE UPDATES

. Wayne concludes his review of the very powerful, POWERPAINT in this issue, by expanding on some of the useful things that can be done with this multi-purpose program.

. SMARTDISK, is the latest program from Walter's Software and is a sure winner! Now, all us SMARTWRITER users can use a 64K, 128K, or 256K memory expander as a ramdisk. SMARTDISK extends the same great features of lightning fast file saves/loads to SMARTWriter users, drastically reducing wear and tear on tape and disk drives. See our review in this issue.

. See our review of BEYOND TREK, a souped up game of Star Trek from Digital Express.

. NIAD GOLD SCIENCE & EDUCATION is the latest edition to our GOLD series, so aptly done by Bob Tarnowski.

. CLIP ART VOL I is a great collection of 45 clip art pictures that can be used with POWERPAINT. See this months GRAPHICS WORKSHOP for more information on this new product.

. SPEEDYWRITE is a fantastic wordprocessor for the ADAM, providing many additional functions ADAMites have been asking for. We'll have a full review next month.

. FILEMANAGER is a top notch utility program, written by Tony Morehan. This program is equal or better (based on personal opinion) to any other ADAM utility program. We'll have a full review in our next issue.

. Digital Express is finalizing their GODOS operating system as well as a new word processor. We're anxiously awaiting these new products which should be out in the next 30-60 days.

. Reedy Software is nearing completion of PHRASE CRAZE! This will be a Wheel of Fortune type game for us gameshow lovers.

. Mike McCauley is working a new game to be called GARBAGEMAN. Try to guess what this one could be!

. Rumor has it that another company will be releasing tape/disk versions of many of the more popular cartridge games for the ADAM. We should have details next month.

## PUBLIC DOMAIN UPDATES

. Sharon McFarlane, our CP/M 2.2 librarian has been hard at work. She has added 8 new CP/M PD volumes (35-42) to our library!! Thanks Sharon for your hard work. Sharon has included documentation files in all the libaried files for your convenience.

. BASIC Volume #BNDV24 is completed - This volume contains more fine games and an updated list of ADAM peeks and

pokes compiled by Sharon McFarlane. Volume 24 also has our new musical boot program that you'll really love (thanks to Sharon for this musical boot and Bob Tarnowski for putting the PD together).

BNV25 contains the complete Basic Programming Course that we have been printing excerpts from in each issue. This 10 chapter book is a great reference for any ADAM SMARTBasic programmer.

LOGO - See the Public Domain Workshop for a description of some great LOGO programs in our newest volume - LNDV3. Andrew Heckert is doing a great job as our LOGO PD librarian.

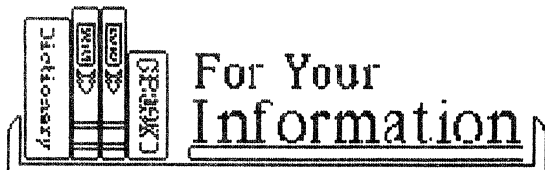
### HARDWARE

. Well, new ADAM disk drives are dwindling down to about gone. It had to happen sooner or later as we all knew. We only have about 15 left as of this writing. However, we will have a good supply of reconditioned disk drives by May. Additionally, we should start to see more companies putting out double sided conversions for ADAM disk drives.

. Memory chip price increases (as a result of the falling US dollar as compared to the Japanese Yen) are starting to have their affect. Our memory expanders have gone up in price as a result. 64K expanders are now \$49.95 and the 256K is now \$149.95.

. We are still giving a \$30 credit for any 64K memory expanders sent in when purchasing a 256K expander.

. Orphanware has just informed us the new Star NX-1000 printer will not work with their PIA2 parallel printer interface. John Lingrel is working on a solution, but is not sure when it will be ready.



### ADAM USER GROUPS

The following is our current list of the smaller, local ADAM USER Groups. Each of these groups have meetings of their members. Please send in information on other User Groups so we can update this list for everyone's use.

St. Louis Area ADAM User Group  
 President Jim Guenzel; Vice President Barry Wilson  
 Dues - \$20 per year for monthly newsletter  
 Address - 1566 Wood Lake Chesterfield, MO 63017

463 ADAM Group

President Dean Roades  
 Meet first Friday of each month  
 Address - 8522 Hohman Ave, Munster, IN 46321

ADAM Users Group Of Germany  
 Friedenstrasse 14  
 6101 Bickenbach; Federal Republic of Germany

Indianapolis ADAM Users Group  
 President Harold Shaw  
 Address - 816 W. St Clair Ct  
 Indianapolis, IN 46214

Greater Houston ADAM Users Group  
 Dues - \$15 per year for Monthly Newsletter  
 President Terry Fowler  
 Address - P.O. Box 800801  
 Houston, TX 77280-0801

Gulf Coast ADAM Users Group  
 C/O Joseph Quinn  
 6665 Timbers Dr  
 Mobile, AL 36695

Inland Empire Users Group  
 Contact Benny Montaya (714) 839-8574 or Tom Keene  
 (714) 538-6254  
 P.O. Box 2210  
 Rialto, CA 92376

Loyal ADAM Users (LAUGH)  
 P. O. Box 182  
 Grimsby, Ontario Canada L3M 4G3 Phone 935-8713

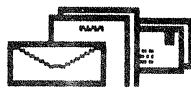
Metro Orlando ADAM Users Group  
 Dues - \$12 per year fro Monthly Newsletter  
 Editor Pat Herrington  
 Address - 1003 Oak Lane  
 Apoka, FL 32703

Omaha ADAM Users Group  
 President Norman Castro  
 Dues - \$15 per year for newsletter  
 Call 291-4405

Regina ADAM Users Group  
 President Gerry Totten  
 Address - 1634 N Ewart Pl  
 Regina, Sask., Canada S4X 4E4 Phone (306) 545-9309

Triangle ADAM Users  
 Dues - \$12 for 6 issues  
 Address - 2623-A Yanceyville St  
 Greensboro, NC 27405-4407 Phone (919) 375-6159

## ITEMS OF INTEREST



. Philip Kosowsky is a former Coleco employee who is offering his services to aid in repairing defective ADAMs. He can do

most electronic component repairs, but not mechanical repairs on the ADAM printer. He asks that you write to him and describe the problem and he will respond as to whether he can repair it or not. His address is -

8 Castillon Ct  
Clifton Park, NY 12065

. A statistician and programmer has developed some sophisticated mathematical and computational programs for the ADAM. He asked us to attempt to determine if there was a market for these types of programs. The program, called STATCALC contains the following:

A. Probability Calculations - Factorial, Permutations, Combinations, Probability of no repetition in a cycle and Bayes formula.

B. One Independent Variable Statistics - Single variable, moving average, standardized scores, generalized mean, frequency histogram.

There is a comprehensive documentation files included. Please contact NIAD if you would be interested in these programs.

Mike Degner, a freshman in College has offered to do some custom programming work in CP/M. He will take on a project and charge according to the time he puts in. This would be a good arrangement for someone in business who needs a program with particular features.

Write to Mike at 224 Morrow Hall, Platteville, WI 53818

. Robert Fortney called with a suggestion for the "sticky ribbon" problem on the ADAM printer. His suggestion is for the situation when the little band on top of the ribbon is slipping. He says that sanding the little knobs with some coarse sand paper works just fine.

. Jim Goebel reports that he gave us the wrong number for the Joliet BBS. The correct number is (815) 485-0398. Also, this BBS will be soon changing its number to (312) 301-2100. You should set the options on ADAMLINK to 8 bits, no parity, 1 stop bit.

. Gerald Garcia is starting an ADAM Users group in Connecticut. Write to him at 141 Bradley St, New Haven, CT 06511 or call at (203) 787-0561.

## TELECOMMUNICATIONS WORKSHOP



CompuServe is a national telecommunications network for any and all computer users. For Adam users, it's a national meeting place and a central source of public domain software, both basic and CP/M. We are located in the Computer Club forum, one of the oldest forums on CompuServe. The Adam is in sections 9 and 10, and have Data Libraries 9 & 10. Section



9 is Adademia, for basic and Logo files, and anything that can be downloaded via AdamLink2. (More on that in a bit) Section 10 is the Adam CP/M section.. usually requiring a CP/M modem program such as Madam7, MEX114, or IMP. (Also.. more on that in a bit). As a meeting place, there are ongoing discussions in the message bases, and in the weekly Sunday night <9:00 ET> CONference where we exchange ideas, tell about new items for Adam users, and just make friends. Both Tim Nunes and I are there almost every night, and are available very Sunday night.

