SOMETHIN'S COMIN'...SOMETHIN' GOOD

There has been lots of talk about how ADAM will survive If some third party vendors would only continue where Coleco left off.

Well, let's go back to when Coleco was still promising us the "good life" even after "death."

AUG was asked to find out if many ADAM users would be Interested In the "Universal Port." That is the device that allows ADAM to be connected to another printer (usually a dot-matrix) or to another computer or external modem for telecommunications. The answers we received were an overwhelming "YES." However, it was decided (by Coleco) to forego this option.

The tractor feed was offered and then abandoned.

CP/M software from Coleco and Westico was promised, but since the prices were so high, Westico decided to give up the ADAM CP/M offering. Nothing from Coleco as well.

The 80 column card was on the drawing board—there to remain.

Separate power supply, so that the ADAM could be more portable, was just a "gleam In Coleco's eye."

The necessary software to "back-up" all our software was definitely not on the agenda.

All of the above is mentioned so that you can see how far we have come In only the last few months and still "lookIn' good."

Let's start with the "Universal Port." It's here! We have used it (are still using it) and it works well. See SP-1 Interface Review inside.

The tractor feed is here and is being shipped from inventory. See our vendor advertisers for additional information.

CP/M software is now available at reasonable prices from Eve Electronics.

The 80 column card will be available in about 60 days, as will the separate power supply.

The back-up software is now available from many sources, including our PD library.

That takes care of the old stuff. Now, how about something NEW?

Before the end of 1985 ADAM users will see many new and exciting hardware and software innovations, such as:

A software program that will let ADAM "read" other disk formats.

Hardware that will allow you to add other drives... drives of ANY SIZE and configuration.

A speech synthesizer and real time clock/calendar.

A light pen.

An Adapter to let you user either an RGB or Composite monitor .

These are not just promises. These are commitments.

Catalog

Back Issues

We have had many requests for back issues of AUGment. If you would like copies of any of the previous five issues, please send $3.00 (for each] to AUG Back Issues, P.O. Box P, Lynbrook, NY 11563.

Disk-DP Exchange

If you would like to send us articles for AUGment and receive your ADAM pin and a disk or dp from our library, send us your articles and/or programs on disk or dp.

Time to Renew?

It's time for some AUGies to renew their membership. If your AUGment label has RENEW printed on it, your membership will expire after the next issue. Please write your ID# on the face of the check.

Dear AUG,

I recently received a letter from a businessman in Orlando, FL, regarding my math program printed in Vol. 1, No. 3 of AUGment. He informed me that he was unable to get the division section of the program to function properly. He asked me to look into the problem, and I discovered he was absolutely right. I have sent him a corrected version, but I thought other AUGies should be aware of the changes necessary to correct the division section of the program.

Change line 630 to read:

```
630  x=int(rnd(1)*20):y=int(rnd(1)*20):
     if x=0 or y=0 then 630
```

Add lines 635 to 637 as follows:

```
635   q=(x/y)
636   if q=int(q) then 640
637   goto 630
```

And finally change line 660 to read:

```
660   if d=q then 680
```

Russell Dusome
52 Briar Road
Barrie, Ont., Canada LAN 3M4

* * *

Dear AUG,

I'm writing this letter to inform you of a new "SIG" that was formed on a local BBS here. Call (216) 244-9081. It is very important that you tell the sysop you are using an ADAM. Try very hard to make the time to call. There are so few ADAM BBS's around that we should support each one. File transfers will begin if enough calls are received. GIVE IT A CALL!!!

Name = Steel City BBS
Sysop = Mike Mitock
Hours = 7:00 p. m. - 7:00 a. m.
Telephone # = (216) 244-9081
Days = All seven

J. Fligner
2110 W. 36th Street
Lorain, OH 44053

Dear AUG,

Here is some Information on items in Vo 1. 1, No. 5.

