

# NIBBLES & BITS



THE COMPREHENSIVE MONTHLY NEWSLETTER FOR THE ADAM COMPUTER

April 1988

Issue #19

single issue: \$4.00

EDITOR'S NOTE . . . . .	3
N&B NEWS . . . . .	3
ADAM NEWS . . . . .	5
BUILDING AN ADAM . . . . .	6
EXPLORING CP/M 2.2 . . . . .	6
OVER THE PHONE LINES . . . . .	7
INSIDE ADAM'S GAME CONTROLLERS . . . . .	8
MORE ON SmartTUNES . . . . .	9
BEGINNING WITH GO-DOS . . . . .	11
EZ SHAPE CONVERTER . . . . .	12
EZ HGR FIND . . . . .	13
PowerPAINT WORKSHOP . . . . .	14
MultiPIX . . . . .	16
SOFTWARE REVIEWS . . . . .	20
ADAM ACCESS . . . . .	25
ADAM USERS' GROUPS . . . . .	27
BULLETIN BOARD . . . . .	27
PRODUCT LIST . . . . .	28
PUBLIC DOMAIN SOFTWARE . . . . .	32

ColecoVision, ADAM, SmartBASIC, and SmartWriter are registered trademarks of Coleco Industries, Inc. CP/M 2.2 is a registered trademark of Digital Research, Incorporated.

"NIBBLES & BITS" is printed in the USA. Copyright (c) 1988 by DIGITAL EXPRESS. All Rights Reserved.

DESIGNED and PRINTED entirely with the amazing ADAM™ computer (using PowerPAINT, NewsMAKER, and ShowOFF II)

## **PUBLIC NOTICE**

"Nibbles & Bits" is published monthly by DIGITAL EXPRESS. Individual issues may be purchased for the current month or for a back issue for \$4.00; the premier issue was July, 1986. Issues were not published for three months: Dec '87, Jan '88, and Feb '88. The standard subscription rate for one year (12 issues) is \$22.00 in the USA, its possessions, and Canada; and, the annual rate in foreign countries is \$30.00. The standard subscription rate for six months (6 issues) is \$12.00 in the USA, its possessions, and Canada; and, the semi-annual rate in foreign countries is \$16.00. ALL subscription issues are sent by U.S. mail, FIRST CLASS. Issues are typically mailed during the last three days of the preceding month.

We welcome contributions of original reviews, programs, articles, questions, and comments. Please include your subscription ID number from your mailing label on all written correspondence to us. Thank you. Please include an SASE (Self-Addressed Stamped Envelope) if you want a written reply.



Your subscription ID number is on the first line of your mailing label (affixed to the newsletter). It is a 10 digit code. The first four digits are the month and year of the final issue in your current subscription. Following the ID number is a brief message. If this is your final issue, the message will read "FINAL ISSUE!!!". If this is your penultimate issue (next to last), the message will read "TIME TO RENEW". Otherwise, the message will apprise you of the exact number of issues remaining in your subscription (excluding the current issue). Please verify this information each month.

To insure that you don't miss any issues, please renew early and let us know promptly of any address change. Please include your subscription ID number on the address change notification (you can get an address change kit free from your local US post office).

## **GENERAL INFORMATION**

Most issues include a special offer on software purchases; these are explained as time limited offers. If you receive N&B outside the North American continent (Australia, Israel, England, and South Africa, for example), we will extend these deadlines to you by 30 days.

If you have products or services of interest to ADAM owners, please let us know. We try to keep our readers apprised of all the latest news concerning the ADAM. Also, we offer free announcements in the BULLETIN BOARD section of the newsletter; please submit these at least 15 days prior to the first day of the issue month. We also offer half page (7" across by 4.5" down) commercial advertising slots for \$50.00 per issue (effective April 1, 1988). "Camera ready" artwork must be received at least 30 days prior to the first day of the issue month. Circulation: 2300+.

Product orders are processed within 24 hours of receipt. Where possible, orders are shipped via UPS. Backordered items are shipped at our expense. Order processing may be delayed by legal and traditional holidays.

## **COPYRIGHT ENFORCEMENT**

Effective February 15, 1988 and beginning with the March '88 issue of "Nibbles & Bits", we are strictly enforcing copyright protection of this newsletter. Articles may be reprinted in other ADAM oriented publications provided FULL CREDIT is given to Digital Express and the author (if he/she is listed). Program LISTS included are considered as FREEMWARE. They may be shared (not offered for resale) provided FULL CREDIT is given to Digital Express and the author (if listed). Also the first five lines of the program MUST NOT be removed or changed. Any variance from this policy will result in prosecution to the fullest extent of the law.

## **DISCLAIMER**

The editor(s) and publisher have exercised due care in the preparation of this newsletter. Neither the N&B staff, nor Digital Express, nor any contributor(s) of any capacity make any warranty either expressed or implied with regard to the information contained herein, either by interpretation, use, or misuse. Reviews and opinions submitted by the readership at large do not necessarily reflect the opinions of the editor or staff. Digital Express has no affiliation with Coleco Industries. Unless stated otherwise, all correspondence shall be considered as "open to public review".

**EDITOR'S NOTE****N&B NEWS**

Well ... this is ADAM's last year; we'd better go with another computer. Too bad; ADAM could have been a good system, if Coleco hadn't murdered it.

Ever heard that or something like it before? It seems to start each year just around Christmas. Perhaps, the timing is somehow tied to the fact that Coleco officially announced it was dropping ADAM after its first big Christmas.

This year there hasn't been much talk about whether or not ADAM was still a useful system. Today, conversations are more inclined toward "who to get what from" and "what will they think of next". In fact, I'm hearing the term 'renaissance' applied to ADAM as if were a patent truism.

Did Coleco murder ADAM? No, of course not; all they did was temporarily stunt its growth. Software developers, hardware designers, users groups, and the many, many thousands of ADAM owners, like a regimen of growth hormones, have boosted the potential of the system to the point that being orphaned is barely a consideration any more. Today the question is not so much whether we'll catch up to the other (still in production) 64K computers, but rather how long it will take to be able to do all the stuff that those 256K marvels are so famous for. New, high quality HW & SW are coming out as steadily for ADAM as they are for just about any other computer (particularly those that are still in production). In fact, I'll go on record as predicting that '88 will be the greatest year yet for ADAM!

In the scattered locations around the country where ADAM and Coleco software can still be found in department stores, stock levels are quickly depleted. As Rich Lefko so eloquently phrased it in his article last month, when most people see an ADAM in operation, they WANT one. On the average, I get one letter every ten days in which a subscriber wants to know how to get an ADAM for a friend. In this issue, see my article on how to assemble an ADAM from surplus components. This could also be useful in setting up a second system — no more fighting over who gets to use it next.

Also in this issue, be sure to read my article on GO-DOS. It's just around the corner. I believe that this new Operating System will open the door to a wealth of new, powerful Z80 programs the way that PowerPAINT has induced the surge in graphics design.

As a matter of fact, we've got several good features in this issue. And thanks again for helping to make DIGITAL EXPRESS a success.



Solomon Swift

□□□ We've now corrected both the final issue (month/year) and the number of issues remaining on all subscriptions. Please check your mailing label to make certain that both of these are, in fact, correct.

□□□ We've added two more volumes of SmartPAINT picture files. N&Bpix017 and N&Bpix018 are available through our PD service.

□□□ Our third volume of small PD graphics for use with PowerPAINT is now completed. All the files in the "PaintMATES" sets may also be used with SmartBASIC. For example, you can use the fonts in your own BASIC programs.

□□□ We've updated our list of PD software combining graphics volumes with the others. The list is free. Just send TWO 25 cent stamps or add 25 cents to the shipping amount with a product order.

Many of the first people to request a PD list didn't receive one back in December. We've just re-mailed the newer PD list to the first 100 subscribers who requested one.

□□□ We are offering a special on E&T SOFTWARE's high quality standard data packs through May 1; get FOUR for just \$7.25 to N&B subscribers.

□□□ We have added floppy disk mailers to our product list. These feature sturdy, bend-resistant construction and have enough room for two 5.25" disks. They are preprinted with a green & white diamond border and marked as a First Class floppy disk mailer. These are available to subscribers for just 49 cents each.

□□□ We've also added portable Versa-Paks™ to the product list. These are blue library cases with a five disk (5.25") capacity. They're just 1.50 each to subscribers.

□□□ Another new product is a 100% teak wood rolltop disk storage unit with a 70 disk (5.25") capacity (comes with six dividers). The subscriber discount price is only \$17.95 each — you've probably seen these for A LOT MORE elsewhere. We like them so much we use them ourselves.

☐☐☐ We are continuing the special on PD software to disk drive owners thru June 1. Buy nine volumes at \$3.95 each and the tenth one (of your choice) free!! DISK ONLY.

☐☐☐ Remember, effective the first of May the annual (12 issue) subscription rate for N&B will be \$24 and the semi-annual rate (six issues) will be \$15. Foreign rates will remain as they are now until further notice.

☐☐☐ As promised, we randomly selected three subscribers each winning a 50 dollar spending spree with DIGITAL EXPRESS. These lucky ADAM owners are:

James R. Bohe  
Bismarck, ND

John C. Marengo  
Downers Grove, IL

Marisa E. Serven  
Flint, MI

☐☐☐ CHESS CHAMP is finished; at press date we're still working on getting all the backorders processed. If you haven't received yours yet, rest assured that it is on its way.

☐☐☐ At the suggestion of Ed Jenkins of E&T SOFTWARE we've added a media backup utility to MegaSYSTEM-XR. It will backup 160K, 320K, and 720K disks, as well as data packs. The program uses a 52K copy buffer. We've also added several nice features. These additions have delayed its completion. Shipping is now scheduled to commence on April 14. We apologize for the delay. If shipping is delayed any longer, we'll include a free PD coupon with the order.

☐☐☐ We've fixed seven minor bugs with PowerPAINT. Serial numbers above 10300 should already have the corrections. To check yours, go to the polygon options and select draw straight line. Without moving the pointer press <RETURN> twice. If the program locks up, you've got the old version. To get yours corrected, you can send the original medium along with a sales receipt to us. We'll repair it and return it free of charge until July 1, 1988.

Also, we've just completed a new commercial package PaintAIDE with the Swift Font Kit. This volume offers a function to automatically correct the original medium for you — it only takes about 15 seconds to patch 8K of the 80K object code. It will also customize some aspects of PowerPAINT for you. Plus it comes with over three dozen font files. See the advertisement in ADAM ACCESS for more details.

☐☐☐ Effective the 7<sup>th</sup> of April the subscriber discount price on the MX-64 memory expander will increase to \$37.95.

☐☐☐ We'll also pay you \$25 for your used WORKING 64K expanders (Coleco, Spectrum Electronics, or OrphanWare). Be sure to put it in a static resistant bag like the one it came in. This offer could be a good way to get rid of your old card if you've updated to an MX-256 or an MX-512. The cards are subject to approval by us. This offer will probably expire on June 1.

☐☐☐ Our PD list (at the back of this issue) of 60 volumes barely covers all the PD programs that we have on hand. Dr. Swift will add extensively to the libraries later this summer. We extend special thanks to the following subscribers who've recently made significant contributions to our libraries.

Roy Crawford  
Ruth Mather  
Sharon McFarlane  
Dave McIntosh  
Hector Sanchez  
Thomas Warren

☐☐☐ We've also released another commercial package. SwiftDISK will add the ramdisk access capability to virtually any standard EOS based program. The existing program can access the ramdisk vice the second tape drive. The package requires MegaDISK 1.0. It will work with as little as a 64K expander, but some programs will require a larger card. See the ad in ADAM ACCESS this month for more details.

☐☐☐ See OrphanWare's ad in ADAM ACCESS this month. They've got some very special discounts exclusively for N&B subscribers!

☐☐☐ We don't have room in this issue for the reader survey or the contest details mentioned last month. We'll post contest details in the May issue. We'll probably include the two page survey in the June issue.

☐☐☐ Here's this month's special offer (expires May 1). Any order with a subtotal over 44.99 qualifies. You can have any PD volume of your choice FREE! This includes one of our latest volumes, "Income Tax '87" by Roy Crawford (for use with Form 1040) — a 23K program with SmartWriter instructions.

☐☐☐ See Dr. Swift's article on GO-DOS this month for the latest details on it and a very special purchase offer.



## ADAM NEWS

□□□ In House Service Reps has started shipping their 256K & 512K memory expanders for ADAM. As expected, the units are not compatible with any of the Orphanware compatible software. They may still be used as a 64K expander, however, with Coleco software.

□□□ Pleasant Valley Video carries an assortment of ADAM game cartridges. Write to the address below requesting their ColecoVision game list and include an SASE. The voice phone number is (513) 787-4704; the BBS number is (513) 787-3777.