Also, in our Data Libraries, we have a wealth of PD software, including the latest PD CP/M files <also available in the CPM Forum>. We have amassed an impressive amount of software including no less than six CP/M programming languages <Ebasic, Eprolog, TinyPascal, Forth, Pilot, and Cobol> and we have the only place on CompuServe that the CP/M user <not just Adamites> can download the Original Adventure Game ... the Colassel Cave. Our Basic section combined with our CP/M section constitute the largest Data Libraries in the Forum for any one computer. The Computer Club forum which can be reached on CompuServe at any "!" prompt by typing "GO CLUB". We look forward to seeing you there. But.. CompuServe isn't just a single Club for Adam users. If you have other interests <which I hope we all do>, you can find it on CompuServe. As I mentioned, Adam users can also access the CP/M Forum (GO CPMSIG) and use almost any program on there. <If your friends with their C-128s tell you that "They have a section there too.." well.. they are right.. BUT Adam runs CP/M much better than the C-128. Irv Hoff, the writer of most of the PD CP/M modem programs, is a sysop on CPMSIG, and is a frequent visitor in the Adam section in Computer Club. If you have an interest in other things.. like science fiction, Midi software, religion, health, home business, and

countless others... you will probably find a section for you on CompuServe. There are also the online multi-player games like Mega Wars, YGI (You Gussed It), and Island of Kesmai. You can also talk to people all over the US and Canada, <and lately> around the world, on the CompuServe CB <where I'm a frequent visitor>. Or.. as in the film War Games.. you can book flights or check on flights with the OAG (Official Airline Guide-Electronic Edition). If you're doing research and you need information.. there is also IQuest, an immense database that can send a printed copy to you or send a file via modem for numerous topics and previously published sources <who knows?? Maybe the paper you write will also end up in IQuest. Also.. there is the Electronic Mall, where you can purchase almost anything from your home. Your home banking and financial needs can also be helped on CompuServe. (Just wait until April 13th and see how crowded the tax help services become). CompuServe is the largest online information service in the world with over 380,000 members. To join CompuServe, you need a) a modem, b) a terminal program, and c) a CompuServe starter kit <see Niad listing>. The hourly

charge is \$6.00 per 300 baud and \$12.50 per 1200 baud. There is no longer any prime time and non-prime time. I hope to see you there. (Sysop Adam CP/M)

(As a service..both Tim and I have been distributing the PD Modem programs, AdamLink2, Madam7, and MEX. Our procedure has been a very reasonable one. We ask you to send a formatted CP/M disk <or DDP> or 2 or 3.. depending on what you want (AdamLink2 doesn't require a CP/M format>, and also to send return postage, no fee other than that. and We'll send you a copy of the program so you can access the entire Data Libraries. You can find us online.)

Rob Friedman ---User I.D> 73267,742

Tim Nunes -----User I.D> 73307,215

Also.. Big John Lingrel of Orphanware is our hardware and technical assistance person online. Along with John, some of our figures are Tony Morehan of T-Dos fame, John Moore of Madam7 fame, Pat Herrington who runs the MOAUG, and numerous others. So.. come join the crowd.

Rob



## PUBLIC DOMAIN WORKSHOP



Note: The Rooket program published in last months issue has some lower case "L's" which print out very similar to "1's". The variables are "LA" and "LB", not "1A" and "1B" in lines 40 and 50.

This month we'll review the contents of LOGO volume # LNDV3 which was recently put together by our LOGO PD librarian, Andrew Heckert. LOGO is a super language which uses the color graphics capability of the ADAM to the fullest. Remember that to run these programs you must first load SMARTLOGO (the base LOGO program) and then you can load and run these programs. Depending on whether you have a tape or disk, you may have to use the "Setdevice" command within SMARTLOGO to direct LOGO to where your program tape/disk is (which drive - 0,1,4,5). Review your LOGO manual to see how to run a program because it is not the same as BASIC. LNDV3 has a menu program that you can run, which in return will display a menu from which you can select which program you want. There is also an excellent documentation file on LNDV3 that you can print out by using either LOGO or SMARTWriter.

### NIAD PUBLIC DOMAIN LIBRARY - LOGO LNDV #3

**MUSEUM** - A delightful little program for young children. The child is asked to pick 3 colors and then enter their name (Mom or Dad can help with this step). The program then displays in the colors chosen 3 objects from the museum. The finale is a bubble machine with all the colors displayed. Very well done and even includes extensive programming notes so it can be modified. Your kids will like this one.

**ROADS** -Fast moving vehicles on multiple roadways. Options to change the vehicle shapes are included. **DANCE** - Simple demo of animation with a dancing figure.

**WINTER** - A logo picture of an iceberg with many black and white little friends. Use LOADPICT "WINTER display.

**WEIRD** - another picture file with a crazy 3D tunnel!

**NEW.PET** - An excellent story telling program for early readers. The child is asked a number of questions, after which the program creates a story complete with pictures and animation! Very well done.

**REN** - Utility to rename LOGO files.

**ERA** - Utility to erase one or several LOGO files from a tape/ disk.

INIT.CAL - A set of procedures which install the LOGOCALENDAR program. LOGOCALENDAR - Provides for a comprehensive appointment calendar. Memo items can be entered for each day, saved and retrieved for later modification. The complete calendar can be printed as well. LOGOCOPY - A complete disk copy program that duplicates a disk in disk drive 1 to a disk in disk drive 2 in 3 minutes. FLIGHT - A nice visual display of animated sprites. SAINT - Musical rendition of a great song. JULY4 - Watch a giant firecracker explode before your eyes - sound and all. WHLFORTUNE - Yes, the wheel of fortune game on the ADAM, complete with spinning colored wheel and all. A very well done rendition of the popular game show. WORLD - The famous kids song, "Its a Small World". SPYHUNT - Cars from the popular game SpyHunter. POKER

- A very well done game of poker, including full graphic cards and even the sound of a shuffling deck! A lot of work went into this fine program. Watch out though, ADAM is tough to beat! TOWER - Color graphics version of the classic computer game. This version includes up to 8 disks that must be carefully maneuvered in the least number of moves to win. LOGODIALER - A LOGO modem program that will keep a list of phone numbers and automatically dial them for you! PRDRIVE - A dot matrix printer patch that will output LOGO printing to the dot matrix printer. EDITOR - A tape/ disk editor program that allows you to read a block into memory and then modify any byte and write it back.

## JACKETS

Here is a super program, enhanced by Bob Tarnowski, that will create jackets for your diskettes, complete with a list of all the files on the disk! Let's get organized. We printed a similar one for ddps a few months ago.

```

1 REM NIAD PUBLIC DOMAIN                VOLUME # BNDV 24
5 REM Modified by BOB                   TARNOWSKI   Feb 1988
8 POKE 17059, 5: POKE 17115, 30: POKE 17126, 31
10 TEXT: DIM f1$(50): num = 1
20 GOSUB 5000
30 VTAB 3: HTAB 13: PRINT "(MO,DY,YR)": PRINT
40 INPUT " TODAYS DATE "; mo, dy, yr
41 VTAB 3: HTAB 13: PRINT: PRINT
42 PRINT " TODAYS DATE "; mo; "/" ; dy; "/" ; yr
50 IF mo < 1 OR mo > 12 THEN 8000
60 IF mo = 2 THEN 90
70 IF mo = 4 OR mo = 6 OR mo = 9 OR mo = 11 THEN 100
80 IF mo = 1 OR mo = 3 OR mo = 5 OR mo = 7 OR mo = 8 OR mo = 10 OR mo = 12 TH
EN 110
90 IF dy < 1 OR dy > 29 THEN 8000
100 IF dy < 1 OR dy > 30 THEN 8000
110 IF dy < 1 OR dy > 31 THEN 8000
120 IF yr < 88 THEN 8000
150 VTAB 23: HTAB 2: PRINT "PRESS ESCAPE TO QUIT": PRINT CHR$(128)
155 GOSUB 5000
160 VTAB 11: HTAB 2: INPUT "NAME OF DISK => "; na$
162 IF LEN(na$) > 18 THEN PRINT: PRINT " TOO LONG - TRY AGAIN": GOTO 155
165 IF na$ = CHR$(27) THEN 9000
166 TEXT: GOSUB 5000
170 VTAB 7: PRINT "-----"
175 HTAB 5: PRINT "INSERT PAPER IN PRINTER": HTAB 9: PRINT "TO PRINT FORMAT":
PRINT
180 PRINT "-----"
185 VTAB 22: HTAB 4: PRINT "HIT ANY KEY WHEN READY"
190 GET d$
192 GOSUB 540
195 PR #1: PRINT
200 POKE 12185, 240
205 PRINT TAB(4); "-----"
----- CUT"