For Loren Storbakken: The confusion stems from the horribly complicated way the video generator works. I don't have much information on the IC, but here is what I know. First, notice that there are two codes for black. One of them is not black, but transparent. That is, it lets the screen color show through, which may or may not be black. Second, color can only be specified for groups of four pixels. Third, pixels can be on or off; HGR turns them off, and HPLOT turns them on, or changes their color. Type this program and input 128, 130, and 134 to see this. The fact is, HPLOT does not turn the pixels off; it just changes their colors.

```
10   hgr
20   input x
30   for y=100 to 150
40   hcolor=8:hplot x,y
50   for i=1  to 100:next
60   hcolor=0:hplot x,y
70   next
80   goto 20
```

Even more dramatic is to type this in immediate mode:

```
hgr
hcolor=8
hplot 90,50 to 110,50
hcolor=3
hplot 110,85 to 110,95
```

For John Milligan: Here is a simpler way to set the colors.

```
10   poke 17059, (screen color)
20   poke 17115, (background) + (text)
     *16
30   poke 17126, (inverse background) +
     (inverse text) *16
```

Incidentally, the text statement resets all the screen parameters, including the character definitions.

Color 0 is black only if the screen color is black.

Vern Wall
4481 Deborah Drive
Doreville, GA 30340

Dear AUG,

Correction

In the last issue, two lines of my subroutine for "Making Cents" were in error. They should read as follows:

```
1020   cb$=str$(b)
1090   if len(l$)=2 then cb$=
       "$ "+l$+"."+r$
```

For output of a number less than 10 cents, add the following line:

```
1025   if len(cb$)=1 then cb$=
       "$          "+".0"+cb$:return
```

Ed Jenkins
E. & T. SOFTWARE
P.O. Box 821242
Dallas, TX 75382-1242

Dear AUG,

If your disk drive fails to check for a failed voltage regulator that drives the motor, remove it, take it in to Radio Shack, and get a replacement. After replacing it, put heat sink compound (from RS) on the heat sink and bolt. My disk drive failed and my father and I fixed it.

Also, I have schematics for the Colecovision to be attached to a monitor with composite or non-composite. I have non-composite, so it looks real sharp, like an arcade game screen.

To get this information (all done by me or my father), write to me.

Damon Michaels
21 Stone Brook Road
Sudbury, MA 01776

Dear AUG,

Recently I discovered something having to do with disks. After you format a blank disk you have 158k of storage space, but if you initialize it after formatting, you then have 253k of storage space, an increase of 95k.

Randy Friesen
Box 1977
Morden, Man., Canada ROG 1JO

3

AUTOAID Review
by Don Zimmerman

Product: Basic Utility
Manufacturer: Futurevision
Media: Digital Data Pack
Price: $29.95 from Futurevision
Rating: 9.9

AUTOAID is a BASIC utility program that can be added to your SmartBASIC to assist with the keying in of Basic programs. It has many features that will satisfy both the novice and advanced programmer.

It allows you to redefine the smart keys and almost any other key to print any of SmartBASIC's commands with a touch of that key. This saves you from having to tediously type in the same commands over and over again.

AUTOAID will generate program line numbers and increment them to your selected values. It has a caps lock feature that will print alphabetical characters, but not numbers, in caps.

I find this very useful, and the "keyclick" feature will help you stay awake at 2:00 in the morning along with helping to prevent keying mistakes.

Another excellent feature allows control of the printer from Basic that will cause the printer to start at the top of each page and skip over the perforations of fanfold. There is also a "formfeed" feature that skips the printer to the top of the next page at the touch of a key.

It also allows indenting of the left printer margin. This will be appreciated by those who have printed out their listings. Included is a small printer buffer that will return control to Basic while the printer is printing. This program will make use of the 64K expander to create a buffer that will be large enough for most users.

Short demonstration programs included on the tape show the AUTOAID Assembly Language Subroutines' capabilities.

These include reading the keyboard, printer functions, sound chip access, changing character and background colors, using a low resolution graphic mode of 64 X 48, and sprite operations.

The full program with its help menus occupies 5K of low memory but provides assembly language subroutines that allow the user to use only what is needed to cut this space down considerably.

The program's functions can be turned on and off with the press of a key. You can use AUTOAID to key in your programs, exit AUTOAID, reset lomem, and you will have the full memory restored to execute your programs without rebooting Basic.

I saved AUTOAID on my backup copy of SmartBASIC and have it boot up with Basic via a "HELLO" program. This is my "programming" Basic tape that has all my predefined functions on it.

Each time I went to work on a program, I boot this Basic tape up with all the functions predefined end do not have to define them again. This is VERY useful because with a little practice you will know by heart which keys are which commands. At first it is helpful to put small stickers by each pre-defined key with its command written on it. Be sure to include a space at the beginning and end of the command you are defining so that you won't have to type one in each time you use the key. This will speed up your keying. The definitions of the keys can be changed at any time.