Pleasant Valley Video  
8141 Pleasant Valley Road  
Caden, OH 45311

□□□ DIGITAL EXPRESS has added Coleco disk drives to their product list. The cost to N&B subscribers is just \$225 each (no extra shipping charge -- just the standard order amount).

□□□ With the delays around Christmas we didn't get a chance to publish our review of "Hacker's Helper volume 1". We do plan to review this information packed guide next month. We'll also be adding it to the DIGITAL EXPRESS product list.

Also the author, Mel Ostler, reports that the next sequel will be released in just a few weeks and has asked that we make a special announcement in N&B. He would like to have a half dozen N&B subscribers to offer confidential, detailed, critical comments on selected articles which will most likely appear in the next volume (particularly with respect to making the text easier to understand by novices). To be considered as a reviewer, inquiry should be made to the address in this month's BB by those interested who will write back promptly.

□□□ Alan Neeley has revised his freeware EOS BBS system so extensively that he's also changed the name. It's now called A-NET. See this month's BB for his address.

□□□ Beyond Trek is a battle adventure enhanced with quick, colorful graphics. It's not an "action oriented" game like the Coleco cartridge. Rather, BT is an intellectual challenge.

□□□ M.W. Ruth has just added an innovative paper product by Classic Future. Each "Banner Roll" is 45' of 8.5" continuous tractor feed paper (no cross perforations -- use the printer tear bar instead). This is great for many graphics applications. It comes in six pastel colors. The price per roll is just \$12.95; see the BB for their address.

□□□ SpeedyWrite is a new word processor for ADAM written in fast z80 code. It has numerous features including line justification and user defined macros. Currently it only supports the ADAM printer, though. We plan to have a review next month.

□□□ PICTURE is a good, very low cost graphics design program released recently by TLB Enterprises. We plan to have a review next month.

□□□ Reedy Software has completed their graphic "wheel of fortune" type game, PHASE CRAZE. We'll have details next month.

□□□ E&T SOFTWARE will start selling a mouse for use with ADAM and GO-DOS. It will sell for around \$85 to \$90. They will also be offering double sided disk drive upgrade kits for about \$100.

□□□ In the November issue we reported about a former Coleco employee who is doing some repair on ADAMs. He has relocated; his new address is listed below. He won't repair disk drives or moving parts. The flat repair rate for other services is only \$50.00.

Philip Kosowsky  
8 Castillion Court  
Clifton Park, NY 12065  
(518) 371-7482

□□□ It appears that Eve Electronics has gone out of business. They haven't answered mail or phone calls in over two months. The primary cause for concern here is their SS/CC speech synthesizer and battery backup clock calendar unit. Already software has been developed to use the features of this product.

□□□ OrphanWare has come to the rescue here -- they have three new products scheduled for May / June releases. Talker will be an Eve compatible speech synthesizer. And they're also working on a clock unit and hard disk interface. More news later on these exciting projects.

□□□ You may have noticed that the price for memory expanders is steadily increasing. John Lingrel, of OrphanWare, reports that chip prices have "quadrupled in the last six months". And, there's no end in sight. If you're planning on upgrading memory, you should do so before the next flurry of price increases. 'Big John' also reports that their ADAM BBS has more than 1.6 MB of PD programs ready for downloading (with 1.5 MB of space for uploading). Their system has 6 disk drives (2 720K and 4 320K), an MX-512, 80 column unit, and a speech synthesizer -- ADAM to the MAX (almost!).

□□□ Wizard's Lair has just released two volumes of graphics files for use with Power-PAINT. Clip Art I has 45 clip art files; Power Prints has 15 full screen pictures. Most of these graphics were drawn by the two commercial artists at Wizard's Lair. We've also added these two volumes to the DIGITAL EXPRESS product list. The cost is just \$11.95 each to N&B subscribers.

□□□ E&T SOFTWARE is working on a "Point Of Sale" program for ADAM. It will print invoices, purchase orders, and update your inventory.

## BUILDING AN ADAM

by Solomon Swift

Have you had trouble finding a second ADAM? Or, how about trying to locate one for a friend? There is an alternative to getting a complete system; build an ADAM from replacement components. It's possible — I just put one together like this myself.

I've looked for the best prices in the ADAM community of dealers. You can actually build one (without the printer) for about \$135. You'll need to make purchases from three ADAM mail order houses and one at a local hardware or electronics store.

From Alpha-1, get a keyboard for \$19.95, an R80 memory console (minus tape drives) for \$65 and two game controllers for \$6. The total shipping will be three bucks.

From ADAM's House get a tape drive for \$12.95 plus three bucks shipping.

From us, DIGITAL EXPRESS, get a printer power supply for \$14.95 and a computer switch box (to attach to a TV) for \$3.25. Include three bucks for shipping.

From a local hardware store, get a video patch cord (RCA / RCA) to connect the console to the computer switch box. Six and nine feet are common lengths. Prices range from five to ten dollars.

Put it all together and you've got a working ADAM (toss in a spare TV). You should note that the bare printer power supply can be very dangerous — keep it well shielded to prevent electric shock. Orphanware carries plastic housings for the power supply. They also sell ADAMnet cables of any length real cheap.

Alpha-1  
1671 East 16<sup>th</sup> Street, Suite 146  
Brooklyn, NY 11229

ADAM's House  
Route 2, Box 2756  
Pearland, TX 77581

## EXPLORING CP/M 2.2

by Guy Cousineau

Last month we deleted a file. Now we'll re-create it — a brand new one with no records in it.

```
LD DE,FCB
LD C,22      ;make file
CALL 5
OR A         ;zero is good
JR NZ,ERROR ;abort
```

Now we can write data to the file. Suppose we want to copy the file that we read last month to this new file. We would start by setting the DMA to the start of our buffer and proceed just as in the read. Note that in this code I have not supplied a check to see if we have written all the required records. This routine would go on until it fills up the entire disk.

```
LD DE,FCB      ;begin routine
LD C,21        ;write
CALL 5
OR A
JP NZ,ERROR    ;on error
CALL INCBUF    ;get next DMA
JR WRITEF      ;repeat routine
```

Now the file has been written to disk, if we included a check for the proper number of records. But you don't know where the program is. We now ask the BDOS to update the directory information for this file so we can retrieve it later:

```
LD DE,FCB
LD C,16        ;close file
CALL 5
OR A           ;zero is OKAY
JR NZ,ERROR
```

To append to an existing file, start by opening the file and setting the record number (FCB+32) to the position where you want to start writing. This is usually one more than the record count (FCB+15).

Note that several functions start by loading the FCB into the DE pair. If you want to reduce the program size, write a subroutine that does this for you, calls the BDOS, sets the error status and returns. The next routine assumes that the caller has loaded "C" with the BDOS function to use.

```
LD DE,FCB
CALL 5
OR A
RET
```

- continued next month -

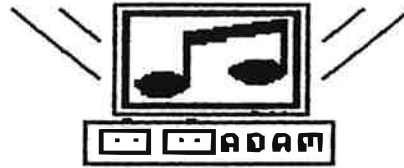






# MORE ON SMART TUNES

by Selemen Swift



This is a continuation of the article in the November issue of N&B. The program on the next page will play the tune "Take Me Out to the Ball Game" — a fairly nice rendition. Be sure to load the machine language SmartTUNES driver routine LISTed in the 11/87 issue first.

For some time DIGITAL EXPRESS had planned to introduce a music composition program for ADAM entitled "SmartTUNES". With several other projects underway, we decided to donate a simple version of the driver routine into the public domain. The routine can generate some very pleasing music. Even more discriminating music lovers will admit that its support songs bring out the best in ADAM's sound chip. The tunes are not quite as complex as those created with VideoTUNES (by FutureVision); but, the potential is there. The prime benefit of SmartTUNES is portability. The songs may easily be incorporated into your own BASIC or Z80 programs.

The routine gives you access to all three voices. You can create some interesting simultaneous sounds and music sweeps with this feature. But, you'll generally find music more pleasing by using the second and third voices for harmony. For instance, the first voice could be used for the score sheet note and the other two voices could be one octave lower and higher, respectively, of the same note. This gives a certain richness to the sound quality. You could also use the other voices to sound chords.

You can set the tempo, select an octave offset, and set the volume. Also, you can exit at any point during a song by tapping the <ESCAPE> key. To play a tune, you first need to RUN the program entitled SmartTUNES. This sets up the Z80 routine in BASIC. Next, just select a song file and RUN it.

Songs are easy to transcribe or compose because it can be done from BASIC using DATA statements. Notes are in actual ASCII form "C" for a "C" note, and so on. You can DELETE line numbers 1000 thru 2300 in a song program (such as the one on the next page) and enter your own song. RUN the program first. After that, if you don't make any revisions, you can immediately play it back by entering CALL 27800 and pressing <RETURN>.

Each song note has values for three voices. The note "E5F6848" plays "E" in the fifth octave with the first voice, "F" in the sixth octave with the second voice, and "8" in the fourth octave with the third voice. The last number, "8", specifies a duration equal to a quarter note. Here are the six more common duration equivalences.

whole note	=	32
half note	=	16
quarter	=	8
eighth	=	4
16th	=	2
32nd	=	1

The same duration values are used for notes and rests. Of course, the dotted counterparts are computed as the mean of two consecutive durations. For example, a dotted quarter note has a duration of 12, or  $(16+8)/2$ . 32 is the highest acceptable value. The routine will automatically abort with a higher value. "1" is the lowest acceptable value.

The notes correspond as follows:

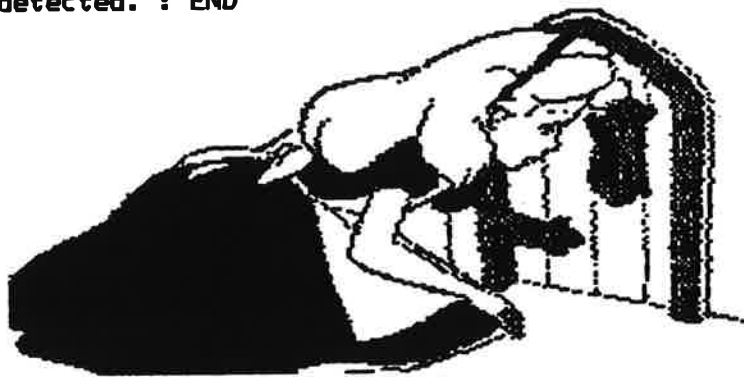
A	=	A
A#	=	a
B	=	B
C	=	C
C#	=	c
D	=	D
D#	=	d
E	=	E
F	=	F
F#	=	f
G	=	G
G#	=	g

"A sharp" is the same note as "B flat", "C sharp" is the same note as "D flat", and so on. Using letters for the notes makes them very easy to remember. The octave range is "3" thru "9". With ADAM a scale starts with the "A" note rather than the "C" note, as in a typical chromatic scale — for this reason, you'll need to offset "A", "A#", and "B" to one octave higher. For example, if you want to sound an "A" in the TRUE fifth octave, you would use "A6" rather than "A5". All else is in exact correspondence with standard western music.

```

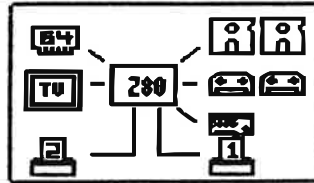
100 LOMEM :32000: be = 29000
110 PRINT " one moment please ...": PRINT
1000 REM "Take Me Out to the Ball Game"
1010 REM must load SmartTUNES player routine first
1020 DATA C5C6C416,C6C7C58,A6A7A58,G5G6G48,E5E6E48
1030 DATA G5G6G424,D5D6D424,C5C6C416,C6C7C58
1040 DATA A6A7A58,G5G6G48,E5E6E48,G5G6G432,g5g6g48
1050 DATA A6A7A58,g5g6g48,A6A7A58,E5E6E48,F5F6F48
1060 DATA G5G6G48,A6A7A516,F5F6F48,D5D6D424,A6A7A516,XYZ1
1070 DATA A6A7A58,XYZ1,A6A7A58,B6B7B58,C6C7C58
1080 DATA D6D7D58,B6B7B58,A6A7A58,G5G6G48,E5E6E48
1090 DATA D5D6D48,C5C6C416,C6C7C58,A6A7A58,G5G6G48
1100 DATA E5E6E48,G5G6G424,D5D6D424,C5C6C48,XYZ1
1110 DATA C5C6C48,D5D6D48,E5E6E48,F5F6F48,G5G6G48
1120 DATA A6A7A524,XYZ8,A6A7A58,B6B7B58,C6C7C524,XYZ1
1130 DATA C6C7C524,C6C7C58,B6B7B58,A6A7A58,G5G6G48
1140 DATA f5f6f48,G5G6G48,A6A7A524,B6B7B524,C6C7C524
2599 DATA W
2900 READ nt$: IF nt$ = "W" THEN GOSUB 3000: GOTO 4000
2910 GOSUB 3000: GOTO 2900
3000 FOR x = 1 TO LEN(nt$): ak = ASC(MID$(nt$, x, 1))
3010 IF ak > 64 THEN POKE be, ak: GOTO 3100
3015 pk = PEEK(be-1): IF pk = 88 OR pk = 89 OR pk = 90 GOTO 3030
3020 IF PEEK(be-1) > 64 GOTO 3200
3030 IF x = LEN(nt$) GOTO 3200
3040 a1 = VAL(MID$(nt$, x, 1)): a2 = VAL(RIGHT$(nt$, 1))
3050 POKE be, a1*10+a2: x = x+1: GOTO 3100
3100 be = be+1: NEXT x: RETURN
3200 POKE be, VAL(MID$(nt$, x, 1)): GOTO 3100
4000 tempo = 235: volume = 15: pointer = 29000: offset = 2
4010 POKE 27946, offset: REM (39,109)
4020 POKE 27792, tempo: REM (144,108)
4030 POKE 27793, volume: REM (145,108)
4040 POKE 27795, pointer/256: REM (147,108)
4050 POKE 27794, pointer-PEEK(27795)*256: REM (146,108)
4100 IF PEEK(27800) <> 229 GOTO 4200
4110 IF PEEK(28000) <> 195 GOTO 4200
4120 IF PEEK(28110) <> 108 GOTO 4200
4130 GOTO 5000
4200 PRINT: PRINT " ERROR!!! SmartTUNES"
4210 PRINT " routine not detected.": END
5000 CALL 27800: END

```



# BEGINNING WITH GO-DOS

by Solomon Swift



## WHAT IS IT:

What is GO-DOS? What will it do? Is another operating system for ADAM really necessary?