```

```

206 GOSUB 235: PRINT TAB(16); "DATE: "; mo; "/" ; dy; "/" ; yr; "      NAME:
"; na$
208 GOSUB 235: GOSUB 238: GOSUB 235
210 FOR i = 1 TO 35 STEP 2: GOSUB 236: NEXT i: GOSUB 235: GOSUB 238
215 PRINT TAB(4); "-----"
----- FOLD"
220 FOR c = 1 TO 29: GOSUB 240: NEXT c
225 PRINT TAB(12); "----- CU
T"
230 PR #0: TEXT: PRINT: GOSUB 5000: PRINT: PRINT: PRINT: PRINT: GOTO 4005
235 PRINT TAB(3); "!" ; PRINT TAB(11); "!" ; PRINT TAB(67); "!" ; PRINT TAB
(13); "!" : RETURN
236 PRINT TAB(3); "!" ; PRINT TAB(11); "!" ; PRINT TAB(16); fl$(i); PRINT
TAB(9); fl$(i+1);
237 PRINT TAB(36); "!" ; PRINT TAB(13); "!" : RETURN
238 PRINT TAB(3); "!" ; PRINT TAB(11); "!" ;
239 PRINT TAB(14); "***** !
!" : RETURN
240 PRINT TAB(11); "!" ; PRINT TAB(67); "!" : RETURN
540 REM
545 REM
550 PRINT CHR$(4); "CATALOG"
555 REM $(4); "CATALOG"
560 FOR i = 54272 TO 55296 STEP 26
565 p = PEEK(i+12): IF i < 54340 THEN GOTO 585
570 FOR t = 0 TO 12: IF PEEK(t+i) = 3 THEN GOSUB 6000: t = 12: GOTO 580
575 lt = PEEK(t+i): pl$ = pl$+CHR$(lt)
580 NEXT t: num = num+1
582 IF e = 1 OR pl$ = "" THEN fl$(num) = ".....": pl$ = ""
585 NEXT i
586 RETURN
4005 HTAB 2: PRINT "ANOTHER COPY (Y/N) ";
4006 GET q$
4010 IF q$ = "Y" OR q$ = "y" THEN CLEAR: GOTO 10
4015 IF q$ = "N" OR q$ = "n" THEN CLEAR: GOTO 9000
4020 GOTO 4005
5000 INVERSE: VTAB 1: PRINT "***** JACKET MAKER *****": NORMAL: RETURN
6000 tt$ = CHR$(PEEK(t+i-1)): sb = PEEK(i+13): nb = PEEK(i+17)
6002 IF p <> 16 AND p <> 208 THEN tt$ = ""
6004 IF p = 20 THEN tt$ = "D"
6006 IF LEFT$(pl$, 7) = "BLOCKS " THEN e = 1
6010 IF LEN(STR$(sb)) = 1 THEN sb$ = " "+STR$(sb): GOTO 6040
6020 IF LEN(STR$(sb)) = 2 THEN sb$ = " "+STR$(sb): GOTO 6040
6030 sb$ = STR$(sb)
6040 IF LEN(STR$(nb)) = 1 THEN nb$ = " "+STR$(nb): GOTO 6065
6050 IF LEN(STR$(nb)) = 2 THEN nb$ = STR$(nb): GOTO 6065
6060 nb$ = STR$(nb)
6065 lh = LEN(pl$): pl$ = LEFT$(pl$, lh-1)
6066 sb$ = sb$+" " : nb$ = nb$+" " : tt$ = tt$+" "
6070 fl$(num) = sb$+nb$+tt$+pl$: sb$ = "": nb$ = "": tt$ = "": pl$ = "": RETURN

8000 PRINT: PRINT: PRINT " * * * * E R R O R * * * *": PRINT: PRINT: PRINT
" TRY AGAIN"
8010 FOR i = 1 TO 5000: NEXT: RUN
9000 POKE 17115, 240: POKE 17059, 0: POKE 17126, 15: TEXT: END

```

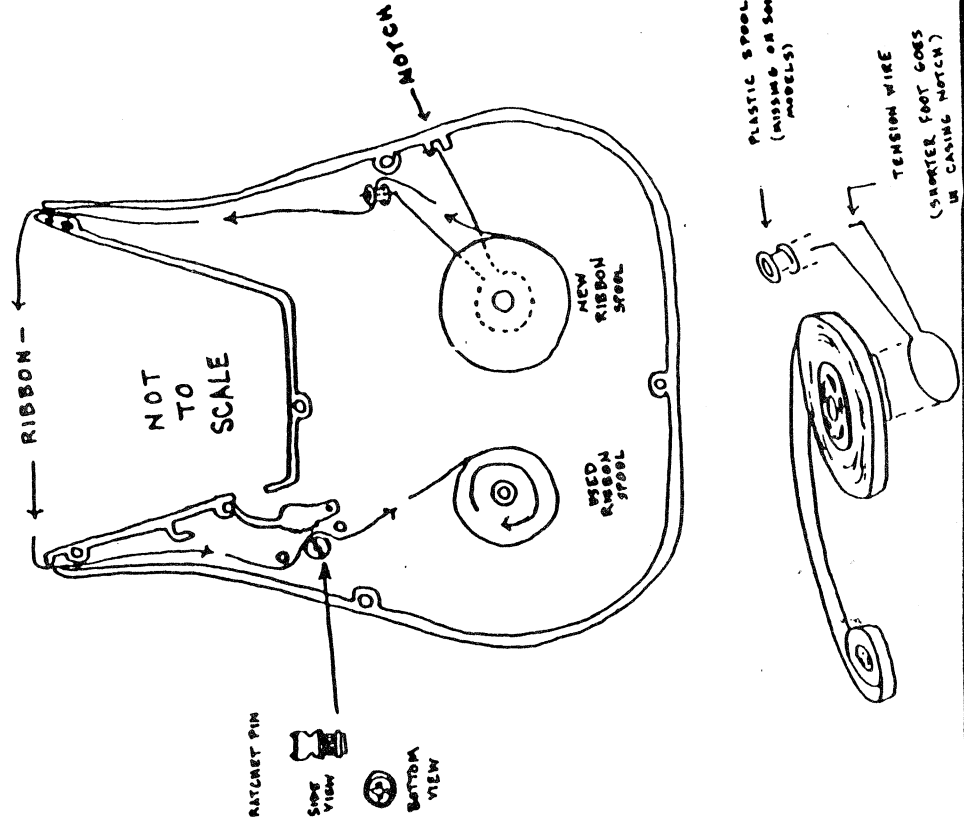


# LOW-TECH CORNER

To adjust the tension on a ribbon that doesn't advance properly:

Remove rubber band and set aside. Carefully remove top of ribbon casing, prying it loose with a thin-bladed screwdriver or equivalent. The cover is held in place by 6 molded pins which fit snugly into slots in the lower casing. It's stubborn, but it WILL come off. The 'ratchet pin' will pop out; set it aside. Lift up the right-hand ('new') ribbon spool, unwinding the ribbon as little as possible, and remove the tension wire from its base. Flex the wire gently to ease tension. Do not overdo this; if it gets too loose, your ribbon will jump the track when you're printing. Reassemble as shown. Be sure that the circular part of the wire fits into the ridge at the base of the ribbon, and that the shorter leg sits in the notch. The ribbon MUST follow the path of the arrows (the shiny side faces inward.) The ratchet pin must be placed with the cross-cut facing downward; it will be loose until you pop the top back in place. Don't forget your rubber band!

(Thanks to NIAD and Ellis Taff for additional input. Hope this helps!)




GRAPHICS WORKSHOP


The advent of the powerful POWERPAINT program releases even more of the ADAM's color graphics capability. Sophisticated software is always required to get the most out of the hardware. Wayne, in the second part of his review of POWERPAINT, provides some practical tips on using a program like this. Hopefully, this article will help many of you POWERPAINT owners get the most out of this package.

Wizard's Lair Software has just released CLIP ART Vol I, which contains 45 clip art files for use in POWERPAINT. Each picture is 64 by 64 pixels (about 1 inch by 7/8 inch when printed). POWERPAINT can access these pictures and they can be placed anywhere within a cell, combined with other clip art, free hand drawing done in POWERPAINT, text, etc. Clip art is available for all graphics design and printing packages for other computers - now ADAM has its own! These clip art pictures were created with the CLIPPER program reviewed a couple of months ago. CLIPPER is both a drawing program (limited to creating the 64 by 64 pictures) and a program that can "clip" a 64 by 64 picture from a larger picture file. Several of the CLIP ART Vol I pictures were created in this fashion. The RLE files that we have in our Public Domain library contain full size graphics pictures in a special coded format. Each volume contains a program which will display the pictures on a TV or monitor. POWERPAINT and GRAPHIX PIX also contain programs that will create picture files from these RLE files) that can be printed or used by programs like CLIPPER and POWERPAINT to aid in designing other graphics pictures.

NOTE: The SNAPSHOTS I program mentioned in last months issue are picture files that can be used by either the SIGNSHOP or NEWSMAKER programs.

Here some samples of the pictures contained on CLIP ART Vol I:



As you can see, there is no limit to what you can do these art files. See Wayne's review for more on POWERPAINT.



## SMARTBASIC WORKSHOP

We're continuing with the printing of L. C Austills's Basic Programming course. We think you will find it very helpful.

### CHAPTER III

The discussions to this point have been directed towards displaying material on the monitor, and communicating between ADAM and the programmer. One of ADAM's bigger break throughs for relatively inexpensive home computers was the tape drive system. To demonstrate how the system works:

Reenter the John Jones program into RAM again if its not in memory. Now place a digital tape in the tape drive. (Multiple drives will be covered later.) The program in RAM may be SAVED onto the tape under any name desired.

Names must begin with letter (not a number), but they may contain numbers, characters, etc. They are limited to 10 characters in length, but can be less. With the tape in the drive ENTER SAVE JONES. The tape drive sprang into action and stored the program under the name of JONES. The name could have been anything selected. To see if a program by the name of JONES was saved, try another command CATALOG with the RETURN key. Displayed on the screen should be a listing of the programs on the tape and the name of the tape. Before each program (or file) listing will be a letter. An A indicates that the program was saved from SmartBasic. An H indicates that it came from SmartWriter or is a data file. A lower case letter indicates that the file is a backup file. That occurs when a file with the same name is stored. A file with a lower case letter can not be directly accessed (more later). The number indicates the number of blocks used in storing each program or file. The number of blocks remaining on the tape is displayed last. Once a program is on tape, how is it reaccessed? 1. Clear out RAM by typing in the command NEW. That clears everything out of RAM. To be sure, type LIST. There should be nothing there.