Just a few hours after using this program I wondered how I ever managed to get along without it. From simply typing in programs from magazines to designing your own AUTOAID, it allows you to concentrate on the program content and not be burdened by having to enter line numbers and commands.

How many times have you been so blurry eyed from keying that you repeated line numbers only to find out later that you have deleted existing lines?

The reasons that I did not rate this program a 10 are: I have not yet compared it to other Basic utility programs; and it will not renumber program line numbers. It is of high quality, however, and the price is very reasonable.

I recommend AUTOAID to all ADAM users!!

Is It Time for You to Renew?

Check Your Label

MMSG PRESENTS BACKUP+ CopyCart+

Managing your software becomes child's play with these MEDIA MANAGERS FOR THE ADAM (tm). Both programs are designed to manage TAPE or DISK based systems with maximum efficiency. A MUST FOR ALL ADAM OWNERS

BACKUP+

* Features a 40K copy buffer to minimize media swaps and speedup copying. This capability is extremely useful for the single tape drive user
* Automatically modifies BASIC as it is copied to TAPE or DISK to make it fully disk compatible
* Contains CATALOG and disk/tape INIT feature
* Supports multiple file copies with WILDCARD syntax which allows copying of several files without typing out each filename
* Allows multiple file copies on a single TAPE or DISK drive without swapping source and destination after each file copied
* Will copy programs like FILER, LOGO, CALC, etc., from tape to disk or disk to tape and readjust the directory "BLOCKS LEFT"

CopyCart+

* No need to power-down system to change cartridges
* Converts standard tapes or disks to special self-booting TARGET media
* Copies most Coleco compatible cartridges to the TARGET media
* TARGET media can hold multiple cartridge programs
* TARGET media will self-boot and display a directory of all copied cartridges
* Program selection and execution is by number making the program easy to use even by young children
* Fully compatible with BACKUP+, CopyCart+ and TARGET media can easily be copied with the BACKUP+ features

TAPE $40   DISK $37

TAPE OR DISK $15

Both programs are all machine language and self-booting. These programs work with any equipped tape or disk drive and are menu driven and self prompting. The programs also come with a 90 day warranty and extensive operation manual.

ALL PRICES INCLUDE POSTAGE
ORDER FROM:

**MMSG
P.O. Box 1112
Broomfield, CO 80020-8112**

BACKUP+ Review

by Loretta Picone

BACKUP+ is a utility program. You will be able to make backup copies of programs that you have purchased or written for the ADAM. In this way you don't have to worry about destroying your original copies, especially programs like SmartBASIC, SmartFILER and ADAMcalc. You will also be able to automatically modify BASIC as it is copied to disk in order to make it fully disk compatible, menu-driven and self-prompting. You can also include English error messages to keep you informed.

BACKUP+ is provided on a self-booting data pack/disk and is loaded by placing the data pack/disk in the first tape drive and pressing the reset switch. After it is loaded it will display the program banner. Then you should remove the tape or disk containing BACKUP+ from the drive. When you press RETURN the main menu will appear.

Now you are ready to select any of six major functions provided by BACKUP+:

1) IMAGE BACKUP; 2) COPY WITH SCREENING; 3) COPY BY FILE; 4) SELECTIVE FILE COPY; 5) CATALOG; and 6) INITIALIZE MEDIA.

IMAGE BACKUP makes identical image copies of the original data pack or disk. If the original is a standard format, copies of unused blocks are eliminated by reading the directory to determine the number of blocks used. The destination directory is also updated to the correct number of BLOCKS LEFT on image copies from data pack to disk.

COPY WITH SCREENING is used to copy SmartBASIC and automatically apply modifications to make it disk compatible. COPY BY FILE provides you with a method of choosing files to be copied from one data pack/disk to another.

SELECTIVE FILE COPY allows you to selectively copy files from one data pack/disk to another. Also, it provides a method of recovering directory entries and/or lost storage space on disk or data pack.

CATALOG allows you to obtain a directory listing from any equipped drive without leaving BACKUP+. Once selected, a CATALOG submenu will be displayed that provides three choices:

1) DISPLAY ALL ACTIVE AND DEAD SYSTEM AND USER FILES; 2) DISPLAY ACTIVE USER FILES ONLY; 3) DISPLAY ONLY DEAD USER FILES.