To date, I've written 19 commercial programs for ADAM (most of them in Z80) and two others are nearing completion. FontPOWER marked the beginning of what I refer to as my "second generation" of software. The most obvious common aspect of these programs is the Coleco-like user interface (SmartKEY labels at the bottom of a graphic screen). Most of these programs required a vast amount of encoding because I had to create new routines and algorithms for each one.

GO-DOS will provide the basis for my 3<sup>rd</sup> generation of commercial software for ADAM. From the programmer's perspective, the most important aspect of GO-DOS is that it has over 300 ready-to-use Z80 routines. This means that machine language programs can be written in half the time it would take otherwise. This allows the programmer to concentrate on the product and not be burdened with having to spend endless hours developing critical user interface and system setup routines.

GO-DOS will provide routines for many of the features common to all graphic operating systems too. In fact, the routines are designed for far more than just peripheral access and pull down menus. Next month, I'll include a breakdown of some of the routines. They range from several sound and speech options to a full gamut of hi-res graphics features to floating point math and trig functions.

## OUTER APPEARANCE:

Even the packaging is different. Our GO-DOS products will come in machine sealed packages. All manuals will be handsomely bound with our new PUNCH AND BIND machine. And, every product will be serialized.

## PROGRAMMING IN Z80:

In BASIC when you want to use a subroutine, you just setup a few variables and execute the routine with GOSUB. This concept is the whole basis of Z80 programming. With machine code you setup registers (instead of variables) and execute the routine with CALL (instead of GOSUB). Really it's that simple. You don't need to be conversant with the HEX system; I've not written even one program using hex. The only significance I've found for hexadecimal numbers is in using commercial assemblers.

## UPCOMING GO-DOS SOFTWARE:

I've got several packages planned for use with GO-DOS. Other software developers are also considering GO-DOS based products.

Here is a brief look at what's ahead. Keep in mind that all of these will use the pull down menus, notepad, icons, and dialog boxes that have become so popular on many systems. And, for the most part, all the programs will be able to exchange data — they work together like individual units of a super system. Plus, you've got a huge 61K workspace (GO-DOS requires at least a 64K card).

"GoWRITER" will be a word processor with many powerful features. These include macros, justification, SmartWriter compatibility, printer selection, and 60 or 30 column screen display. Limited use of graphics is also planned.

GoFILER, GoCALC, GoLINK, GoBASIC (formerly PowerBASIC), and GoPUBLISHER should all be released THIS YEAR — powerful, integrated packages with colorful graphics, pleasant sound, and the easy user interface. GoPAINT is scheduled for '89; it will be an object oriented graphics design program. It will be compatible with PowerPAINT which is a bit mapped graphics program. GoGRAPH, GoSPELCHK, and GoTHESAURUS are other projects under consideration.

## VERY SPECIAL DISCOUNT OFFER:

GO-DOS will come with GoKIT. This is a media utility program for copying files, managing a directory, and it includes some functions to demonstrate the GO-DOS system. The scheduled release date for GO-DOS with GoKIT is May 11 — the retail price is \$24.95; the subscriber cost is only \$19.95.

GoWRITER is scheduled for release on May 18 — retail price is \$24.95; the N&B discount price is \$19.95.

"The GO-DOS Technical Reference Manual" is scheduled for release on May 31. This guide will explain all the routines, how to use them, the jump tables, the data table, and include some basic info on the ADAM system. It will also include tips for creating GO-DOS programs from SmartBASIC. Retail price is \$14.95; the N&B discount price is only \$9.95.

We are currently offering a very special discount on a combination purchase of GO-DOS, GoWRITER, and the Reference Manual. Order all three before April 18 for a total of only \$42.95. I'm offering this discount primarily to get a concrete idea of the support that this series of programs will have. If you've got ideas for routines to include, please list them on a separate sheet of paper with your order.

```

10 REM EZ SHAPE CONVERTER
11 REM (converts current VRAM ASCII to a hi-res shape table)
12 REM A freeware program by DIGITAL EXPRESS
13 REM presented in Nibbles & Bits
14 REM April 1988.
20 REM table starts at address 27648
30 REM When it's done, move the cursor over the command line.
100 LOMEM :40000: POKE 17059, 27: POKE 17115, 27: TEXT
102 DATA 17,0,0,33,0,212,1,0,0,205,29,253,201
104 FOR x = 27500 TO 27612: READ mc: POKE x, mc: NEXT
110 TEXT: PRINT " This program converts the"
120 PRINT " set of ASCII fonts in VRAM"
130 PRINT " into a shape table which can"
140 PRINT " be used in HGR mode by ADAM.": PRINT
150 PRINT " You can easily use them along"
160 PRINT " your graphics creations. They";
170 PRINT " can be rotated, and have"
180 PRINT " individual colors."
190 VTAB 18: PRINT " Do you need to BLOAD or BRUN"
200 PRINT " a font set?": GET k$: IF k$ <> "y" AND k$ <> "Y" GOTO 300
210 HOME: PRINT " Do so now. Type CONT or "
220 PRINT " GOTO 300 to continue.": END
300 HOME: INPUT " Start at what ASCII: "; st$
310 st% = VAL(st$): IF st% < 0 OR st% > 127 GOTO 11000
320 PRINT: INPUT " End at what ASCII: "; en$
330 en% = VAL(en$): IF en% < 2 OR en% > 255 GOTO 11000
340 ON en% < st% GOTO 11000: nu% = en%-st%+1
500 j1% = st%*8: j2% = j1%/256: j3% = j1%-j2%*256
510 k1% = nu%*8: k2% = k1%/256: k3% = k1%-k2%*256
520 POKE 27601, j3%: POKE 27602, j2%: POKE 27607, k3%
530 POKE 27608, k2%: CALL 27600
600 POKE 27648, nu%: POKE 27649, 8
610 nb = 2*nu%+2: ad = 27648+nb: GOSUB 12000
620 POKE 27650, lo%: POKE 27651, hi%: ct% = 0
630 HOME: PRINT " processing data ...": PRINT: PRINT
640 FOR sh = 0 TO nu%-1: sh% = sh: bc% = 0
650 ac% = sh%+st%: PRINT " "; ac%;
660 IF ac% <= 32 OR ac% >= 127 THEN PRINT: GOTO 700
670 PRINT SPC(5); CHR$(ac%)
700 dr% = 0: FOR xx = 0 TO 7
710 by = PEEK(54272+sh%*8+xx): IF by <> 0 GOTO 730
720 dr% = NOT dr%: POKE ad, 2: bc% = bc%+1: ad = ad+1: GOTO 900
730 GOSUB 10000: IF dr% = 1 GOTO 800
740 tb = 0: FOR x = 7 TO 0 STEP -1: GOSUB 13000
750 tb = tb+f1: IF x/2 <> INT(x/2) GOTO 770
760 POKE ad, tb: bc% = bc%+1: ad = ad+1: tb = 0
770 NEXT x: POKE ad, 26: bc% = bc%+1: ad = ad+1: GOTO 900
800 tb = 0: FOR x = 0 TO 7: GOSUB 13100
810 tb = tb+f1: IF x/2 = INT(x/2) GOTO 830
820 POKE ad, tb: bc% = bc%+1: ad = ad+1: tb = 0
830 NEXT x: POKE ad, 10: bc% = bc%+1: ad = ad+1
900 dr% = NOT dr%: NEXT xx: GOSUB 13200: POKE ad, 0
910 ad = ad+1: ct% = ct%+bc%: nb = ct%+2*nu%+sh%+3
920 ON sh% = nu%-1 GOTO 1000: GOSUB 12000: PRINT
930 POKE 27652+2*sh%, lo%: POKE 27653+2*sh%, hi%: NEXT sh

```



## EZ Shape Converter LIST continued ...

```

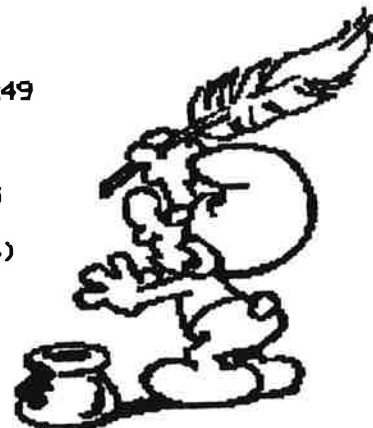
1000 POKE 25431, 255: POKE 25471, 255: POKE 25568, 23: HGR
1010 POKE 16766, 0: POKE 16767, 100: REM pointer to 27648
1020 SCALE = 1: ROT = 0: POKE 16777, 1
1030 vt% = 0: ht% = 2: FOR x = 1 TO nu%
1040 DRAW x AT ht%*8, vt%*8
1050 ht% = ht%+1: IF ht% > 30 THEN vt% = vt%+1: ht% = 2
1060 NEXT: HOME: PRINT
1070 PRINT " BSAVE filename ,A27648,L"; ct%+2*nu%+sh%+3
1080 END
10000 FOR a = 0 TO 7: b(a) = 0: NEXT: FOR a = 7 TO 0 STEP -1
10010 IF by-2^a >= 0 THEN b(a) = 1: by = by-2^a
10020 NEXT: RETURN
11000 HOME: PRINT " end of program.": END
12000 hi% = nb/256: lo% = nb-256*hi%: RETURN
13000 f1 = 1+4*b(x): IF x/2 = INT(x/2) THEN f1 = f1*8
13010 RETURN
13100 f1 = 3+4*b(x): IF x/2 <> INT(x/2) THEN f1 = f1*8
13110 RETURN
13200 pk = PEEK(ad-1): IF pk <> 2 AND pk <> 10 AND pk <> 26 THEN RETURN
13210 POKE ad, 0: ad = ad-1: bc% = bc%-1
13220 IF bc% = 0 THEN bc% = 1: ad = ad+1: RETURN
13230 GOTO 13200

```

```

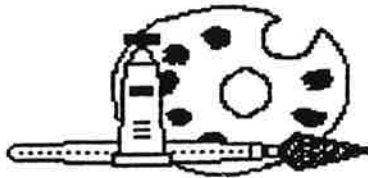
1 REM "ezHGRfind" by DIGITAL EXPRESS
2 REM a freeware contribution; may not be sold commercially
3 REM may be copied and traded freely
4 REM presented in 'Nibbles & Bits'
5 REM April 1988
100 LOMEM:28000: IF PEEK(17000) = 2 GOTO 110
102 POKE 25471, 255: POKE 25568, 23: HGR
104 PRINT " HPLOT some points, then"
106 PRINT " enter RUN.": END
110 DATA 17,0,0,33,0,212,1,1,0,205,29,253,201
120 FOR x = 27800 TO 27812: READ mc: POKE x, mc: NEXT
130 DATA 58,0,212,230,240,50,1,212,201
140 FOR x = 27820 TO 27828: READ mc: POKE x, mc: NEXT
150 DATA 58,0,212,203,71,62,1,40,4,50,1,212,201,61,24,249
160 FOR x = 27830 TO 27845: READ mc: POKE x, mc: NEXT
200 HOME: PRINT " This program will perform a"
210 PRINT " SCRN function for an HGR"
220 PRINT " picture. Press any key.": GET k$: GOTO 300
230 HOME: PRINT " end of program.": END
300 HOME: INPUT " enter vertical: "; vt$: vt% = VAL(vt$)
310 IF vt% < 0 OR vt% > 159 GOTO 230
320 INPUT " enter horizontal: "; ht$: ht% = VAL(ht$)
330 IF ht% < 0 OR ht% > 255 GOTO 230
400 REM find color byte
410 y1% = vt%/8: y2% = vt%-y1%*8
420 x1% = ht%/8: x2% = x1%*8+y2%
430 POKE 27801, x2%: POKE 27802, y1%: CALL 27800
500 REM calculate color values
510 CALL 27820: co% = PEEK(54272): fr% = PEEK(54273)/16
520 bk% = co%-fr%*16
530 PRINT " foreground = "; fr%
540 PRINT " background = "; bk%
600 REM find bit image byte
610 POKE 27802, y1%+32: CALL 27800: x3% = ht%-x1%*8
620 x4% = 7-x3%: POKE 27834, 71+x4%*8: CALL 27830
630 bt% = PEEK(54273): PRINT " bit = ";
640 IF bt% = 0 THEN PRINT "off": GOTO 700
650 PRINT "on"
700 GET k$: ON k$ = CHR$(3) OR k$ = CHR$(27) GOTO 230: GOTO 300

```



# POWERPAINT WORKSHOP

by Solomon Swift



## SUPPORS GROWS

RECENTLY HIZARD'S LAIR, OPERATED BY TWO COMMERCIAL ARTISTS, RELEASED TWO VOLUMES OF GRAPHICS WHICH SUPPORT POWERPAINT. CLIP ART 01 CONTAINS SEVERAL SMALL DESIGNS READY FOR YOU TO INSERT INTO YOUR CREATIONS. POWER PRINTS HAS 15 WELL DONE FULL SCREEN DESIGNS. MORE VOLUMES ARE IN THE WORKS.