2. Type the command LOAD JONES and the digital drive should start. When it stops enter LIST The program should appear and be able to run.

If there had been a program in RAM and the instruction LOAD JONES had been used, the program in memory would have been erased before the new program came in. This effectively prevents merging two programs together while in SmartBASIC. If this happens there are two ways to overcome it. The first requires that copies of both programs on tape (or a disk) be made. Reboot ADAM so

that the SmartWriter is available. Now "GET" the first program from the tape into Memory. Move the cursor past that material to the blank line after the program and "GET" the second program, etc. After all of the material is in SmartWriter, make a new copy of the total contents giving it any name. Return to SmartBASIC and load the new copy. CAUTION-- if there are two statements with the same number, one in each program, only the last one encountered will be in the new program. It prevents retyping entire programs again. When this feature is used, some thought should be given to the numbering system to be used. For example, write subroutines 10000 and above and SAVE separately. The second way is to use POKE commands and should be avoided by new programmers. When a program is finished, to remove it from the tape, the procedure is, enter DELETE along with the program name and ENTER. In the above example the command would be:

```
DELETE JONES
```

Files can be renamed. For example, rename JONES, to smith. The command is:

```
RENAME JONES, smith
```

When the above is typed, CATALOG will display whether it worked or not. Sometimes it is desirable to change a file name rather than delete it. The need will arise in some programs.

After some use, a tape will get a lot of material on it that is no longer wanted or the tape may be full and can't be used. To recover the tape use the command:

```
INIT name
```



The directory block on the tape will be erased and prepared for new entries. When CATALOG is requested the new name of the tape will appear. As the number of tapes (and disks) increases, identification is helpful. CAUTION WHEN INIT is used --EVERYTHING ON THAT TAPE WILL BE LOST! Copies of desirable programs should be saved before the INIT command is used. TAPES THAT CONTAIN OPERATING PROGRAMS SUCH AS SMARTBASIC, RECIPE FILER, ADAMcalc etc. SHOULD NOT BE INITIALIZED. While the tapes are supposed to be protected, the information might be destroyed. ADAM comes with one digital tape drive in the far left position

in the memory console. It is possible to have as many as two tape drives and two disk drives attached. When more than one drive is installed, it is necessary to tell ADAM where to store or get things. Once a drive has been selected, that will be the primary drive until another is selected. When SmartBASIC was loaded, that drive becomes the primary or default drive. (This may not always be the case as a copy of the SmartBasic tape may not have the correction made and tape drive 1 will still be the primary drive).

The identification of the drives is as follows:

Leftmost tape drive	d1
Rightmost tape drive	d2
No. 1 Disk drive	d5
No. 2 Disk drive	d6

There is no position description of disk drives as they are external to ADAM. The way they are connected and the position of a switch on the back of the case determine which is disk 1 and which disk 2.

The command - CATALOG, d5

will make the No. 1 disk drive the primary drive. That will remain until another drive is identified. Other ways of identifying a drive are: Save name, d2

LOAD name, d6

DELETE name, d1

INIT name, d1

Any drive designation may used after any commands.

When booting the computer, it will look for a tape in tape drive 1 first. If nothing is there, it will look at tape drive 2, then disk 1 and lastly disk 2. If there is nothing, it will go to the SmartWriter, or if the first drive containing a medium does not contain a system program such as SmartBasic, etc., it will go to SmartWriter.

If a drive in which there is not a tape or a disk is requested, ADAM will patiently wait (without telling you why) until something is put in that drive. That is a point to remember. In that situation, inserting a medium in the last active drive will solve the problem although the result may not be the desired one.

Tapes and disks have to be formatted. Normally, tapes purchased for ADAM are already formatted and are ready to use. Disks are not. The Disk Operating System that comes with a disk drive contains the software for formatting and must be used on every new disk. Once that is done, they may be INITIALIZED many times.



## CP/M 2.2 WORKSHOP

Our great CP/M Public Domain librarian, Sharon McFarlane has been very hard at work for all you CP/M lovers out there. She has gathered, extensively tested, modified and documented eight disks full of great CP/M programs!! We all owe her a great deal of thanks for this significant contribution to the ADAM PD collection. Here is just a brief list of what each volume contains. A complete doc for volumes 35 and 36 will be printed next month.

CNDV35 - Bradford printing program with all supporting fonts. This program provides for custom fonts on a dot matrix printer.

CNDV36 - Upgrades to major utility programs including NULU152A, CRUNCH24, FBAD60B, and others. CNDV37 - Upgraded version of the very popular VDE word processor (version 262). Macros are now supported.

CNDV38 - More new utilities like SUPERZAP, FU-V13, FILE23 and many others.

CNDV39 - A series of directory utilities including DIRFILES, EDIR, LT23, SEARCH, SPLIT45, etc.

CNDV40 - Latest version of the comprehensive IMP telecommunications program with all supporting files.

CNDV41/42 - Collection of Dbase II utilities and business programs. We'll have more on this next month.

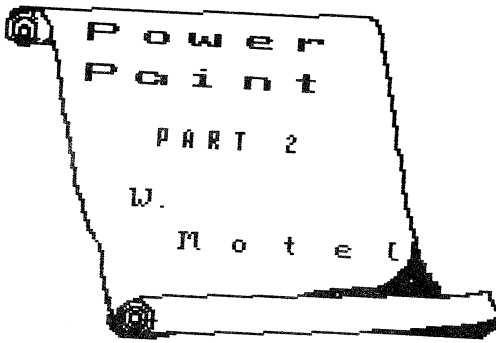


## PRODUCT REVIEWS



### *Power Paint Part 2 by W. Motel*

This month I'll discuss PowerPaint, by Digital Express, from the viewpoint of what I've found from working with it. As we said last month, this is the advanced graphics package from Digital Express. It allows you to create (with the 64K expander), up to 4 screens of graphics/text. This is roughly half of



expander, you can do 8 screens, or a full page. You can draw or paint in both the foreground and background to create more detailed graphics and eliminate the 8 bit horizontal color bleeding. You can 'overlay' both sprites (16 by 16 bit) and clip art (64 by 64 bit) graphics. Various text styles can be inserted. Printing can be done on your dot-matrix printer.

First, READ the MANUAL, experiment with each of the capabilities, then READ AGAIN. The book is an excellent manual, containing a vast amount of information. Experimenting shows you what you've read. Reread to see what you've missed the first time. Make note of all the commands AND SHORTCUTS available. There is too much to learn all at once.

Secondly, understand what foreground and background means and how to work with it and use it to your advantage. Try small examples on the screen and by printing to see what the difference's are. When doing a picture, decide if it's mainly for graphics or for printing. If it's for printing, remember that only the foreground prints. A design of 2 adjacent colors looks nice, but if they are both done in the foreground, they print as a solid black bar. If you have one as reground and one as background, they still look the same, but the print out is a little more pleasing. The REVERSE PICTURE option, which changes the background and foreground bits, is useful for printing, as the background is now the foreground, and thus prints.

Draw option is for thin, intricate detail. It is available in both foreground and background. You can use the arrow keys for movement. The Control and arrow key makes very smooth diagonal lines. Polygon option makes quick lines, circles, triangles, rectangles, and squares.

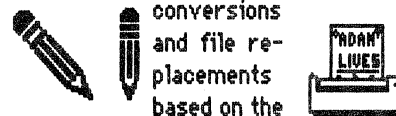
For larger fill ins, use the Sprite Art or Paint option. They both do the same thing, in that they overlay the area. Sprite Art uses the 16 by 16 bit sprite created with SpritePower. The Paint option overlays with the selected Brush, which is similar, but created as a shape. The brushes supplied with PaintPower are all 16 by 16 bits. The brushes are created as simple shapes. They

only have to exist in a 1000 byte normal shape table. Create your own smaller (smaller than 16 by 16 bit) brushes for more flexibility. The ones supplied are OK, but a little big for detail fillin. What you need are a set of squares, 2 by 2, 3 by 3, 4 by 4, etc. You can also create unique shapes particular to your own application, such as flowchart symbols, furniture designs for room arrangements, etc. PowerPaint uses whatever space the shape occupies, not the fixed 16 by 16 of the sprite. More flexibility for foreground/background designing.

When using text fonts, setting the text background to the color of the existing background blends the text into the existing graphics, but when you print this out, the background is now blank and the text prints out, as it is the foreground. Try using the inverse font instead. You can get the same graphic effect and get the printing to still print the background, with the text in white. Try this and you'll see what I mean. When using the fonts that you can orient sideways and upside down, practice and make note of where the alignment block shows on the screen and where the text character actually goes.

I found that saving the 4 cells individually, instead of as an entire workspace gives you more flexibility in reloading. Each cell can now be used in other graphics. Loading a cell only replaces the one cell you load to, but the workspace replaces the entire workspace. You can't load part of a workspace. Practice the moving window and pull options by placing the same full screen picture in 2 adjacent cells. This will help you see what these commands lets you do and how to use them to center a one cell picture into 2 cell halves.