INITIALIZE MEDIA allows you to initialize a data pack or disk directory without leaving BACKUP+. INITIALIZE MEDIA functions similarly to the INIT command in BASIC. There are also several additional features.

I was very impressed with this fantastic program. BACKUP+ is a multiple data pack/disk system that is fast, reliable and easy to use. In just minutes an operation is completed and all of your worries regarding backed up files will be eliminated.

BACKUP+ comes with an excellent manual that will give you step by step instructions on making your own BACKUP copies on data pack or disk.

However, not following the instructions described in the manual could result in the destruction of the originals. To be on the safe side, you should read the manual completely before you use BACKUP+.

BACKUP+ is available from MMSG, P.O. Box 1112, Broomfield, CO 80020-8112 ($35 for disk or $38 for data pack plus $2 for shipping and handling per order. CO residents add 3% sales tax.) Volume discounts are available with orders of 2 or more: 2-9,. 10% and 10 or more, 15%.

Binder with Index

YOU ASKED FOR IT! YOU GOT IT! Hot off the press is the AUGment index for Vol. 1. Also available is a three-ring binder for neat and convenient storage of your copies of AUGment. Order from AUG Binder, Box P, Lynbrook, NY 11563. Make sure to include your membership number on your check.

Binder with index....................................$10.00
Index alone...3.00
All six Vol. 1 issues,
        with binder and index.......................25.00

Function Keys in SmartBASIC

On the ADAM keyboard there are twenty-three function keys (8 Command keys, 6 Smart keys, 5 Cursor keys, and 4 special keys). Using these keys allows for a better program. They not only make the program look more professional, but they also make the program easier to use. For each function there Is a corresponding ASCII code. Although nothing appears on the screen when you press a function key, the computer reads the ASCII code for the key that has been pressed. This code Is then stored in memory. The memory location is -651.

The following Is a list of the ASCII codes for the function keys In BASIC.

1. SMART KEYS:

I	129	I	(SHIFT)	137
II	130	II	(SHIFT)	138
III	131	III	(SHIFT)	139
IV	132	IV	(SHIFT)	140
V	133	V	(SHIFT)	141
VI	134	VI	(SHIFT)	142

* CONTROL has no effect on these keys.

2. COMMAND KEYS:

WILD CARD	144	WC	(SHIFT)	152
UNDO	145	UNDO	(SHIFT)	153
MOVE/COPY	146	M/C	(SHIFT)	154
STORE/GET	147	S/G	(SHIFT)	155
INSERT	148	INSERT	(SHIFT)	156
PRINT	149	PRINT	(SHIFT)	157
CLEAR	150	CLEAR	(SHIFT)	158
DELETE	151	DELETE	(SHIFT)	159

* CONTROL has no effect on these keys.

3. CURSOR KEYS:

HOME	128			
UP	160	UP	(CONTROL)	164
RIGHT	161	RIGHT	(CONTROL)	165
DOWN	162	DOWN	(CONTROL)	166
LEFT	163	LEFT	(CONTROL)	167

* SHIFT has no effect on these keys.

4. SPECIAL KEYS:

RETURN	13
TAB	9
BACKSPACE	8
ESCAPE/WP	27

* SHIFT and CONTROL have no effect on these keys.

Donald Abele
402 Middlesex St.
Gloucester, NJ 08030

Text & Programming Tips

Stopping a Listing

If you want to list a complete program to check it, you can stop it on the screen to look at a section by pressing Control-S to "freeze" the desired part. Start and stop as desired by pressing the two keys as often as needed. You can also stop a printer listing to move to a new page.

Making Noise with ADAM

Simple programs can have one note added by inserting PRINT CHR$(7) wherever you want to get attention.

Special Characters for TV Display

You can express yourself in unique ways with PRINT CHR$(n). Try the following (n)umbers for some interesting results: 2, 3, 4, 5, 14, 15, and 20.

There are many others that you can discover if you run:

```
1 INPUT n: PRINT n;CHR$(n): GOTO 1
```

Simplified Use of Logical Operators

BASIC programs evaluate logical expressions such as $x > 0$ as a "1" if the condition is true and a "0" if it is not true. This can be used to simplify multiple IF statement sequences to a mathematical statement that completes the action desired. For example, in high resolution graphics (HRG), there are 0-255 positions possible along the horizontal x direction and 0-159 along the vertical y direction. To keep any value on the display from going out of range, you need only the following two statements:

```
x = x + 255*((x < 0) - (x > 255))
```

```
y = y + 159*((y < 0) - (y > 159))
```

provided that the values do not change by a large amount (over 255 or 159) between successive points displayed.