BRYAN PAYTON HAS JUST STARTED A NEW ADAM SUPPORT BUSINESS WHICH WILL START OFF BY RELEASING VOLUMES OF GREETING CARD DESIGNS FOR USE WITH POWERPAINT. MR. PAYTON HAS CONTRIBUTED SEVERAL ORIGINAL DRAWINGS TO OUR PIX LIBRARY.

THE NUMBER OF READY-TO-USE GRAPHICS IS STEADILY INCREASING -- 1000+... AND IT'S SO EASY TO USE THEM IN YOUR OWN PICTURES.

DIGITAL EXPRESS HAS JUST RELEASED ANOTHER COMMERCIAL PACKAGE WHICH SUPPORTS POWERPAINT. PAINTSIDE ALLOWS YOU TO PRESET THE FOUR SPECIAL FONTS TO THE TYPEFACE OF YOUR CHOICE. PLUS IT CORRECTS SEVEN HINOR BUGS WITH THE PROGRAM. IT COMES WITH 20 FONTPOWER FONT SETS WITH A TOTAL OF OVER THREE DOZEN FONT FILES TO CHOOSE FROM -- ADD SOME REAL PUNCH TO THE MYSINIS PAGE LAYOUT FEATURE. SEE THE ADAM ACCESS DEPARTMENT OF THIS ISSUE FOR MORE DETAILS.

## MORE TIPS

- WHEN YOU CREATE CLIP ART FOR USE WITH POWERPAINT BE SURE TO STORE THE FILE IN 280 BINARY FORM. GETTING A CLIP ART FILE TAKES YOU BACK TO THE PRIMARY MENU. SELECT "POLYBORS AND MORE" FROM THE PRIMARY MENU AND THEN "CLIP ART" TO POSITION THE SMALL GRAPHIC ANYWHERE WITHIN YOUR PICTURE.
- THE PAINT BRUSHES THAT COME WITH THE PROGRAM ARE 16 x 10 PIXELS IN SIZE. WITH THESE YOU SHOULD TRY PIXEL INCREMENTS OF 8, 12, 15, OR 16. YOU CAN ALSO CREATE YOUR OWN CUSTOM PAINT BRUSHES. JUST STORE ANY ORDINARY BASIC HI-RES SHAPE TABLE WITH A LENGTH OF 1000 BYTES. I HIGHLY RECOMMEND GUY COUSINEAU'S SHAPENAKER PROGRAM IN OUR PD LIBRARY. READ THE DOCS FILE FROM SMARTWRITER FIRST.
- EXPERIENCED COMPUTER GRAPHICS ARTISTS SOMETIMES USE A TECHNIQUE CALLED 'SHADING' TO ADD VISUAL APPEAL TO DRAWINGS. YOU CAN DO THIS WITH POWERPAINT TOO. TRY THIS. DRAW A LARGE SOLID CIRCLE (WITH THE POLYGON OPTION). THEN GO BACK TO THE ENTRY OPTIONS AND SELECT PAINT GRAPHICS. HERE, CHOOSE THE ERASE OPTION. MOVE THE BRUSH OVER THE CIRCLE AND WATCH IT TRANSFORM INTO A VERY DETAILED GRAPHIC THAT APPEARS TO BE QUITE COMPLEX.
- YOU CAN ERASE TEXT IN THE SPECIAL FONTS MODE. TO DO SO SWITCH FROM THE OVERLAY OPTION TO THE REPLACE OPTION. THEN YOU CAN ERASE WITH THE SPACE BAR.

- BE SURE TO NOTE THAT THE BINARY STORAGE OF A PICTURE CELL SAVES IT AS A 10K ^B FILETYPE. THIS SHOULDN'T BE CONFUSED WITH 10K H FILETYPES ACCESSED FROM BASIC. IF YOU WANT TO USE THE PICTURE FROM BASIC STORE IT WITH THE SMARTPAINT OPTION.

- YOU CAN CENTER DOUBLE SIZED TEXT WITH 8-PIXEL PRECISION USING THE MOVE/COPY OPTION AFTER YOU PRINT IT ON THE SCREEN.

- CENTERING A FULL SCREEN PICTURE BETWEEN TWO CELLS CAN ADD AN IMPRESSIVE TOUCH TO A FULL PRINTED PAGE LAYOUT. TO DO THIS, COPY A PICTURE TO AN ADJACENT CELL -- VERTICAL OR HORIZONTAL. THEN SELECT THE FULL PICTURE OPTION FROM THE MOVE/COPY MENU. FOR HORIZONTAL CENTERING PULL ONE CELL TO THE RIGHT 15 MOVES. PULL THE OTHER CELL TO THE LEFT 15 MOVES. FOR VERTICAL CENTERING PULL ONE CELL DOWN 10 MOVES AND PULL THE OTHER CELL UP 10 MOVES. TO CHECK THE CONNECTION USE THE MOVING HINDON NODE TO SCROLL THE PICTURE.

- YOU CAN STILL CREATE A NICE FULL PRINTED PAGE LAYOUT WITH AS LITTLE AS A 64K CARD. DESIGN THE TOP HALF (4 CELLS) AND STORE IT. THEN DESIGN THE BOTTOM HALF AND STORE IT. LOAD THE TOP WORKSPACE AND PRINT IT AND DO THE SAME WITH THE BOTTOM WORKSPACE PICTURE. IF YOU DON'T PHYSICALLY MOVE THE PAPER BETWEEN PRINTINGS, THE TWO WILL BE CONNECTED PERFECTLY. THIS IS A FEATURE THAT WASN'T REVEALED IN THE MANUAL.

## UPCOMING SUPPOR

LATER THIS SUMMER I'LL RELEASE ANOTHER PACKAGE SUPPORTING POWERPAINT. THIS ONE WILL BE CALLED PAINTPLUS. IT WILL REQUIRE AT LEAST A 128K EXPANDER. IT STORES SEVERAL POWERFUL FEATURES ON THE RANDISK WHICH YOU CAN ACCESS WITH THE DELETE KEY. I'LL HAVE MORE DETAILS ON THIS ONE IN A LATER ISSUE.

## THE POWER

MANY ADAMITES ARE ALREADY USING POWERPAINT AS A PAGE LAYOUT PROGRAM. THE POSSIBILITIES ARE VIRTUALLY ENDLESS. THE NEXT PAGE CONTAINS EXAMPLES OF LETTERHEADS CREATED WITH THE PROGRAM. THESE ARE AVAILABLE ON THE PD VOLUMES PAINTFORNS 01 AND 02.

YOU MAY FIND THAT THE PAINTMATES VOLUMES ARE MORE VERSATILE THOUGH. SMALLER GRAPHICS LIKE CLIP ART AND PAINT BRUSHES GIVE YOU THE POWER TO QUICKLY CUSTOMIZE YOUR OWN CREATIONS. THESE ARE DOWNLOADED FROM PD LIBRARIES FOR OTHER COMPUTERS AND MANY ARE ALSO DRAWN SPECIFICALLY FOR USE WITH ADAM BY ARTISTS.



**YOUR NAME**  
**GOES HERE**

street address  
 city  
 state and zip

f r o m **PAULA'S** d e s k . . .



**MEMO** f r o m **YOUR NAME** H E R E

put your descriptive  
 text within these  
 borders . . .

**ADAM™**

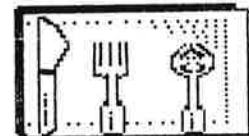
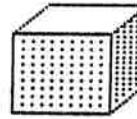
EOS  CP/M  GO-DOS

**INSERT** ←

```

1 REM MultiPIX by Leonard Adolph
2 REM a multicolor mode graphics program
3 REM a freeware program
4 REM presented in Nibbles & Bits
5 REM April 1988
99 REM load ml routines
100 LOMEM :34816
110 FOR a = 1056 TO 1063: POKE a, 0: NEXT
120 DATA 62,200,17,128,0,33,0,31,205,38,253,201
130 DATA 1,62,5,205,32,253,201
140 DATA 33,85,4,17,0,56,1,16,0,205,26,253,201
150 DATA 33,32,4,17,0,0,1,8,0,205,29,253,201
160 DATA 4,2,255,2,4,0,0,0,96,96,0,0,0,0,0
170 FOR a = 1064 TO 1124: READ mc: POKE a, mc: NEXT
210 CALL 1064: CALL 1076
220 POKE 1077, 7: POKE 1078, 6: CALL 1076
230 POKE 1065, 0: POKE 1067, 0: POKE 1068, 4: POKE 1071, 56: CALL 1064
240 POKE 1077, 192: POKE 1078, 1: CALL 1076
250 CALL 1083
252 DATA 33,0,112,54,0,35,124,254,136,194,88,4,201
255 FOR a = 1109 TO 1121: READ mc: POKE a, mc: NEXT a
260 DATA 40,12,0,6,200,128,1,15
270 FOR a = 1125 TO 1132: READ mc: POKE a, mc: NEXT
275 x = 32: y = 24
279 REM menu routine
280 POKE 1084, 101: POKE 1085, 4: POKE 1087, 0
285 POKE 1088, 31: POKE 1090, 8: POKE 1091, 0
290 TEXT: arrow = PEEK(1125)
300 CALL 1083: PRINT " Use joystick and left fire"
310 PRINT "      button to select"
320 PRINT "      <ESCAPE> = QUIT": PRINT: PRINT
330 PRINT " List controller functions": PRINT
340 PRINT " Show color chart": PRINT
350 PRINT " Change Multicolor background": PRINT
360 PRINT " Draw in Multicolor": PRINT
370 PRINT " Save PIC to tape": PRINT
380 PRINT " Load PIC from tape": PRINT
390 PRINT " Clear Multicolor screen"
400 POKE 64885, 0
402 IF PEEK(64885) = 27 THEN TEXT: PRINT " end.": END
404 IF PDL(5) = 0 AND PDL(7) = 0 THEN 402
410 IF PDL(5) = 1 THEN arrow = arrow-16: GOTO 440
420 IF PDL(5) = 4 THEN arrow = arrow+16: GOTO 440
430 IF PDL(7) = 1 THEN 490
440 IF arrow > 136 THEN arrow = 40
450 IF arrow < 40 THEN arrow = 136
460 POKE 1125, arrow: POKE 1084, 101: POKE 1087, 0: POKE 1088, 31
470 FOR time = 1 TO 120: NEXT time: GOSUB 1020: CALL 1083
480 GOTO 400
490 ON (arrow-24)/16 GOTO 500, 600, 800, 1000, 2000, 2200, 2400
499 REM show controller functions
500 POKE 1125, 200: TEXT: CALL 1083
520 PRINT " Controller functions": PRINT: PRINT: PRINT
530 PRINT " Joystick: Moves select arrow"
540 PRINT "      & Multicolor cursor": PRINT
550 PRINT " #[0-15]: Choose draw color": PRINT: PRINT
560 PRINT " Left fire button: Put pen to"
565 PRINT "      screen": PRINT
570 PRINT " Right fire button: Lift pen"
575 PRINT "      from screen": PRINT