When a file is loaded, PowerPaint does the necessary



conversions  
and file re-  
placements  
based on the

file type and/or name. A sprite

file should be created in SpritePower for use in PowerPaint by using the save Binary Image (not Z80) - file type H. Clipper Art file conversely are created in Clipper as Z80 - file type B. Font files from FontPower are also H files, but the file name ends with .fnt. Brush files are also H shape files, but they always have to be 1000 bytes long. If you get something strange, check the type and name. I found this by loading in a Clipper sample file that was the nary Image H type. PowerPaint treated this as a Sprite Art file (it's H type, not ending in .fnt or 1000 bytes long). PowerPaint does a lot of automatic file read conversion, just be aware of the rules.

When printing, remember this is a graphics program, thus printing is done as graphic images. Even though you might have all text, the print routines for the dot matrix printer treat the data as graphic images, therefore the

print time is longer. This is normal.

Once again, this is a great program. The more you work with it, the more you'll find uses for it and the more you'll see how to use it to its fullest capabilities. Enjoy! Editors Note: CLIPPER is a companion program to POWERPAINT, which provides the capability to create 64 by 64 pixel art files. See our review of CLIP ART Vol 1 in this issue for some examples of work done with this program. POWERPAINT allows you to take these art pictures and place them within an individual POWERPAINT cell which is 240 by 160 pixels. SPRITPOWER is another companion program that can be used for creating 16 by 16 pixel art files for use in POWERPAINT as well as for creating sprites for use in SMARTBasic programs.

### *SMARTDSK By L. Marschand*

This latest release from Walter's Software will be a great boon for us SMARTWriter users because we will finally be able to use a Ramdisk as an active drive, as is

available in SMARTBasic. SMARTDSK does require at least the 64K memory expander, but can use a 128K or 256K expander as well. Remember that SMARTWriter can only



handle documents up to about 7 pages long, utilizing the memory that comes standard in the ADAM. When you add a memory expander (64K or larger), SMARTWriter can handle documents up to approximately 20 pages long. SMARTDSK is a software program that is loaded (from tape or disk) that modifies ADAM's operating system to provide the capability to use the memory expander as a substitute for Tape drive #2. SMARTWriter is automatically loaded by SMARTDSK. An additional option is provided that will load a parallel printer driver for a dot matrix printer if you have one, otherwise the standard ADAM printer is used. Once, SMARTDSK is loaded and you are in SMARTWriter all things are normal until you want to save a document. When you're ready to save a document (remember, we recommend that you frequently save your documents and not wait until you are completely through typing in case a problem occurs which could wipe the document currently in memory), just use SMARTKEY IV (DRIVE B) and your document will be instantly saved to your memory expander. You won't believe how fast this is done as opposed to saving to a tape drive and even a disk. Storing a multi page document to tape took 3 minutes, 38 seconds; to disk 44 seconds,

but only 23 seconds when storing to the memory expander using SMARTDSK. The other advantage of SMARTDSK is the savings of wear and tear on your tape/disk drives. Walter's has cleverly designed their program so that it uses the 64K memory expander from the opposite end that SMARTWriter uses it. As mentioned above, if a document goes above approximately 7 pages it begins to use the 64K memory to keep the pages above 7. A potential problem exists if you have a very large document in memory (some of which will be stored in the 64K memory expander) and then you save it to the memory expander - one may overlap the other. This would only be a problem with very large documents- 10 pages or more. SMARTDSK is also compatible with Walter's RAMDISK and MEDIA AID software. This gives the flexibility of saving a program using the RAMDISK program and accessing it using SMARTDSK or vice versa.

Also, MEDIA AID can be used to copy a file from tape/disk to the 64K memory, then load SMARTDSK and access it using SMARTWriter. Total flexibility is provided in this way. Walter's has provided a unique product which enhances the utility of SMARTWriter and reduces wear and tear on tape and disk drives.

RATING - A +

### *Beyond Trek by W. Motel*

This is a new version of the strategic variety of Star Trek games that have been around. It is not a graphic game, but is a graphically enhanced version of the older Data Doctor Klingon Challenge from Strategy Strain Vol. 1. You look at the view screen, similar to what Capt. Kirk would see. Your view is the quadrant starbase and the klingon ships surrounding it. The 2 thru 5 klingon ships are color-coded for easy ship number identification. The starbase color indicates its damage status. Your mission is to destroy the klingons in all 4 quadrants, before they destroy the enterprise. Points are accumulated for hitting and destroying the klingons, saved starbases, ending shield status, and surviving crew member counts. If you rank within the top 10 scores, you can enter your name into the Hall of Fame. These can optionally be saved on your game disk. You have 4 basic command groups and sub options within each. These are Status Report (klingon, enterprise, or starbases), Fire Weapons (phaser, front/rear photon, plasma bolt, and antimatter bomb). You also have Manuever, and Cloak/Repair. Status reporting does not count as a move, but after a randomly chosen 1 to 3 of the others, the klingon's will return fire on you and/or the starbases in your current quadrant and the other 3 quadrants. Your weapons each have their

effectiveness ranges. You can use your cloaking device and you have shield power, as do the klingons. You may use impulse or warp power (up to warp 8). You can also hyperspace to the 4 quadrants. As with most of the Star Trek type games, this one relies on strategy and planning. You have 4 levels of play, which vary the number of klingons per quadrant (1 more klingon than the level number).

Rating: B

### *NIAD GOLD SCIENCE & EDUCATION*

This is a selection of 23 educational oriented games for children of various ages, from preschoolers to Junior High. Thanks to Bob Tarnowski for putting together such a fine volume for our children.

**ADDITION** - Uses 3 difficulty levels. Problems are presented and must be answered within a set timeframe. Scores are recorded and grades given !

$$1 + 2 = 3$$

**ALC-CALC** - Calculates blood alcohol content based on a standard medical formula. Also has a reaction timer that measures your reaction in 100's of seconds - try it !

**AVERAGER** - Calculates the average of a list of numbers. The results can be printed, along with the list you entered.

**CALCULATOR** - Comprehensive program providing a SMARTKEY driven set of functions: addition, subtraction, multiplication, division, percentage. Additionally, functions are provided for arctangent, cosine, expnum, natural log, power, sine, root and tangent.

**CONSTELLATION** - Provides data and a picture of the 12 major constellations. Also has a quiz section that displays each constellation and asks you to name it and its brightest star.

**CONVERTER** - Automatic converter of various units of measure (meters, inches, feet, rods, acres, etc) for length, area, volume, mass, velocity and pressure.

**DICE** - An automated pair of dice !

**FIRESAFETY** - A very well done set of instructions for fire safety in the home. All kids should play this one.

**GRAVITY** - An interesting color graphics game, although a bit slow moving. A well done space science is drawn and the players mission is to set a course through a number of planets to a base station. The problem is to allow for the gravitational pull of the various planets, considering their effect on each other.

**HEXCONVERT** - Conversion program between hex and decimal.

**LIFE** - This is the classic computer game of life, but with some nice additions. Using the control stick you enter the life cells, in various groups using different colors and at what ever density you wish. The calculations for each generation (you also pick how many generations to play out) take 62 seconds. Good rendition of this classic.

**MORSECODE** -Practice drill for those learning morse code. You can enter a message and ADAM will sound out the equivalent morse code. You can enter an individual letter and the dot/dash(s) will be displayed and sounded out. The speed can be set from 1 to 6 depending on your skill level.

**MULTIPLY** -Drilling program, provides three levels of difficulty and a timer you must beat.

**NUMBERFAX** - For any number entered the following is computed -square, square root, cube, cube root, log, reciprocal.

**PLANETLBS**-Calculates how much you would weigh on the nine planets of our solar system.

**PLANETS** -Gives statistics on each of the nine planets -albedo, distance from the sun, orbital speed and density, diameter (draws picture), escape velocity, mass, moons and other facts.

A B C D E F ...



**PRESCHOOL** - An excellent program for this fun age. Super large, high resolution letters, numbers or shapes are drawn for the child to identify. Correct responses are rewarded with a nice color display. This program is similar to programs I have seen for the Apple or PC that cost \$25 and up ! If you young ones, this is a must.

**SPANISH** -A vocabulary quiz where you must supply the English equivalent. Score is calculated and you will get a grade.

**TYPEDRILL** - A nicely done typing drill with 3 speeds and 3 difficulty levels. Letters, numbers and punctuation characters are scrolled across the screen and you must strike the key as fast as you can. Errors and misses are recorded and a score calculated which can be printed. Works very well to improve keying skills.

**USAMAP** - A great drawing of the Good Ole USA, with all states outlined.

**USACITYQUIZ** - Cities are displayed and you must name the states.

**USPRESQUIZ** - You must enter the names of each of our presidents.

This is a top notch set of educational and fun programs that will offer hours of enjoyment and learning.

RATING - A+

## SEGA UPDATES

### *Great Basketball Review W. Motel*

This is Sega's Basketball game for 1 or 2 players. It uses the normal controller's, not the sports pad. In the 2 player game, you compete head to head against your opponent. In the 1 player, you compete in an 8 team tournament. You chose one of the 8 countries as your team. You must win against each of the remaining 7 to win the Championship. 2 losses and you're out. Each of the 8 teams have their own characteristics for speed, jump, pass, and shooting precision. As you progress, you get better as do your opponents. A game is two 3 minute halves, with 90 second overtimes until there is a winner.