Charles Cowan
Advanced Methods
39 Cachet Parkway
RR 2, Gormley, Ontario, Canada LOH 1GO

Join ADAM Smart Link BB

To all AUGies who have been writing to us for more information on the ADAM Bulletin Board developed by Sherman Murdock and now run by Scott Early:

You can validate your free membership for the ADAM Smart Link by calling the system via the ADAMLink modem at 404/424-6258 or by writing to Scott Early, 303 Cabaret Court, Marietta, GA 30064. Include your name, address, phone number and the password you want to use. Validation usually takes about 48 hours.

You will be able to get and leave messages, download BASIC and CP/M programs from the library, access a listing of users' names, and communicate with Scott Early. ADAM Smart Link is on line 24 hours a day, seven days a week for validated users.

Here's how to get ON LINE: You need a modem and ADAMLink2 software. You will be set to get onto the bulletin board when you insert ADAMLink2 into the drive and press the reset switch.

Using the instructions that came with ADAMLink2, call the ADAM Bulletin Board in Marietta by dialing 404/424-6258. Then press Smartkey VI (DIAL) and wait until you are connected. After making sure you have set up your ADAMLink to receive a file, put the messages on disk/data pack rather than reading the messages on line. This will save you phone time. If you want to leave a message, write a draft before you call. Also, if you want to insure a good upload of your message with ADAMLink, put a carriage return before the 35th character of each line and end each message with a line that has only a period (.)like this:

Once you have been connected, you will be asked your name and the password. The password will not be echoed on the screen. Then hit the "L" key to log onto an existing account and use the DEFAULT Parameters. The ADAM Bulletin Board Menu will appear. Follow the instructions.

Enjoy!

Best of Bulletin Board

From: JEFF SOUTHERN
When you download ADAM to ADAM, use CONTROL-G to signal the sender that you are ready to get the file. Also, the receiver can use it to tell when he has closed the file. CONTROL-G is the bell. It won't go in the file!!!! It Just makes life easier.

From: SCOTT
If you download a file using ADAMLInkll, It is possible that the program may be corrupted because of line noise. Don't worry, because the problem is easy to correct. Just download the file again. (The line noise will not appear in the same place twice.) Compare the two files and make repairs using SmartWRITER .

Due to the large number of library selections, it is now necessary to ask for a limit on the number of files you download. Please download only two files per day.

********WARNING********

Users who abuse the 2 files per day rule will be deleted. This rule is designed to give more users time to call. You will not be warned before being deleted.

There is a text file in the library called READ ME. I would appreciate it if you would download it and read it. It will not count against your 2 files per day limit.

From: JAMES EASTERDAY
For those not yet aware, you can use MCI, Sprint, etc. with BBS. To do so you enter the digit one (1) Instead of a real phone number and use your long distance service to call the BBS. Before the remote computer answers, press smart key VI to dial. This will save you BIG BUCKS!

From: SCOTT
Well, we are accepting new members "online" now — no more SASE. This message must contain:

1) Name, 2) Address, 3) Phone #

Also, you must press the left bracket key several times (SHIFTED square bracket just to the right of the "P") .

Software/Book Review

by Don Zimmerman

TITLE: THE HACKER'S GUIDE TO ADAM
AUTHORS: Peter and Ben Hinkle
              117 Northview Road
              Ithaca, NY 14850
PRICE: $12.95 for manual
RATING: A

Peter and his son Ben have done it again. They are the ones who started their own research and published INFORMATION FOR ADAM EXPLORERS, which explored the innards of ADAM. THE HACKER'S GUIDE TO ADAM contains all the information of their first manual plus much more of what Peter and Ben have discovered about ADAM's workings since then. They go into detail on number notations, Assembly Language, memory mapping, how SmartBASIC is loaded and used, the video display processor, graphic modes, sprites, sound chip operation, keyboard, game controllers, and more. The authors include information on the up to now secret operation of ADAMNET, system operating routines, the operating system itself, the memory bank switches, tape and disk control formatting, power supply, printer control, ADAM's expansion ports, and even give pin outs of ADAM's chips.