```





## MultiPIX LIST continued ...

```

580 PRINT " *: Return to Menu"
585 IF PDL(13) = 10 THEN POKE 1125, arrow: GOTO 280
590 GOTO 585
599 REM show color chart
600 POKE 1125, 200: TEXT: CALL 1083
620 PRINT " Color chart": PRINT: PRINT: PRINT
630 PRINT " 0 = Clear (Erase)"
635 PRINT " 1 = Black"
640 PRINT " 2 = Medium Green"
645 PRINT " 3 = Light Green"
650 PRINT " 4 = Dark Blue"
655 PRINT " 5 = Light Blue"
660 PRINT " 6 = Dark Red"
665 PRINT " 7 = Cyan (Aqua)"
670 PRINT " 8 = Medium Red"
675 PRINT " 9 = Light Red"
680 PRINT " 10 = Dark Yellow (Orange)"
685 PRINT " 11 = Light Yellow"
690 PRINT " 12 = Dark Green"
695 PRINT " 13 = Magenta (Purple)"
700 PRINT " 14 = Gray"
705 PRINT " 15 = White"
720 PRINT: PRINT " * = Return to Menu"
740 IF PDL(13) = 10 THEN POKE 1125, arrow: GOTO 280
750 GOTO 740
799 REM change background color
800 POKE 1125, 200: TEXT: CALL 1083
805 c$ = ""
810 PRINT " Change Multicolor background": PRINT " * = Return to Menu"
820 PRINT: PRINT: PRINT
830 PRINT " Enter background color": PRINT
840 PRINT " #[0-15]#": PRINT
850 PRINT " ?";
860 IF PDL(13) = 15 THEN 860
865 IF PDL(13) = 10 THEN 930
870 c$ = c$+CHR$(PDL(13)+48)
875 IF LEFT$(c$, 1) <> ";" THEN GOSUB 1870: GOTO 800
877 GOSUB 1820
880 IF LEN(c$) > 4 THEN GOSUB 1870: GOTO 800
885 IF PDL(13) = 11 THEN PRINT "#";
890 IF PDL(13) < 10 THEN PRINT PDL(13);
895 IF LEN(c$) > 2 AND PDL(13) = 11 THEN GOTO 910
900 FOR time = 1 TO 100: NEXT time: GOTO 860
910 c1 = VAL(MID$(c$, 2, LEN(c$)-2))
915 IF c1 > 15 THEN GOSUB 1870: GOTO 800
920 POKE 25431, c1+c1*16
930 POKE 1125, arrow: GOTO 280
999 REM MC draw routine
1000 HGR2: p = 0: POKE 1077, 200: CALL 1076
1010 POKE 1125, 200: POKE 1129, y*4: POKE 1130, x*4
1020 GOSUB 1240
1030 a = 1084: GOSUB 1200
1035 CALL 1083
1040 FOR time = 1 TO 140: NEXT time
1050 GOSUB 1290
1060 IF PDL(5) <> 0 THEN 1370
1070 IF PDL(13) <> 15 THEN 1630
1080 IF PDL(7) = 1 THEN p = 1: GOTO 1405
1090 IF PDL(9) = 1 THEN p = 0
1100 GOTO 1040
1200 POKE a, 0: POKE a+1, 112

```



## MultiPIX LIST continued ...

```

1210 POKE a+3, 0: POKE a+4, 32
1220 POKE a+6, 0: POKE a+7, 24
1230 RETURN
1240 POKE 1084, 101: POKE 1085, 4
1250 POKE 1087, 0: POKE 1088, 31
1260 POKE 1090, 8: POKE 1091, 0
1270 CALL 1083
1280 RETURN
1290 IF PEEK(1132) <> 15 THEN POKE 1132, 15: GOTO 1310
1300 POKE 1132, 1
1310 GOSUB 1240
1320 RETURN
1330 POKE a, 32: POKE a+1, 4
1340 POKE a+3, INT(x/2)*8: POKE a+4, INT(y/2)+32
1350 POKE a+6, 8: POKE a+7, 0
1360 RETURN
1370 IF PDL(5) = 1 THEN y = y-1: IF y < 0 THEN y = 47
1380 IF PDL(5) = 4 THEN y = y+1: IF y > 47 THEN y = 0
1390 IF PDL(5) = 2 THEN x = x+1: IF x > 63 THEN x = 0
1400 IF PDL(5) = 8 THEN x = x-1: IF x < 0 THEN x = 63
1405 POKE 1129, y*4: POKE 1130, x*4
1410 GOSUB 1240
1420 IF p = 1 THEN 1440
1430 GOTO 1050
1440 a = 1084: o = 0
1450 GOSUB 1330
1455 c1 = c
1460 IF x/2 = INT(x/2) THEN c1 = c*16: GOTO 1470
1465 c1 = c
1470 o = y-(INT(y/8)*8)
1520 a = 1097
1530 GOSUB 1330
1540 CALL 1096
1550 m = PEEK(1056+o)
1560 IF x/2 = INT(x/2) THEN 1580
1570 m = INT(m/16)*16: GOTO 1590
1580 m = m-INT(m/16)*16
1590 c1 = c1+m
1600 POKE 1056+o, c1
1610 CALL 1083
1615 o = 0
1620 GOTO 1050
1630 c$ = ""
1640 IF PDL(13) = 10 THEN 1780
1645 IF PDL(13) = 15 THEN 1690
1650 c$ = c$+CHR$(PDL(13)+48)
1660 IF LEFT$(c$, 1) <> ";" THEN GOSUB 1870: GOTO 1040
1670 IF LEN(c$) > 4 THEN GOSUB 1870: GOTO 1040
1680 IF LEN(c$) > 2 AND PDL(13) = 11 THEN 1720
1685 GOSUB 1820
1690 FOR time = 1 TO 100: NEXT time
1700 GOSUB 1290
1710 GOTO 1640
1720 GOSUB 1820
1730 c = VAL(MID$(c$, 2, LEN(c$)-2))
1740 IF c > 15 THEN GOSUB 1870: GOTO 1040
1750 GOTO 1405
1780 a = 1097
1790 GOSUB 1200

```

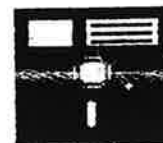


## MultiPIX LIST continued ...

```

1800 CALL 1096
1805 POKE 1077, 192: CALL 1076
1810 POKE 1125, arrow: POKE 1129, 200: GOTO 280
1819 REM bell sound
1820 z = PEEK(17005)
1825 IF z = 3 THEN POKE 17005, 0: POKE 17008, 0
1830 POKE 17963, 6: POKE 17958, 144
1835 POKE 17950, 128: POKE 17954, 9
1840 POKE 17972, 159
1850 PRINT CHR$(7);
1855 POKE 17005, z: POKE 17008, z
1860 RETURN
1869 REM error sound
1870 z = PEEK(17005)
1875 IF z = 3 THEN POKE 17005, 0: POKE 17008, 0
1880 POKE 17963, 24: POKE 17958, 240
1885 POKE 17950, 224: POKE 17954, 2
1890 POKE 17972, 255
1900 PRINT CHR$(7);
1905 POKE 17005, z: POKE 17008, z
1910 RETURN
1999 REM save to tape routine
2000 POKE 1125, 200: TEXT: CALL 1083
2010 PRINT "Use keyboard to enter file name": PRINT
2020 PRINT " Six characters max. length": PRINT
2030 PRINT " Picture Name ";
2040 INPUT pic$
2050 IF LEN(pic$) > 6 THEN GOSUB 1870: GOTO 2000
2060 pic$ = pic$+".PIC": PRINT: PRINT " Saving "; pic$
2070 d$ = CHR$(4)
2080 PRINT d$; "OPEN "; pic$
2090 PRINT d$; "WRITE "; pic$
2100 FOR k = 28 TO 33: FOR b = 0 TO 3: FOR d = 0 TO 31
2110 byte = d*8+b*256+b*2+k*1024
2120 PRINT INT(PEEK(byte))
2130 PRINT INT(PEEK(byte+1))
2140 NEXT d, b, k
2150 PRINT INT(PEEK(25431))
2160 PRINT d$; "CLOSE "; pic$
2170 POKE 1125, arrow: GOTO 280
2199 REM load from tape routine
2200 POKE 1125, 200: TEXT: CALL 1083
2210 PRINT "Use keyboard to enter file name": PRINT
2220 PRINT " Six characters max. length": PRINT
2230 PRINT " Picture Name ";
2240 INPUT pic$
2250 IF LEN(pic$) > 6 THEN GOSUB 1870: GOTO 2200
2260 pic$ = pic$+".PIC": PRINT: PRINT " Getting "; pic$
2270 d$ = CHR$(4)
2280 PRINT d$; "OPEN "; pic$
2290 PRINT d$; "READ "; pic$
2300 FOR k = 28 TO 33: FOR b = 0 TO 3: FOR d = 0 TO 31
2310 byte = d*8+b*256+b*2+k*1024
2320 INPUT num: POKE byte, num: PRINT CHR$(8);
2330 INPUT num: POKE byte+1, num: PRINT CHR$(8);
2340 NEXT d, b, k
2350 INPUT num: POKE 25431, num
2360 PRINT d$; "CLOSE "; pic$
2370 POKE 1125, arrow: GOTO 280
2399 REM clear multicolor screen
2400 POKE 1125, 200: TEXT: CALL 1083
2420 PRINT " Clear Multicolor screen": PRINT: PRINT: PRINT
2430 PRINT " Right fire button = Clear"
2435 PRINT " screen": PRINT
2440 PRINT " * = Return to Menu": PRINT: PRINT
2450 PRINT " ?"
2460 IF PDL(9) = 0 AND PDL(13) <> 10 THEN 2460
2470 IF PDL(9) = 1 THEN 2490
2480 GOTO 2500
2490 CALL 1109
2500 POKE 1125, arrow: GOTO 280

```



# SOFTWARE REVIEWS



## Review of the OrphanWare 720K Disk Drive Upgrade

by Ronald W. Collins

President of N.O.A.H.

It seems that the orphaned computer that we're all so fond of continues to grow. I thought the limit of ADAM's expansion was reached with the double sided disk drive upgrades. Now, to my great thanks, OrphanWare has just taken us into the realm of the high tech state of the art. Big John, of OrphanWare, has managed to upgrade a single sided Coleco disk drive to utilize the new 3.5" disks. These are the same sized disks used by the 16 and 32 bit computers we hear about (but don't really want to buy).

I recently received my 3.5" drive and started doing some tests on it. My main test was to use the drive extensively with all the software that I have. My first task was to format some disks on it. If you haven't considered the size of this disk in storage capacity (720K) then you may well be shocked at how fast one of these "little" disks is formatted! While on the subject of speed, the drive does work faster than the standard drives due to the shorter distance the read mechanism needs to travel to retrieve information.

I use CP/M for most of my projects. And since the ADAM is such a sophisticated CP/M machine (far faster and more efficient than many I've tried), the 720K of storage became a "must have" piece of hardware. With WordSTAR 4.0 you can have room for ALL the support overlays, the dictionary, and your main program with enough space left over on the disk for a multitude of other files. This way you can run the program (or business) all from one single disk.

The limitation of CP/M is that there aren't many graphics programs for use with it. It also can't run many of the EOS programs that I own and use so frequently. My favorite spreadsheet program is ADAMcalc. It's limitation, as with most EOS software, is the storage space eaten up by the files themselves. The 720K drive sure is helpful here -- you don't have to worry about running out of storage space in the middle of a project.

For those who desire to play around with graphics, the best program I can recommend is, of course, PowerPAINT from DIGITAL EXPRESS. I transferred the program over to a modified 720K disk and then transferred three disks full of picture files. This still left me 172K worth of space for more files! This is also saving me a pile of 5.25" disks.

My thanks and congratulations go out to Big John for his hardware design, to Tony Morehan for his software to run the drive, and to all the independent programmers such as those at DIGITAL EXPRESS, GJM Enterprises, Walter's Software, and AJM Software for their fine support of the new 720K format. From a user's point of view, I don't think I could use my ADAM as effectively as I now do without the 3.5" disk drive. I think the massive storage capacity is well worth the investment.

<b>PRODUCT:</b>	<b>DOCUMENTATION LIBRARY</b>
<b>MANUFACTURER:</b>	<b>ADAM's HOUSE</b>
<b>MEDIA TYPE:</b>	n/a
<b>GRAPHICS/SOUND/DESIGN:</b>	n/a
<b>INSTRUCTIONS:</b>	95
<b>USEFULNESS vs. PRICE:</b>	100
<b>RECOMMENDATION:</b>	highly recommended
<b>PRICE:</b>	1 - 2 dollars each
<b>RATED BY:</b>	Hector Sanchez

Have you ever wanted to hook up a Commodore Mouse to ADAM? Or, how about an Atari 10key? Well now, thanks to ADAM's House (associated with GHAAUG), you can. ADAM's House offers, at a very reasonable price, documentation sheets to do just that and then some. Other sheets available allow you to separate ADAM's video signal for monitors that accept separated video / audio input (such as the Commodore line). This improves ADAM's resolution. Most of these sheets only cost one dollar -- a real bargain.