The controller is used to move the offensive player with the ball and the defensive player indicated by the arrow. Button 1 is used to jump and shoot. Button 2 is used for passing. A double button push would execute a jump pass or jump hot. A pass is made to the flashing offensive player (player picked by the computer). The defensive player can attempt to steal the ball or jump to block a pass or shot. When a shot is attempted, the factors that effect its success are your distance to the basket, how close a defender is, and the teams shooting precision factor. A referee will automatically call fouls for charging, pushing, or traveling. There are free throws and 3 point shots. After you win a game, you have the opportunity to upgrade your own team factors by earning vitality points. These can then be applied as you see fit. This will help you in your later tournament games.

### *Zillion Review By W. Motel*

Your mission in this adventure, travel thru the alien maze of tunnels and rooms to recover the 5 floppy disks needed to destroy the alien's central computer. You must also rescue your 2 captured comrades, who are trapped somewhere in the labyrinth. The entire maze covers a 16 by 8 location area, so this is not only an action game, but

a strategy game requiring planning, memory, and a good map. You are armed with your laser gun Zillion. As you travel you encounter alien warriors of various strengths. You also encounter rooms with cylinders that must be destroyed. These contain either helpful items or symbols that are needed to gain access to the rooms computer. This is necessary to open doors to enter the other rooms. The computer also gives you access to various commands to warp, stop various alien defenses, or display maps. Finding and rescuing your comrades is also important in that you can exchange characters during the game. This is useful as each of your 3 characters having different factors for jumping, speed, and damage that they inflict on the enemy. The game will take time to get thru and solve. There is no save game option, but you can go back to your ship an unlimited number of times to replenish your energy. You can also continue from where you died up to 3 times per game. The symbols in the rooms needed for computer access are randomly changed each time you enter the room during the same game or a different game, therefore you can not remember the access codes. If you like a good thinking/strategy game for Sega, this is it.

## GAMES BY Jim Goebel

### GAMES WORKSHOP

Hello. This month, I am going to answer a letter, and give some tips for a couple of games.

Norman Fraga wrote me a letter about the Sega System. He mentioned that Sega has a newsletter, and hint sheets available from them. He also mentioned that Sega is currently programming 7 new 3-D games and that the system itself can be hooked up to a RGB monitor that has a TTL Analog input. Thank you for your letter Norman. EDITORS NOTE: Norman was nice enough to send us teh SEGA Game Hint sheets. You may order them from us for \$1.50 to cover duplication costs and postage.

While I was chatting with Alan Neely on his BBS (call it at (801)-484- 5114) He gave me the following trick for Miner 2049er: When the game displays "1 or 2 players" enter the following code 6453\* and the screen you wish to play. The screen number is from 1-9 on the keypad, while level 10 is "\*" and 11 is "\*\*". Before I had started writing this article, I made it past the first level on the Fall Guy. There are two things about this game. First, for a map, send a SASE to the user's group and NOT the games address (I will give some away at the march meeting). Secondly, in the warehouse screen. When you land on the second floor, go all the way to the LEFT. Then



run right and jump. Now you should be on top of the first crate. Now run RIGHT. You should fall through the hole on the right. When you fall, adjust it so that you land on your feet. The last floor you should be able to handle. Next, here are the phone numbers for the 3 big video game companies.

SEGA 1-800-USA-SEGA  
1-415-742-9300

NINTENDO 1-800-422-2602

Nintendo game assistance line 1-206-885-PLAY

ATARI 1-408-745-2367 Please note that ATARI home games and ATARI arcades games are now two different companies. This is the home games number. And finally, I wish to say that if you have any tips, questions, or updates, write to:

Game c/o Jim Goebel jr  
2904 Kellogg St.  
Joliet IL 60435

## HEX CONVERT

Here is a very useful little program for converting hexadecimal to decimal numbers. The program has some nice routines that you can consider.

0 & NIAD PUBLIC DOMAIN VOLUME # BN  
DV 20

```

1 REM   Programed by Gary J. Gumkowski
10 REM   PROGRAM TO CONVERT
20 REM   HEX TO DECIMAL NUMBERS
30 HOME: CLEAR: vt = 2
40 a$ = "*****": GOSUB 9000
50 vt = 4: a$ = " PROGRAM TO CONVERT HEXIDECIAL
VALUES TO STANDARD DECIMAL VA
LUES": GOSUB 9000
60 GOSUB 9000: a$ = "*****"
****": GOSUB 9000
100 REM   =INPUT HEX=
110 vt = 10: a$ = "INPUT HEX VALUE": GOSUB 9000
120 vt = 16: a$ = "DECIMAL EQUIVELENT OF": GOSUB
9000
130 VTAB 12: HTAB 12: CLEAR: INPUT hex$
140 VTAB 18: HTAB 1: PRINT
200 REM   =CHECK INPUT=
210 IF hex$ = "" THEN END
220 IF LEN(hex$) > 6 THEN VTAB 12: PRINT: GOTO 1
30
230 hl = LEN(hex$)
300 REM   =CHECK EACH DIGIT=
310 FOR i = hl TO 1 STEP -1
320 h$(i) = MID$(hex$, i, 1)
330 NEXT i
    
```

```

400 REM   =CALCULATE DEC VAL=
410 FOR i = hl TO 1 STEP -1
420 IF h$(i) = "a" THEN h$(i) = "10"
430 IF h$(i) = "b" THEN h$(i) = "11"
440 IF h$(i) = "c" THEN h$(i) = "12"
450 IF h$(i) = "d" THEN h$(i) = "13"
460 IF h$(i) = "e" THEN h$(i) = "14"
470 IF h$(i) = "f" THEN h$(i) = "15"
480 IF h$(i) > "f" THEN vt = 19: a$ = "BAD NUMBE
R, PRESS ANY KEY TO CONTINUE"
: GOSUB 9000: GET c$: VTAB 18: PRINT: PRINT: PRINT
490 IF h$(i) > "f" THEN VTAB 12: PRINT: GOTO 130
500 REM   =CONVERT STRING=
510 hv = VAL(h$(i))*16^(hl-i)
520 dec = dec+hv
530 NEXT i
600 REM   =PRINT OUT ANSWER=
610 vt = 18: a$ = "HEX "+hex$+" = "+STR$(dec): GO
SUB 9000
700 h = dec/256: hl = INT(h)
710 lo = dec-(256*hl)
720 VTAB 20: HTAB 10
730 PRINT "LO BYTE="; lo
740 VTAB 21: HTAB 10
750 PRINT "HI BYTE="; hl
1620 VTAB 12: HTAB 1: PRINT
1630 GOTO 130
8999 END
9000 REM   =AUTO PRINT FORMAT=
9010 IF LEN(a$) <= 31 THEN b$ = a$: a$ = "": GOSU
B 9110: RETURN
9020 FOR x = 2 TO 32
9030 IF MID$(a$, x, 1) = " " THEN y = x-1
9040 NEXT x: b$ = LEFT$(a$, y): a$ = RIGHT$(a$, LE
N(a$)-y-1)
9050 GOSUB 9110
9060 GOTO 9010
9100 REM   =OUTPUT SUBROUTINE=
9110 IF vt = 0 THEN vt = 1
9115 m = LEN(b$)
9120 IF m/2 <> INT(m/2) THEN b$ = b$+" ": m = m+1
9130 FOR n = 1 TO m/2
9140 VTAB vt: HTAB 16-n: PRINT LEFT$(b$, n); RIGHT
$(b$, n);
9150 NEXT n: vt = vt+1
9190 RETURN
    
```