This is not just a technical manual. Peter and Ben include 18 programs that are helpful in understanding ADAM's workings. These programs are of high quality and include some exceptional programs that the non-programmer will find very useful. There is a font editor program that contains a font set that Coleco should have included with ADAM. Two software copying programs are included that make this manual an exceptionally good bargain. The tape copy program skips empty blocks, and the cartridge copy program is a new addition to ADAM utility programs that will allow users to back up their cartridges to tape/disk.

This manual is remarkable considering that Peter end Ben did not have access to Coleco's technical manuals. All ADAM users should have THE HACKER'S GUIDE TO ADAM for reference. The programs alone are worth much more than the cost of the entire package.

Vendors

SPEECH SYNTHESIZER UNIT
from
EVE ELECTRONIC SYSTEMS
2 Vernon Street, Suite 404
Framingham, MA 01701

ADAM SOFTWARE
from
Kray
17888 Maybury
Fraser, MI 48026

MINI-VAC
from
American Gift Ideas
4056 NE 5th Terrace, Box 490210
Fort Lauderdale, FL 33349-0210

PUBLIC DOMAIN, VENDORS, CHAPTERS
from
Daniel Pease
12 Budds Avenue
Charleston Heights, SC 29405

PRINTER RIBBONS
from
Delta Micronics
Box 10933
Erie, PA 16514

NEWSLETTER PRINTING
from
The Gocals
Ted & Diana Gocal
413 Peninsula Drive Erie, PA 16505

ADAM UTILITIES
from
Uncle Ernie's Toolkit
279 Eastholm
Akron,OH 44312

BACKUP+ for the ADAM
from
MMSG
P.O. Box 1112
Broomfietd, CO 80020-8112

* * *

The VENDOR column is not advertising. We will list as many vendors as space allows. These listings in no way represent our endorsement.

Hints and Bugs
by Gordon Meyer

Here's a very handy trick for CP/M users. Type this Instruction at the A> prompt: SAVE 0 CONT.COM <return>.

This will create an empty file on your media. It will take up no room at all—just one directory entry. What good is it? Well, when you get a BDOS Error because you forgot to log in a new disk, you can re-start any program you were running by typing CONT. Because CONT.COM is an empty file, CP/M will jump to and execute any program currently in memory. So provided you don't do anything to erase the memory, you can re-execute just about any program without having to re-load it! I found this hint in the CP/M Bible by Zaks.

Speaking of books, If you are interested in learning machine language programming, check into Machine and Assembly Language Programming, by David C. Alexander, published by TAB. It is written for a TRS-80, but almost all of it applies to the ADAM.

Finally, try poking 17215,200 or 100 followed by a TEXT command. This was discovered by ADAMite David Jacksch. He calls it Graph-Text. Commands will still be recognized by ADAM, so to return to normal POKE 17215,224:TEXT. I believe whet is happening is that you are setting the VDP to multi-color mode. I haven't been able to verify this, though. Anyway, It is a neat trick! See you next issue!

[Ed. note: Gordon Meyer is offering several public domain programs and is also interested in trading programs by modem. Write to Gordon at 2608 West 6000 South, Roy, UT 84067, requesting a copy of his catalog.]

Renewal Notice

The AUG, Inc. renewal rate is now $15.00 in the United States, $20.00 in Canada (U.S. Funds). When renewing, please write your identification number on the face of the check. Mail your check to AUG Renewal, Box P, Lynbrook, NY 11563.

SP-1 Interface Review
by Loretta Picone

IT WORKS! The SP-1 Serial/Parallel Interface REALLY WORKSI

The SP-1 allows ADAM to be used with any high-speed dot matrix or letter quality printer. You can also use standard modems and direct connect to other computer systems.

The SP-1 is easily hooked up into the side expansion port on the right hand side of the machine. A printer cable runs from the box to the printer and plugs into a parallel or serial port.

Make sure your ADAM is turned off during the installation.

The SP-1 interface comes with a disk that includes programs for use with CP/M, SmartBASIC and SmartWRITER.

The CP/M program allows the "IOBYTE" in CP/M to be set for the desired output.

You will first have to move two files, cpmprinter and cpmserinit, from the "ADAM" disk to your CP/M system disk. After this is done, you can select the desired output options using the CP/M "STAT" program to redirect your printer output to the SP-1 Parallel port, which is defined as UL1. When you type STAT LST:=UL1:<RETURN>, the printer output will go to the SP-1 Parallel port. Now press CONTROL-P to print.