I now have a 10-key that works with SmartWriter, ADAMcalc, and SmartBASIC (with MoreKeys by Nibbles & Bits). I also have hooked my ADAM to a Commodore 1902 monitor. I recommend these information sheets to anyone who "likes to mess around with electronics".

<b>PRODUCT:</b>	<b>KEYBOARD OVERLAYS</b>
<b>MANUFACTURER:</b>	John F. Busby, II
<b>MEDIA TYPE:</b>	n/a
<b>GRAPHICS/SOUND/DESIGN:</b>	n/a;n/a;100
<b>INSTRUCTIONS:</b>	n/a
<b>USEFULNESS vs. PRICE:</b>	100
<b>RECOMMENDATION:</b>	highly recommended
<b>PRICE:</b>	\$11.00
<b>RATED BY:</b>	Hector Sanchez

This is one of the best things I have seen for ADAM in some time. Mr. Busby has made available some keyboard overlays for ADAM. They are well designed and look really professional.

One of the biggest problems with software is remembering all the commands; with these overlays, all you have to do is slip one on your keyboard. No longer will you have to memorize commands or keeping looking at instruction manuals. You get 16 overlays for only \$11.00. This includes AutoAID, ADAMlink, SmartWriter, SmartTYPE, VideoTunes, SmartSpeller, Fast Filer, Data Calc, Dest Set B, M & P, SmartFiler, Smart Letters & Forms, Finance/Loans, and Paint Master.

The only drawback to this product is that you have to cut them out yourself -- this takes some time, but the effort is well worth it. I highly recommend these overlays.

PANASONIC KX-P3131 DAISYWHEEL PRINTER  
AND DIGITAL EXPRESS (MODIFIED) SHOWOFF II

Want ADAM to print out twice as fast with clean, jet black letters like those of the best electric typewriters--and relatively quietly too as it types out your manuscripts, personal letters, and the like? Perhaps a lever to pull that quietly rolls the paper to the top of a page just at the right spot. How about two additional settings to intensify impact if preparing carbon copies? Throw in the capability to work with the same daisywheels that you've used with ADAM. Add auto line justification that prints pages like those of a book, with ruler straight margins on both left and right sides--or center justification that gives your manuscript titles a snappy mid position on a line with no effort at all. Would you like a wide ribbon (the Diablo HyType II Multistrike or many equivalent models put out by other manufacturers) that lasts much longer and which you can probably pick up in a local stationery shop? All this is possible with the Panasonic KX-P3131 and 3151 (higher priced, even faster model) printers.

I've often wondered why only dot matrix printers are suggested to augment ADAM. My goal was to have a printer which could execute like the finest machines, producing perfect letter quality, and still not have to give up the excellent SmartWRITER word processor. After much research and a few bouts with the "school of hard knocks," I finally succeeded in improving upon the performance of ADAM's printer without giving up a thing.

Of course, you'll need a parallel patch like the one supplied by Orphanware, along with the Digital Express specially modified version of ShowOFF II for these printers. Otherwise, you won't be able to underline text or have the neat, professional looking page justification described above. (It's impractical to use the old system producing uneven line endings--but you'll never miss it.) Dr. Swift was kind enough to modify a version of this software so it could work with my new printer. You can also get bold, **shadow**, and **outline** printing with the simple use of imbedded commands. It will even enable you to print with proportional spacing to squeeze letters closer--something I find very useful when printing out large sums on personal checks. Not only can you underscore, you can also double underscore words from within the program. You'll have fun experimenting with several other features provided which are too numerous to mention (one prints some of those characters on your print wheel that couldn't be printed out with regular ADAM.)

ShowOFF II provides you with the same screen as SmartWRITER--but with several decided improvements. First, I've found the black text on deep yellow background much easier to read and far

more relaxing after many hours of work. Ever get tired of scrolling up or down? Just a touch of the Control button along with "t" or "b" will move you five screens automatically. (Tap them twice and you'll double the movement and so on.) And that never used WILD CARD button--now it performs a useful function in immediately restoring a normal page if you suddenly find you're out in open space while in the "moving window" mode.

There are a few disadvantages: You can't use the familiar return key alone to change paragraphs; you'll have to add a simple embedded command as well. The same is true for underlining and the other added functions. Margins are easily set to produce uniform widths on each side of a page using another embedded command. (I've found that settings of 11,70 produce the the most attractive effect with the carriage paper holder two notches to the left of the zero setting.) You can use other settings to indent any line as much to the right as you wish and then go right back to your normal settings afterwards. I'd also recommend ending each document with two carriage returns sandwiched between a form feed command to make sure the last line is included in your copy.

There are certain "no-no's" to avoid, not mentioned in the instructions, or you might have some printout problems. One is never to change ADAM's vertical margin settings after you've begun to type a second page or you might have some words joined together on a line starting a new page. You can change the horizontal controls instead to alter the length of the printed page. But you should never have a problem with page size if you use the following ADAM settings: Horizontal 10 and 75 and Vertical 5 and 56. ADAM then will automatically print uniformly to produce pages just like the one you're reading. If you prefer to use the moving window format, you can always change the right margin to 45, but be sure to restore it to 75 when you're ready to print.

So you do have to depart from some of the normal procedures you're accustomed to with regular SmartWRITER but this is little to sacrifice compared to using the clattering ADAM printer that used to plod on, while printing out its weak, jagged letters--resembling the output of an antique typewriter I'd fumble with in the old days. I've substituted the independent power supply which can be purchased cheaply from many ADAM outlets. Tucked behind my monitor it's completely invisible, and being relatively in the open air, it never overheats. The Panasonic is a bit wider than ADAM's printer since it has a 13" carriage but quite a bit lower in height. The printer also has a 6K buffer. With short documents, or when you've reached the last page, you can let it print out while you do other work, or even turn ADAM off.

I've had so much fun with this machine that I've devised all

sorts of excuses to write letters to various organizations or consumer products manufacturers. As a result I've received free products, coupons, and many replies, including one from the president of a national corporation. Before, I was embarrassed to use the old ADAM printer consistently since I'd previously had a Smith Corona electric cartridge typewriter which, though I may have averaged twenty mistakes a page, still produced better looking copy. Now I've returned to the print quality of that machine--along with the many new features described--without having to give up SmartWRITER. To me that's the best of all possible worlds.

HERBERT LOTTMAN

## SHOW OFF II

MODIFIED FOR THE PANASONIC KX-P3131

### STYLE OF TYPEFACE

\S = shadow printing  
 \O = outline printing  
 \B = bold printing  
 \b = cancel print style

### USER MARGIN CONTROL

~10,70 = user left, right

### SPECIAL PRINTING

\U = begin overstrike  
 \v = cancel overstrike  
 \P = proportional on  
 \p = proportional off  
 \U = underscore start  
 \D = double underscore  
 \u = cancel underscore

### PRINTER CONTROLS

\ = normal line feed  
 \E = reverse line feed  
 \F = form feed  
 \Z = single direction  
 \z = bi-directional  
 \r = reset printer

### ASSORTED FUNCTIONS

\Y = spoke #1 font  
 \y = spoke #2 font

### LINE JUSTIFICATION

\A = left and right  
 \C = center text  
 \X = disable all WP



# ORPHANWARE



ORPHANWARE  
5665 Myers Road  
Akron, OH 44319  
216-882-4720

Mon - Fri:	9:00 to 5:00
Sat:	10:00 to 3:00

MX164 memory expander	37.95	Regularly	45.00
MX256 memory expander	139.95		155.00
MX512 memory expander	229.95		255.00
MX164 Short kit	9.95		15.00
MX164 Full Kit	25.00		32.00
PIA2 interface	33.95		37.95
Centronics Cable	15.00		17.00
80 Col Video Unit	219.95		239.95
RS232 + AVATEX 1200e	139.95		149.95
320K Disk Drive Conversion	125.00		135.00

720K Disk Drive Conversion	165.00	175.00
WordStar 4.0 for ADAM	139.95	149.95
FILE MANAGER	15.95	19.95

CP/M disk conversion	2.50/disk	3.00
Include ADAM formatted disk with your order		

Shipping for modems, 80 column video units and disk drives is 8.80. All else is 3.30. Add 1.00 per hundred for insurance. We accept VISA and Master Charge. These prices are good for until May 1, 1988 and your order must be accompanied by the mailing label from this issue of Nibble and Bits. Send SASE for our full catalog.

## SWIFTDISK

BY DIGITAL EXPRESS

Okay, you've got a memory expansion card and a ramdisk utility ... the speed is unbelievable — your productivity is greatly increased. But, you can only access the ramdisk from SmartBASIC or your own Z80 programs. How about the vast wealth of software written before ramdisks were even a consideration on ADAM?

SwiftDISK could be just what you're looking for. It fools the Operating System into thinking that the RAMDISK is a SECOND TAPE DRIVE (even if you only have one tape drive). A powerful boon to ADAMcalc, SmartWriter, and SmartLOGO. It can be used with ANY standard EOS program (can't be used with SmartBASIC 2.0 because of its revision of EOS). Yes, now you can access the ramdisk on any program that provides file access for a second tape drive ... just another innovation from the folks at DIGITAL EXPRESS.

SwiftDISK requires MegaDISK 1.0 — you'll need to transfer the 'shortdisk' program to the SwiftDISK medium. This program also works great with FastPatch by OrphanWare. It even boots disks and DDPs just like FastPatch does. Because some (Coleco) programs use a 64K card as a work buffer, SwiftDISK is best recommended for those who have an MX-128 or larger.

How much is this ramdisk breakthrough? How does \$11.95 retail sound? And N&B subscribers can get it for only \$9.95. This program is COMPLETED and READY TO SHIP — absolutely no waiting on this new product.

# PAINTAIDE

## WITH THE

# SWIFT FONT KIT

BY DIGITAL EXPRESS

Sure PowerPAINT is a very comprehensive graphics design program. Yes, it's the single largest program ever written for the ADAM computer by a third party developer. Of course, it's compatible with "SmartPAINT", "FontPOWER", "SpritePOWER", and "CLIPPER" (all by DIGITAL EXPRESS also). And, PowerPAINT is widely acclaimed as one of the best programs ever written for the ADAM™ computer. So, what could make it better?

First, seven minor bugs slipped by in the 80K Z80 object code of the program. PaintAIDE will automatically correct these for you. The program now correctly displays the 512K card icon on the status screen for ALL systems so equipped. You now have 62K more ramdisk storage space with any OrphanWare card greater than 64K. The polygon lockup bug is fixed!! There were two bugs with the LOWER or UPPER case SmartKEY labels option. One would cause a "NO DIRECTORY END" error message and the other wouldn't allow you to store customized PowerPAINT print codes. Both of these are fixed. The SmartKEY labels are easier to read (even on TVs). And, you can now erase thoroughly in the SPECIAL FONTS mode.

PaintAIDE allows you to enable or disable the printer status check for your dot matrix. You can select your own default background color for CLEAR. And, BEST OF ALL ... you can pick your own predefined typeface for the four sets of SPECIAL FONTS. With half width you can setup for MICRO fonts or (better) SYSTEM fonts. With full width, you can setup for COMPU, MICRO, or SYSTEM fonts. And you can select from BOLD, COMPU, GOTHIC, or SYSTEM for the double width fonts. Plus, you have six double sized (headline) typefaces to choose from: BIG, BOLD, COMPU, GOTHIC, OUTLINE, or RITZ.

PaintAIDE requires two drives. You insert PaintAIDE in one and PowerPAINT in the other. You just select the options that you want and it will change the PowerPAINT medium for you ... fast. Thereafter, the changes will be in effect when you boot the disk or data pack. You can change them again later also.

PaintAIDE also comes complete with the Swift Font Kit. This includes 20 sets of FontPOWER font sets — see the samples below. With all the SPECIAL FONT sets, you have a total of over three dozen font files to choose from. This really brings out the page layout aspect of PowerPAINT.

<p>SYSTEM FONTS BOLD FONTS SCRIPT FONTS RITZ FONTS MODERN FONTS ITALIC FONTS MACHINE FONTS OLD ENGLISH FONTS OLD WEST FONTS</p>	<p>VERY SMALL FONTS ...  AND EVEN SMALLER FONTS</p>	<p>BOLD2 FONTS SCOP FONTS COMPU FONTS ROMAN STYLE FONTS BLOCK GOTHIC FONTS</p> <p style="font-size: 2em; font-weight: bold;">ABC    ABC</p> <p style="font-size: 2em; font-weight: bold;">ABC    ABC</p>
---	---	--

More good news. All the font files can be used in your own SmartBASIC programs also!!! And, a program is included to convert FontPOWER font sets to hi-res shape tables for use in HGR or HGR2 modes. More ... a program is included that allows you to stretch the length of FontPOWER font sets for storage in SmartPAINT format.