**PRODUCT LIST**

PRICES EFFECTIVE: 3/1/88

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**OTHER SOFTWARE**

Specify .DDP or .Disk

VIDEOTUNES	\$ 25.95
FANTASY GAMER	\$ 22.95
BASIC BONANZA	\$ 18.95
SOFTPACK I	\$ 16.95
LVAC ARCHIVE I	\$ 9.95
READY SOFTWARE LIB	\$ 15.95
QUICKFAX QUEST	\$ 9.95
PERSONAL ACCOUNTANT	\$ 18.95
STRATEGY STRAINER I	\$ 9.95
PAINTMASTER	\$ 18.95
BUSINESS PACK	\$ 22.95
TURBOLOAD	(DDP) \$ 15.95
POWERPRINT	(DDP) \$ 22.95
SIGNSHOP	(DDP) \$ 15.95
QUICKCOPY	(DDP) \$ 15.95
MULTIWRITE	(DDP) \$ 9.95
ELECTRIC GAME PACK	(Disk) \$ 17.95
Specify I or II	(DDP) \$ 18.95
REDO BUMPER	(Disk) \$ 15.95
ENTERTAINMENT PACK	(DDP) \$ 17.95
JEPARDY QUESTION PACK	(DDP) \$ 14.95
FAMILY FEUD QUESTION PACK	(DDP) \$ 14.95
TRIVIA PACK I	(DDP) \$ 12.95
KIDS TRIVIA	(DDP) \$ 14.95
PRO FOOTBALL	(DDP) \$ 18.95
BACKUP 3.0 (COPY ONLY)	\$ 16.95
BACKUP 3.0 (COPY/UTILITY)	\$ 24.95
SMARTGAMES PACK	(DDP) \$ 9.95
ROYAL AMBS. EDUC PKC (Disk)	\$ 11.95
(Christian Pems)	\$ 9.95
CPM NEVADA BASIC	(DDP) \$ 11.95
SP-1 CUSTOM SOFTWARE for	\$ 39.95
Smartwriter/Filer (Specify printer)	\$ 7.00
GRAPHIXPAINTER	\$ 19.95
For Dot Matrix printers	\$ 19.95
GRAPHIXPIX I	\$ 14.95
SPRESS WORDS	\$ 9.95
SPRINGS CALENDAR	\$ 8.95
JEPARDY QUESTION MAKER	\$ 18.95
FAMILY FEUD QUEST MAKER	\$ 18.95
Each of Quest Makers (Disk)	\$ 24.95
BASIC RAM DISK Use (Disk)	\$ 26.95
64K, 256K in BASIC (DDP)	\$ 24.95
REVISED (Specify Basic V1.0 or V2.0)	\$ 28.95
PAINTINGS (Disk)	\$ 7.95
Specify Vol 1,2,3 (DDP)	\$ 9.95
SIGNS (Disk)	\$ 7.95
Specify Vol 1 or 2 (DDP)	\$ 7.95
JANES'S RECIPES 25 rec/vol	\$ 9.95
(Specify Disk or DDP and VOLUME	\$ 7.00
V1 Deserts, V2 Salad, V3 Outdoor, V4 Holiday)	\$ 7.00
MICROWORKS (DDP)	\$ 29.95
Filter, Calc, Graph, Text	\$ 29.95
EASY COME, EASY GO	\$ 19.95
WIZARD'S PINBALL ARCADE	\$ 18.95
ADMTALK	\$ 18.95
Interpreter for EVE Speech	\$ 18.95
SYNTHESIZER (DDP)	\$ 18.95
AMERICAN WAR QUIZ (DDP)	\$ 9.95
WORLD GEO. (DDP)	\$ 9.95
HOME FILE MANAGER (DDP)	\$ 9.95
PERSONAL CHECKBOOK (DDP)	\$ 9.95
HOME BUDGET (DDP)	\$ 9.95
BASIC SYSTEM MGR/FASTRUN	\$ 18.95
LAB MOUSE (DDP)	\$ 12.95
STATES and CAPITOLS (DDP)	\$ 9.95
WORLD CAPITOLS (DDP)	\$ 9.95
GREAT INVENTIONS (DDP)	\$ 9.95

**OTHER SOFTWARE**

CONTINUED

BASICIDE	\$ 9.95
MEDIA-AID PLUS	\$ 19.95
Specify basic V1.0 or V2.0	\$ 19.95
SMART LOGO	(DDP) \$ 17.95
PROOF READER	\$ 34.95
LIBRARIAN	\$ 18.95
NIAD GOLD SERIES	\$ 9.95
GAMES 1	\$ 9.95
TEXT ADVENTURE	\$ 9.95
HOME/BUSINESS	\$ 9.95
SCIENCE/EDUCATION	\$ 9.95
MICROTALK	\$ 19.95
(Requires speech synthesizer)	\$ 19.95
STAGE FRIGHT	\$ 19.95
ADAMCALC Dot Matrix PATCH	\$ 9.95
ADAMCALC Dot Matrix PATCH	\$ 9.95
SPRITE POWER	\$ 18.95
CLIPPER	\$ 14.95
POWER PAINT	\$ 34.95
BEYOND TREK	\$ 16.95
NEWSMAKER	\$ 4.95
NEWSMAKER (Vol 1)	\$ 26.95
SMARTSHOOT	\$ 18.95
SMARTDISK	\$ 18.95
CLIP ART (Vol 1)	\$ 12.95
CLIP ART (Vol 1)	\$ 12.95

**COLECO SOFTWARE**

(DDP, unless noted)

SMART LOGO	7600	\$ 29.95	SPECIAL
EXPER PLE	7602	\$ 19.95	SPECIAL
RECIPE FILER	7813	\$ 15.95	SPECIAL
SMART LTRS/FORMS	7804	\$ 15.95	SPECIAL
FLASHCARD MAKER	7862	\$ 15.95	SPECIAL
FLASHFACTS (TRIVIA 2902)		\$ 11.95	EACH
CP/M 2.2	7832	\$ 29.95	
ADAMCALC	7831	\$ 24.95	
R. SCARRY WORDBOOK	7658	\$ 20.95	
WACKY WORD GAME	7834	\$ 15.95	
DONKEY KONG JR.		\$ 19.95	
SUPER ZAXXON	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

(Specify ddp or disk)

**ACTIVISION SOFTWARE**

ALCAZAR	\$ 27.95
ROCK N' BOLT	\$ 27.95
BOULDER DASH	\$ 27.95
RIVER RAID	\$ 22.95
KEYSTONE KAPERS	\$ 22.95
PITFALL II	\$ 22.95
DEATHLON	\$ 18.95

**IMAGIC SOFTWARE**

MOONSEEPER	\$ 27.95
INTERPHASE SOFTWARE	\$ 18.95
SEWER SAM	\$ 22.95
AQUA ATTACK	\$ 22.95
BLOCKADE RUNNER	\$ 18.95
SQUISH N' SAM	\$ 18.95

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

CARBAGE PATCH ADV. IN PARK 128K Version  
FALL GUY and VIDEO HUSTLER  
YOKES ON YOU and MATH WIZ

**PRODUCT LIST**

PRICES EFFECTIVE: 3/1/88

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**NIAD USER GROUP PRODUCTS**

PUBLIC DOMAIN

PLEASE Specify VOLUME # and Disk/DDP

NOTE: \$ 5.00 Disk - \$ 7.00 DDP

SMARTBASIC # 1 - 25 (25 Different)	
SMARTLOGO # 1 - 3 (3 Volumes)	
ADAMCALC # 1 - 2 (2 Volumes)	
BASIC UTILITIES # 1 - 2 (2 Volumes)	
CP/M 2.1 Includes backup utility)	
CP/M 2.1 - # 1 - # 42 (42 Volumes)	
JEPARDY/HARDHAT MACK	
NIAD BACK ISSUE INDEX - Smartfiler file	
ADD \$ 2.00 for 40 page manual	
PINBALL GAMES 5(Volumes 1 and 2)	
Requires Pinball/Hardhat Mack	
SUPER SUBROC	
TROLLS TALE	
ADAM DIAGNOSTIC	
Requires 64K expander	
ADAMLINK II TELECOMMUNICATIONS	
SMARTBASIC REPLACEMENT DDP	
SMARTBASIC V2.0 with doc. file	
NIAD BACK ISSUE INDEX - Smartfiler file	
EOS DISK MANAGER - (Replacement on disk or DDP)	
RLE PICTURE FILE # 1-3 (3 volumes available)	\$ 7.00
CUSTOM PRINTER SOFTWARE	
NIAD PD SIGNS VOLUME 1	
VIDEOTUNE SONGS - Volumes 1 and 2	
1 MINUTE FORMATTER (Disk)	

**NIAD SPECIALS**

Collecovision/Adam

GRAPHIXPIX I and EITHER PAINTINGS	\$ 19.95
VOIS 1, 2, or 3	\$ 19.95
PAINTMASTER and EITHER PAINTINGS	\$ 27.95
VOIS 1, 2, or 3	\$ 9.95
NIAD LOGO/LOGO/GRPHICS 2698	\$ 18.95
NIAD ECONOMY DDP - Non LORAN 10 for	\$ 19.00
SUPERACTION CONTROLLERS 2491	\$ 48.95
EXPANSION MODULE 2 (Orlyver 2413)	\$ 48.95
ORPHANWARE PIA2 PARALLEL INTERFACE	\$ 289.95
& PANASONIC 10801 PRINTER W/CABLE	NEW LOW PRICE
Everything you need to hook it up	
ORPHANWARE PIA2 PARALLEL INTERFACE	\$ 249.95
& OKI 20 PRINTER-ADAM PLUG/PRINT	
Everything you need to hook it up	
OKI 20 PRINTER-ADAM PLUG/PRINT	\$ 199.95
No interfaces on cables	
NEW ADAM (tan) HAND CNTL'S	\$ 9.95
NEW ADAM KEYBOARDS	\$ 19.95
ADAMNET CABLES for KEYBOARD/DISK	\$ 2.95
ADAMNET CABLES for SUPERGAME COPY	\$ 8.95/1000
3 1/2 x 11 20 LB PIN FEED PAPER	\$ 18.95/500
9 1/2 x 11 20 LB PIN FEED PAPER	\$ 4.00 EACH

NOTE: You must send label card from game as proof of purch: Family Feud, Best of Brotherbund