An incredible package ... it's just \$21.95 retail and ONLY \$16.95 to N&B subscribers. You'll wonder how you ever got along without it (even if you don't have PowerPAINT yet). This graphics packed volume is COMPLETED and READY TO SHIP — absolutely no waiting.

**ADAM USERS'  
GROUPS****TEXAS****ghAUG**

Editors: Terry R. Fowler  
Route 2, Box 2756  
Peerland, TX 77581

ADAM Users of El Paso  
Dick Levin  
6308 Falling Star  
El Paso, TX 79912

**ADAM'S ALIVE**

Editor: Ed Jenkins  
1010 Westminster  
Garland, TX 75040

**UTAH****ADAM-LINK of Utah**

Editor: Alan Neeley  
2337 South 600 East  
Salt Lake City, UT 84106

**VIRGINIA**

Central Virginia AUG  
Thomas J. Kelly  
Route 664, 3B  
Earlsville, VA 22936

Norfolk ADAM Group  
Gerald M. Steen  
1456 Longdale Drive, #102  
Norfolk, VA 23513

Washington, D.C. AUG  
Jim Tyson  
1811 St. Roman Drive  
Vienna, VA 22180

**BULLETIN BOARD**

- big selection of software -

**ADAMagic**

1634 North Thompson Drive  
Bay Shore, NY 11706-1330

**LOOKING FOR LOCAL ADAMites**

Marisa Serven  
5185 Maplebrook Lane  
Flint, MI 48307

GREAT data packs, COLOR stationery, and  
COLOR ribbons; send SASE to

Steven Major  
P.O. Box 562  
Champlain, NY 12919

- new big memory expanders -

**In House Service Reps**

620 Harmon Cove Towers  
Secaucus, NJ 07094

**Hacker's Helper**

Mel Ostler  
7641 Raasaf Boulevard  
Las Cruces, NM 88005

huge selection of ADAM products  
- fast shipping -

**M.W. Ruth, Company**

3100 West Chapel Avenue  
Cherry Hill, NJ 08002

**PHRASE CRAZE**

Ready Software  
10085 60<sup>th</sup> Street, SE  
Alto, MI 49302

**Unique ADAM Hardware****TRISYD VIDEO GAMES**

26 Florence Crescent  
Toronto, Ontario  
CANADA M6N 4E4

- sharply duplicated game instructions -

send SASE for list

**Norman R. Castro**

809 West 33<sup>rd</sup> Avenue  
Bellevue, NE 68005



## PROGRAMMING UTILITY SOFTWARE

- DDD Intel-BEST 3.3** (by DIGITAL EXPRESS) \$24.95 (retail) \$18.95 (SDP)  
 \* makes over 3 dozen changes to BASIC 1.0; comes with 9 very user friendly MUBIC commands
- DDD Intel-LOAD V1.0** (by DIGITAL EXPRESS) \$15.95 (retail) \$11.95 (SDP)  
 \* converts BASIC 1.0 programs to load up to 12 times faster; stays in RAM; 2 BSAVE options
- DDD Intel-LOAD V2.0** (by DIGITAL EXPRESS) \$15.95 (retail) \$11.95 (SDP)  
 \* converts BASIC 2.0 programs to load up to 12 times faster; stays in RAM; 2 BSAVE options; works only in STDHDM
- DDD SmartBEST V1.0** (by DATA DOCTOR) \$16.95 (retail) \$14.95 (SDP)  
 \* makes several changes to BASIC 1.0; not compatible with Intel-BEST 3.3
- DDD SmartTRIX** (by DATA DOCTOR) \$19.95 (retail) \$14.95 (SDP)  
 \* a set of 10 excellent programming aides; two very nice sprite programs; 60 page manual; disk & DDP versions not compatible
- DDD BASICaide (rev 2)** (by Mr. T. SOFTWARE) \$11.95 (retail) \$9.95 (SDP)  
 \* several BASIC 1.0 enhancements; new CHAIN command; new BIN command to store fast loading programs; macros; fixes; more
- DDD TurboDISK 1.0** (by DIGITAL EXPRESS) \$24.95 (retail) \$19.95 (SDP)  
 \* creates ramdisk ability with BASIC 1.0; corrects several BASIC bugs; includes TurboCOPY -- very nice media control and copy utility; requires 64K expander
- DDD MegaUtil** (by MARATHON COMPUTER) \$32.95 (retail) \$27.95 (SDP)  
 \* an excellent collection of varied programming aids; includes ByteWriter (block editor), CopyWriter (media backup utility), PD modules, programming tips, plus more
- DDD TurboDISK 2.0** (by DIGITAL EXPRESS) \$15.95 (retail) \$11.95 (SDP)  
 creates a powerful ramdisk ability for BASIC 2.0 and a 64K expander; disables EXTDMEM command
- DDD MegaDISK 1.0** (by DIGITAL EXPRESS) \$24.95 (retail) \$19.95 (SDP)  
 \* creates the ramdisk ability for BASIC 1.0 or your own Z80 programs; works with 64K, 128K, 256K, 512K, and 1M ORPHANWARE memory expanders; automatically checks size of your XRAM cards; does NOT disable NMI interrupt (FLASH, etc.); comes with 5 PD programs including EZfileXFER; much, much faster than a Coleco disk drive; self-booting or can be BRUN after BASIC
- DDD XRAMpak I** (by DIGITAL EXPRESS) \$19.95 (retail) \$14.95 (SDP)  
 \* the perfect companion for MegaDISK 1.0 and your ORPHANWARE memory expansion board (any size); includes XRboot (boot BASIC 1.0, ADAMcalc, and ADAMlink in about 2 seconds), XRcopy (a VERY powerful copy utility uses ramdisk space ABOVE your files stored there -- great for multiple copies of PD software), PACK and UNPACK (compacts and decompacts your favorite utilities into/from one large file for quick system setup), EZfileXFR2 (faster than EZfileXFER, by not restarting the directory after each transfer)
- DDD AUTOWRITER** (by Mr. T. SOFTWARE) \$15.00 (retail) \$14.25 (SDP)  
 \* a menu driven utility that writes machine code routines and BASIC subroutines (included) of your choice to a user designated data pack or disk; file may then be merged with existing programs to add special features; detailed instruction manual

## DOT MATRIX PRINTER SOFTWARE

- DDD FILE PRINTER** (by Terry Fowler) \$9.95 (retail) \$9.45 (SDP)  
 \* a fine set of BASIC utilities for use with your dot matrix printer; prints SmartWriter compatible files; allows you to set default printer functions; (price goes UP at the end of November)
- DDD ShowOFF II** (by DIGITAL EXPRESS) \$19.95 (retail) \$14.95 (SDP)  
 \* machine code print enhancements for SmartWriter (adds 32 print controls and 5 CONTROL functions to SmartBASIC; requires Centronics parallel interface, a Panasonic KIP-1080 or 1080i printer, and at least a 64K expander
- DDD ShowOFF IIa** (by DIGITAL EXPRESS) \$19.95 (retail) \$14.95 (SDP)  
 \* very similar to ShowOFF II except that it is compatible with any dot matrix printer that supports Epson FX escape codes; works with Epson, Star, and printers and the Okimate 20; does NOT include line justification commands or internal document margin control; requires at least a 64K expander
- DDD Fast & Calc Patch** (by ORPHANWARE) \$9.95 (retail) \$8.95 (SDP)  
 \* FastPatch 2.0 directs all printer output to your parallel interfaced printer -- can be used with SmartBASIC 1.0, SmartWriter, and SmartFiler; CalcPatch directs ADAMcalc output to your dot matrix printer; neither patch includes special printer commands -- works just like the standard ADAM versions
- DDD LinkPatch** (by ORPHANWARE) \$9.95 (retail) \$8.95 (SDP)  
 \* ADAMlink II telecommunications software with up and down loading of ASCII files; plus directs printer output to your dot matrix

**RECREATION/GAMES SOFTWARE**

- DDD MageQuest (rev 2)** (by REEDY SOFTWARE) \$16.95 (retail) \$14.95 (SDP)  
\* superb graphic adventure; includes 9 levels of play in the main adventure plus 3 solo adventures; additional solo adventures available from REEDY SOFTWARE
- DDD TriviaPac I** (by Mr. T. SOFTWARE) \$17.95 (retail) \$14.95 (SDP)  
\* 1200 questions; 6 categories; one to four players; graphics and sound; hall of fame; many hours of fun
- DDD Kid's TriviaPac** (by Mr. T. SOFTWARE) \$17.95 (retail) \$14.95 (SDP)  
\* 1080 questions; 6 categories; one to four players; graphics and sound; hall of fame; many hours of fun
- DDD Strategy Strain** (by DATA DOCTOR) \$18.95 (retail) \$14.95 (SDP)  
\* nine intellectually challenging computer classics; graphics and sound; good Star Trek game
- DDD Lab Mouse** (by REEDY SOFTWARE) \$13.95 (retail) \$11.95 (SDP)  
\* exciting game that puts you in the role of a laboratory mouse stuck in a maze; all hi-res graphics; 5 skill levels
- DDD Entertainment Pack** (by REEDY SOFTWARE) \$16.95 (retail) \$14.95 (SDP)  
\* three challenging computer classics (connect 4, blockade, and slide puzzle); great graphics; fast animated sprites; one or two players
- DDD Stage Fright** (by REEDY SOFTWARE) \$16.95 (retail) \$14.95 (SDP)  
\* extensive text adventure in which you play the role of an actor or actress trapped in an abandoned theater; some graphics and sound; easy to play -- challenging to win; game save option; three progressive levels of play
- DDD Diablo** (by IMAGE MICROCORP) \$19.95 (retail) \$18.95 (SDP)  
\* a maze-like game in which the play field consists of user movable tracks on which you try to keep a ball in motion; good graphics; requires substantial strategy to play
- DDD Black Gold** (by IMAGE MICROCORP) \$19.95 (retail) \$18.95 (SDP)  
\* a board style game for one to four players; compete by digging for oil; good graphics
- DDD Stock Market Game** (by IMAGE MICROCORP) \$19.95 (retail) \$18.95 (SDP)  
\* a board style game for 1 to 4 players; see who makes the biggest profit buying and selling stock; a relatively good tool for learning about the stock market; more enjoyable with some stock market understanding
- DDD Centipede** (by AtariSOFT) \$13.95 (retail) \$11.95 (SDP)  
\* the still popular arcade game in which you shoot away segments of oncoming centipedes; available in cartridge ONLY; one or two players
- DDD Defender** (by AtariSOFT) \$13.95 (retail) \$11.95 (SDP)  
\* the action packed arcade game in which you shoot attacking alien ships and attempt to save inhabitants of the planet below; available on cartridge PLUS disk or data pack (specify which one you want with the cartridge); one or two players
- DDD Beyond Trek** (by Digital Express) \$19.95 (retail) \$14.95 (SDP)  
\* pits you against hostile klingons; very good graphics; good sound/music; protect 4 starbases and annihilate the klingons; you command the Enterprise; hall of fame for 10 high scores (for session or all-time); requires at least a 64K expander
- DDD Chess Champ** (by Digital Express) \$19.95 (retail) \$14.95 (SDP)  
\* the FIRST graphic chess game for the ADAM; great graphics; easy user interface; skill levels; switch sides; a little slow on higher skill levels; good chess playing companion; documentation includes instructions on playing chess; requires at least a 64K expander

**COLECO COPYRIGHTED SOFTWARE**

- DDD SmartLOGO** (data pack only) \$22.95 (retail) \$18.95 (SDP)  
\* Coleco's version of the popular structured language; good for graphics and sound control; 350+ page manual
- DDD SmartFILER** (data pack only) \$16.95 (retail) \$12.95 (SDP)  
\* Coleco's general purpose database program; easy electronic filing system; search features; 3B page manual
- DDD ADAMcalc** (data pack only) \$24.95 (retail) \$18.95 (SDP)  
\* advanced electronic spreadsheet; comes with sample templates; 154 page manual
- DDD CP/M 2.2** (data pack only) \$32.95 (retail) \$25.95 (SDP)  
\* Coleco's version of the still popular operating system; 1000's of public domain supporting programs; 250+ pages

**GUIDES/BOOKS/INSTRUCTIONS**

- DDD Hacker's Guide (vol 1) (by Peter & Ben Hinkle) \$12.95 (retail) \$11.95 (SDP)  
\* The Hinkle's in - depth guide to the technical aspects of exploring ADAM; 60 pages; 18 programs
- DDD Hacker's Guide (vol 2) (by Peter & Ben Hinkle) \$12.95 (retail) \$11.95 (SDP)  
\* The Hinkle's detailed guide to SmartBASIC V1.0; 110 pages; HELLO program includes several BASIC fixes and enhancements
- DDD Hacker Software (by Peter & Ben Hinkle) \$5.95 (retail) \$3.95 (SDP)  
\* the programs from volumes one and two (above)
- DDD ez ref 101 (by DIGITAL EXPRESS) \$2.45 (retail) \$1.95 (SDP)  
\* approximately 700 Z80 instructions listed in NUMERICAL sequence; 9 pages; decimal, hex, op code, operands; good for disassembling machine code; holes drilled for easy binder insertion
- DDD ez ref 102 (by DIGITAL EXPRESS) \$2.45 (retail) \$1.95 (SDP)  
\* approximately 700 Z80 instructions listed in ALPHABETICAL sequence; 9 pages; decimal, hex, op code, operands; good for assembling machine code routines; holes drilled for easy binder insertion
- DDD ez ref 103 (by DIGITAL EXPRESS) \$3.95 (retail) \$2.95 (SDP)  
\* study of ADAM's EOS; jump table vectors, routines, setup for CALLs, exit register meanings; plus several assorted tables that have appeared in N&B; 21 pages; holes drilled for easy binder insertion
- DDD Pinball/HardHat Guide \$3.95 (retail) \$2.95 (SDP)  
\* 40 pages of instructions for the popular public domain package; holes drilled for easy binder insertion; includes Pinball reference chart

**"NIBBLES & BITS" SOFTWARE**

- DDD N&B binder01 (by DIGITAL EXPRESS) \$29.95 (retail) \$24.95 (SDP)  
\* all six issues from 07/86 thru 12/86; sturdy 3-ring binder; includes two DDPs or two disks containing all the programs
- DDD N&B binder02 (by DIGITAL EXPRESS) \$29.95 (retail) \$24.95 (SDP)  
\* all six issues from 01/87 thru 06/87; sturdy 3-ring binder; includes two DDPs or two disks containing all the programs
- DDD N&B issue programs (by DIGITAL EXPRESS) \$6.95 (retail) \$3.95 (SDP)  
\* set01: all the programs from 07/86 thru 09/86  
\* set02: all the programs from 10/86 thru 12/86  
\* set03: all the programs from 01/87 thru 03/87  
\* set04: all the programs from 04/87 thru 06/87  
\* set05: all the programs from 07/87 thru 09/87  
\* set06: all the programs from 10/87, 11/87, & 03/88

**GRAPHICS DESIGN SOFTWARE**

- DDD ShowOFF I (by DIGITAL EXPRESS) \$29.95 (retail) \$24.95 (SDP)  
\* graphics design package (enter text, draw polygons, paint, save pictures, etc.); fast color changes; a variety of print options (preset for Epson FX / IBM 5152 printer codes); printing graphics requires Centronics parallel interface for printer
- DDD CLIPPER (by DIGITAL EXPRESS) \$19.95 (retail) \$14.95 (SDP)  
\* introduces the concept of "clip art" to ADAM; totally machine code program; build clip art collections; put clip art in hi-res pictures; draw and edit clip art; also capture from hi-res pictures; enter text; change colors; includes an 11K ramdisk (does NOT require 64K expander)
- DDD FontPOWER (by DIGITAL EXPRESS) \$16.95 (retail) \$12.95 (SDP)  
\* utility using Coleco-like graphics for designing your own font sets; comes with 8 font sets including "script", "Roman", "cory", and "bold"; shows you how to use the font sets in high or low resolution graphics; plus three font shape tables for HGR and HGR2 modes; includes demos; fonts can be used in your own BASIC 1.0, BASIC 2.0, and z80 programs
- DDD SpritePOWER (by DIGITAL EXPRESS) \$19.95 (retail) \$14.95 (SDP)  
\* totally machine code utility using Coleco-like graphics for designing your own sprites; includes 3 sets of sprites; extensive instruction manual; shows you how use sprites in BASIC 1.0, BASIC 2.0, and Z80 programs; includes PUFF; includes 11K ramdisk (does not require 64K expander); very easy to use program
- DDD PowerPAINT (by DIGITAL EXPRESS) \$44.95 (retail) \$34.95 (SDP)  
\* 80K machine code graphics processor for ADAM; the most extensive graphics design program available; uses Coleco-like graphics; a large variety of file storage and retrieval options (directly loads PaintMASTER, SmartPAINT, GraphixPAINTER, SmartLOGO, and RLE pictures); quick global color changes; move, copy, and erase options; many hardcopy print options (screen, labels, letterheads, and whole picture); screen scroll options; four screen pictures with 64K card (8 screen picture with 256K or 512K expander); uses FontPOWER font sets, CLIPPER clip art, and SpritePOWER sprites; requires at least a 64K memory expander; requires a Centronics parallel interfaced Epson FX or IBM 5152 compatible dot matrix printer for hardcopies; fully compatible with SmartPAINT; you can easily UNDO changes

**MISCELLANEOUS SUPPLIES**

000 Coleco/LORAM digital data packs	\$33.95 (retail--for 10) \$29.95 (SDP--for 10)	\$4.95 (retail--each) \$3.95 (SDP--each)
* designed and formatted by Loranger Manufacturing; no face label		
000 plain label digital data packs	\$19.95 (retail--for 10) \$17.95 (SDP--for 10)	\$3.45 (retail--each) \$2.25 (SDP--each)
* Sony brand formatted by E&T SOFTWARE; no face label		
000 plain lable 5.25" disks for ADAM	\$6.95 (retail--for 10) \$4.25 (SDP--for 10)	\$ .79 (retail--each) \$ .49 (SDP--each)
* double-sided; double density; includes envelope and write protect tabs		
000 printer ribbons for SmartWRITER printer	\$15.95 (retail--for 3) \$14.75 (SDP--for 3)	\$5.75 (retail--each) \$5.25 (SDP--each)
* black ink; standard replacement ribbon cartridge		
000 Panasonic printer ribbon	\$6.95 (retail--each) \$5.45 (SDP--each)	
* black ink; nylon; standard replacement ribbon for 1080, 1080i, 1090, 1091, 1091i, and 1092		
000 standard multipurpose adhesive labels	\$5.45 (retail--for 1000) \$3.95 (SDP--for 1000)	\$2.95 (retail--for 500) \$2.25 (SDP--for 500)
* white, pin-feed, 3 1/2" by 1 1/16"; fan fold; single column		
000 multipurpose adhesive labels	\$9.95 (retail--for 1000) \$8.95 (SDP--for 1000)	\$7.95 (retail--for 500) \$6.95 (SDP--for 500)
* white, pin-feed, 4" by 1 7/16"; fan fold; single column		
000 word processing computer paper	\$4.25 (retail--for 250 sheets) \$3.45 (SDP--for 250 sheets)	
* white; pin-feed; 9 1/2" by 11"; fan-fold; 20 lb. wt.; clean edge; one part		
000 MX-64 memory expansion card	\$44.95 (retail -- each) \$37.95 (SDP -- each)	
* ADAM compatible 64K card; expands ADAM to 144K; plugs into slot three inside console		

**EDUCATIONAL SOFTWARE**

000 Spanish Vocabulary (by MARATHON COMPUTER)	\$18.95 (retail)	\$16.95 (SDP)
* a unique program for ADAM; includes electronic dictionary; comes with 1600 words; expandable to 7400 words; quizzes; printed study sheets; report cards		
000 QuikFax Guest (by DATA DOCTOR)	\$18.95 (retail)	\$14.95 (SDP)
* three academic quizzes; includes study mode (on - screen and hardcopy); US capitals, world capitals, and Chemistry elements		

**BUSINESS SOFTWARE**

000 SoftPACK I (by E&T SOFTWARE)	\$18.95 (retail)	\$18.45 (SDP)
* four menu driven home management programs; SoftCHECK, Checkbook Totalizer, CheckBook Reconciler, and SoftMailer (address filer for labels and envelopes)		
000 Business Pack I (by E&T SOFTWARE)	\$18.95 (retail)	\$18.45 (SDP)
* two useful programs for creating and printing address files; plus two very good programs for inventory control and printing		



■■■■■ "SDP" stands for Subscriber Discount Price. N&B subscribers get a 5% to 25% discount off the suggested retail price of items listed.

■■■■■ Unless otherwise noted, all software is available on disk or datapack.

■■■■■ All DIGITAL EXPRESS storage media (disks and data packs) are warranted to be free from defects in materials and workmanship. If the storage medium proves defective, return it to us for replacement or repair (at our discretion). After 90 days from purchase, a \$3.00 return shipping fee is required.

■■■■■ The product prices listed herein may be subject to change after May 1, 1988.



Public Domain Software Info

Public domain software is offered as a quick, inexpensive means for you to expand your ADAM software library. Note, however, that public domain software is not necessarily of commercial quality. Although, we do attempt to winnow out flawed programs, there is no guarantee of the quality regarding these packages. If, however, the storage medium itself proves defective within 90 days of purchase, we will replace it free of charge.

You may get any of the volumes described below on digital data pack for \$5.95 or on disk for \$4.95. Subscribers also have an option to get a volume FREE (limit three per calendar month); this option does not apply to volumes in the "Coleco PD Library".

Here's how to get one FREE. (1) Contribute an original program for any library. (2) send a signed statement that the program is NOT copyrighted. (3) send the program on DDP (digital data pack) or disk; one DDP or disk for each volume that you want to exchange. And, (5) include a return eailer with sufficient postage or send \$2.50 for shipping costs.

SmartBASIC V1.0 LIBRARY

Each of these volumes is self-booting with SmartBASIC stored on the volume. When you pull the reset, a graphic screen will be displayed as BASIC loads. All programs will speed load. Each volume (except the utility volumes) is controlled by a user friendly ramdisk (does NOT require the 64K expander) central menu for easy file selection. Each volume contains over 120K of files.

N&Bgames (volumes 1, 2, & 3): an assortment of text adventures, board games, and animation games.  
 N&Bgraph (volumes 1 & 2): a variety of graphics displays and music programs.  
 N&Bmath (volumes 1 & 2): several scientific and financial math programs.  
 N&Butil (volumes 1 & 2): an assortment of programming utilities.

GRAPHICS FILES LIBRARY

In order to view/use the hi-res picture files in this library you need SmartPAINT (from ShowOFF I), the HBR Picture Manager program (02/87 N&B, page 16), or PowerPAINT.

N&Bpix (volumes 001 thru 010): 13 files each.  
 Art Gallery (volumes 1 & 2, compiled by REEDY SOFTWARE): 13 files each.  
 PaintMATES (vol 1 - 3): small art for use with PowerPAINT (fonts, sprites, clip art, & brushes).  
 PaintFORS (vol 1 & 2): one full page graphic, 2 letterheads, & 1 label for use with PowerPAINT.  
 PixManII: switch pictures between RLE, SmartPAINT and PaintMASTER; includes SW docs.

Coleco PD LIBRARY

SmartBASIC 2.0: improved interpreter; 49K files; works with or without 64K expander  
 Pinball/HardHat Mac: latest version with two demo games; 1 to 4 players.  
 ADAMlink II: supports up and down loading of SW compatible files; includes printed U/D docs.  
 Jeopardy: just like the game show; great graphics; 1 to 3 players.  
 Super SubRoc: 90K arcade-type game; super graphics; hall of fame.  
 Troll's Tale: Easy graphic adventure; supports one player; disk & DDP not compatible.  
 Video Hustler: graphic billiards game; 1 or 2 players.  
 Disk Manager: file handling utility; the program that comes with a disk drive.  
 SmartBASIC 1.0: a replacement for the BASIC that came with your ADAM.

CP/M 2.2 LIBRARY

CP/Mgames (volumes 1 & 2): assorted EBASIC (included) games.  
 demo carts: requires 64K XRAM card; music samples, system tester, such more.  
 CP/Mutil01: a variety of utility .COM files for CP/M.

PINBALL GAMES LIBRARY

PBgames (volumes 01 thru 04): 10 pinball games each; self-booting.

MISCELLANEOUS COLLECTIONS LIBRARY

Mplus01: a collection of improvements to MultiWrite (required); by Jim Guenzel.  
 N&Bacalc01: several paradiqa and other files; 148K; by Terry Fowler.  
 EZpak: self-booting medium; contains EZmenu & EZcopy.  
 ezFILER: self-booting medium; contains nice BASIC address filer.  
 SHAPEMAKER: several font shape tables; nice shape design utility; by Guy Cousineau.  
 N&Blogo01: a variety of SmartLOGO (required) files.  
 One Minute Formatter: 1 or 2drives, single or double sided, same time, plus more.  
 MusicBOX (vol 1 & 2): 10 SmartTUNES songs each, plus instructions, and more.