SMARTLOGO with LATEST VERS. \$ 4.00

Send in your Filer Disk/DDP

BACK ISSUES of NIAD from 1/85 \$ 3.00 EACH

10 or more \$ 2.50 EACH

RIGHT DIR TAPES for SUPERGAME COPY \$ 2.50 EACH

UPDATES of FIXES to PD tapes \$ 3.00 EACH

**SUPPLIES**

RIBBONS

ADAM REPLACEMENT

PANASONIC 1080/10901

OKIMATE 20 RIBBONS

Color \$ 4.95 EACH

Black \$ 9.95 EACH

\$ 4.95 EACH

\$ 5.95 EACH

**COVERS**

3 PIECE FOR COMPLETE ADAM

DISK DRIVE ONLY \$ 18.95

3 PIECE FOR EXPANSION ADAM \$ 23.95

PRINTER WHEELS \$ 5.95

SPECIFY FONT STYLE for the ADAM printer

Gothic 12, Script 12, Elite 12, Emphasis,

Courier 12, Pica

Drive 72, Head CLEANING KIT \$ 50

DISK DRIVE HEAD CLEANING KIT \$ 18.95

Centra's 2 cleaning diskettes/fluid

**DISK/DIGITAL DATA PACKS**

COLECO/LORAN DDP 10 for \$ 4.75 EACH

NIAD/LORAN DDP 10 for \$ 39.95 EACH

NIAD (Non LORAN) DDP 10 for \$ 4.95 EACH

BOX of 10 LORAN DS/DD Diskettes \$ 19.00

5 Boxes 50 Diskettes \$ 9.95 SPECIAL

**PINFEED PAPER/LABELS**

9 1/2 x 11 20# MICROPERF PAPER \$ 9.95 /500

9-1/2 x 11 OKI-20 THERMAL PAPER \$ 16.95 /1000

3 1/2 x 15/16 PIN FEED ADDR LABEL \$ 8.95 /250

**CARTRIDGE SOFTWARE**

Collecovision/Adam

SMURF PAINT/PLAY	2697	\$ 18.95
SUESS FIXUP PUZZLE	2699	\$ 18.95
T-TURTLE LOGO/GRPHICS 2698		\$ 18.95
DAMBUSTER		\$ 29.95
WW II Bomber/Dogfight		\$ 29.95
TAPPER		\$ 22.95
TARZAN		\$ 22.95
BEAMRIDER		\$ 22.95
HERO		\$ 22.95
MARGAMES		\$ 18.95
CABBAGE PATCH PICTURE SHOW		\$ 18.95
HEIST		\$ 9.95
LEARNING WITH LEEPER		\$ 9.95
NOVA BLAST		\$ 18.95
GOLF		\$ 18.95
CENTIPEDA		\$ 12.95
DEFENDER		\$ 12.95

**CP/M 2.2 COMM L SOFTWARE**

**INFOCOM PRODUCTS**

Requires ADAM CP/M software

Disk only

PLANETFALL	\$ 34.95
ZORK I	\$ 29.95
ZORK II	\$ 39.95
STARCRSS	\$ 39.95
DEADLINE	\$ 39.95
PRINTERS GUIDE	\$ 49.95
SUPERCAL	\$ 49.95

PRODUCT LIST 3/1/88

HARDWARE & ACCESSORIES

NOTE: SEE SPECIALS ON NEXT PAGE AS WELL

- ADAM DISK DRIVE 7817 \$225.00
- 5-1/4" high-capacity disk drive for the Coleco Adam.
- \*\*\*\*\* TWO FOR \$399.95
- Provides expanded capability for faster storage and retrieval and increased reliability. Requires standard diskettes.
- ADAM LINK MODEN 7818 \$49.95
- ADM phone modems which provides capability, with included software, to interface with other ADM computers or large bulletin board systems such as Compuserve.
- NOTE: Order ADM Link II software from Public Domain list which will allow upload/download of programs.
- COMPUSEIVE STARTER KIT \$29.95
- Includes account number, password and five free hours of connect time to the popular computer information system.
- DIGITAL DATA DRIVE # 2409 \$29.95
- DD (but not based) digital data drive which can be used as a replacement or as a second drive.
- 54K MEMORY EXPANDER ME-64 \$49.95
- Provides additional 64K of memory for SMARTWIT, CPB programs. Provides print buffer spooling for ADM/CLK.
- 256K MEMORY EXPANDER \$149.95
- Provides 256K ram disk master CP/M 2.2
- Requires addresser card (add'l \$17) if you don't have P112 interface. Must send in P112 for modification if you have it.
- EYE RE-212/PARALLEL INTERFACE SP-1 \$139.95
- Allows the connection of the ADM to any popular printer and other devices requiring either serial or parallel interface connections. Includes software for directing print to additional printers directly from SMARTWIT, SMARTER, BWC, CP programs.
- EYE SP-1 PARALLEL INTERFACE ONLY \$79.95
- ORIHANWARE PLAZ PARALLEL INTERFACES \$39.95
- (parallel cable required - see next item)
- PARALLEL OR SERIAL CARDE SP-1C \$15.95
- Cable required to attach SP-1 or P112 interface to other printers.
- SHELDON PARALLEL CABLE \$24.95
- Parallel cable containing extra shielding to prevent interference with TV sets.
- ORIHANWARE 3D COL VIDEO UNIT \$199.95
- 3-Dimensional unit
- Provides 10 column video output for CP/M software. Switches various terminals.
- EYE MULTI-UNIT ADAPTER WA-3 \$44.95
- Special adapter cable required to attach both the SP-1 and SP-0C to the ADM. NOTE: Not required for 80-column video board.
- ADAM PRINTER TRACTOR FEED \$72.95
- Feeds into the ADM printer as originally designed to provide for feeding of pin-fed continuous form paper.

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- PRINTER ON/OFF SWITCH \$12.95
- Replaces 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 ADM console to a video monitor. Supports both picture and sound signals.
- still - see review in 7/85 issue.
- \* RECEIPT DOP OR DISK FOR SOFTWARE PROVIDED
- SPECIALS/ NEW PRODUCTS
- 54K MEMORY EXPANDER & SMARTDISK \$59.95
- Provides full ability to use kit expander from SMARTDISK as a ram disk. Specify whether you want the basic RAM monitor or cable above.
- BASIC RAMDISK PROGRAM FOR BASIC V1.8 OR 1.8
- POWER SUPPLY FOR COLECO DISK DRIVE \$19.95
- POWER SUPPLY FOR COLECOVISION \$9.95
- MAGNAVOX CH8505 COLOR MONITOR \$249.95
- Use with the ADM for better color. Also compatible with all other computers as well.
- 54K RAM MONITOR FOR CABLE ABOVE
- MAGNAVOX TV TUNER FOR MONITORS \$79.95
- Texas monitors into standard TV's
- MAGNAVOX 8CM8515 COLOR MONITOR \$369.95
- Same as CH8505 above, but will display 80 columns as 80H computers (not the ADM).
- 3-OUTLET SURGE PROTECTOR \$14.95
- Protect your hardware from power surges.
- COMBO MONITOR TILT/SWIVEL STAND & \$69.95
- 5-OUTLET SURGE PROTECTOR W/ MASTER SWITCH
- Integrated small unit regulates your computer wires and gives surge protection. Turn on all components with one switch or individually.
- NIAD PRODUCT REVIEW BOOK \$19.95
- Contains detail reviews of 100 ADM products, organized alphabetically for quick reference.
- MICROSTUFFER 64K PRINTER BUFFER \$59.95
- For any computer/parallel dot matrix printer. Free complete by controlling the printer.

PRINTERS

- PANASONIC 10801-2 \$219.95
- 9x9 DOT MATRIX
- DRAFT MODE - 144 CPS
- NEAR LTR QUALITY - 28 CPS
- COMPATIBLE W/ EPSON RX80,
- IBM, FULL GRAPHICS
- ADJ TRACTOR FEED
- MEDIA HNDL: CENTRONICS PARALLEL
- INTERFACE: 2 YEAR LIMITED WARRANTY
- FEATURES: \$99.95
- PANASONIC 10911-2 \$269.95
- 9x9 DOT MATRIX
- DRAFT MODE - 192 CPS
- NEAR LTR QUALITY - 38 CPS
- COMPATIBLE W/ EPSON RX80,
- IBM FULL GRAPHICS
- ADJ TRACTOR FEED
- MEDIA HNDL: CENTRONICS PARALLEL
- INTERFACE: 2 YEAR LIMITED WARRANTY
- FEATURES: \$199.95
- OKIMATE 20 COLOR PRINTER \$199.95
- 24 PIN THERMAD
- DRAFT MODE 60 CPS
- NEAR LTR QUALITY - 40CPS
- LIMITED ADJ TRACTOR FEED
- PRINT MODULE SUPPLIED PLUG N
- PRINT MODULE SUPPLIED THAT
- ATTACHES TO EVE OR ORPHANWARE
- PARALLEL INTERFACE
- BLACK & WHITE OR COLOR PRINTING
- 8K BUFFER; SPECIAL PAPER REQ'D
- FEATURES
- 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 \$8.95
- WORD PROCESSING WITH YOUR ADM \$8.95
- FIRST BOOK OF ADM, THE COMPUTER TAB BOOKS \$8.95
- BASIC BASIC PROGRAMS FOR THE ADM BY KNIGHT, TIMOTHY ORR \$8.25
- WITH 25 PROGRAMS ON YOUR ADM, SCIENCE CENTER \$9.95
- THE COLECO ADM ENTERTAINER BY BRIAN SAWYER \$12.95
- HACKER'S GUIDE TO ADM VOL I \$11.95
- HACKER'S GUIDE TO ADM 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 ADM RESOURCE DIRECTORY \$13.95
- USING & PROGRAMMING ADM BY KNIGHT \$7.95

SEGA GAME SYSTEM

\*\*NOT COMPATIBLE WITH ADAM\*\*

- 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 \$14.95 NEW
- SEGA 3D GLASSES \$49.95 NEW
- SEGA CARD SOFTWARE (256K) \$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 SETTING
- SOCCER
- MARKSM/ TRIP
- ZILLION
- GREAT HOCKEY (SP)
- WONDERBOY
- BAMBO
- 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