HINT: You should go back to your CP/M manual and look up CONFIG commands. This way you can change the CP/M parameter Serial Card Features, #8 Set Default I/O Byte, from LST:=LPT: to LST:=UL1. This will save you time not heving to type in STAT LST:=UL1: <RETURN> every time you want to print. Now all you have to do is press CONTROL-P.

The SmartBASIC program allows the selective output to either the ADAM printer (PR#1), Parallel port (PR#2) or Serial Port (PR#3). The first thing is to copy the programs from the "ADAM" disk onto your SmartBASIC disk, except for the two CP/M programs. Then type RUN ptrdvrs,d5 <RETURN>.

Now load a SmartBASIC program as usual and list the program on the screen. Now you are ready to print to a parallel printer by typing PR#2 <RETURN> and LIST <RETURN>. This will send the program to the printer.

A program is also provided to allow "draft" printout of a SmartWRITER file to either serial or parallel port. To run the draft print program, type the following command: RUN sw-bas,d5 <RETURN>. At the first prompt, to enter a SmartWriter file, type In the name of the file you want to print, followed by a RETURN. The second prompt asks for the drive # (4=dsk 1, 5=dsk 2). If your file is in disk drive #1, enter a 4; if the file is in disk drive #2, enter a 5. Press <RETURN>. The following entries allow your text to be formatted as desired. At the third prompt, give the MAX. LINE LENGTH, which Is between 32 and 132 characters per line. I advise that the max should be 80 or less. The fourth prompt will ask for LINES PER PAGE, a number between 12 and 66. We used 66. The fifth prompt asks for LINE SPACING, single, double or triple. The sixth prompt, SEND TO (0=Par, 1=Ser), allows you to select the port of SP-1 unit to send the printout. We used 0. The last prompt before printing is PRESS RETURN TO PRINT.

However, if the file name that was entered is not found on the disk, the program will stop and FILE ERROR 5-0 will appear.

WELL, WE DID IT! The SP-1 Interface is off and running. It is fast, reliable and quieter than the ADAM printer.

What a relief! Now I don't have to hear any more complaints from co-workers on how noisy and slow the ADAM printer is.

The SP-1 Interface comes with an excellent instruction booklet that I advise you to read BEFORE trying to get the interface working.

The SP-1 Serial/Parallel Interface is available for $139.95 plus shipping and handling from EVE ELECTRONIC SYSTEMS, 2 Vernon Street, Suite 404, Framingham, MA 01701. Or call (617) 653-3003 for more information.

Bob's Business

The following is part two of the ratios program, "Fundamental Analysis." Part one (lines 10 to 660) was published in the last issue.

```
670  PR #1
680  PRINT A$;    "  ";  B$
690  PRINT "Earnings per share,
     continuing ops,  this year "; N
700  PRINT "Earnings per share,
     continuing ops, last year "; 0
710  PRINT "Earnings per share, bottom
     line, this year "; P
720  PRINT "Earnings per share, bottom
     line, last year "; Q
730  PRINT
740  PRINT  "Dividend yield, last 12
     months"; (A2/A)*100; "%"
750  PRINT "Payout Ratio, this year ";
     (A2/N)*100; "%"
760  PRINT "Current Price-Earnings
     ratio, continuing ops "; A/N
770  PRINT "Current Price-Earnings
     ratio, bottom line "; A/P
780  PRINT  "Current   price/sales
     ratio"; (A)/(B/W1)
790  PRINT
800  PRINT "Current Market Price per
     share "; A
810  PRINT "Current Book Value per
     share"; (U1-N2)/(W1)
820  PRINT "Current net current assets
     per share "; (E1-S1)/W1
830  PRINT
840  PRINT "Return on assets, this
     year ";(J+H+Y)/(((K1+L1)/2))*100;
     "%"
850  PRINT "Return on assets, last
     year "; ((K+I+Z)/L1)*100; "%"
860  PRINT "Return on Equity, this
     year "; ((J-(C2*E2))/(((U1-M2)
     +(V1-N2))/2))*100; "%"
870  PRINT "Return on Equity, last
     year "; ((K-(D2*F2))/(V1-N2))/(V1
     -N2))*100; "%"
880  PRINT
890  PRINT "Debt Ratio, this year ";
     ((S1/K1))*100; "%"
900  PRINT "Debt Ratio, last  year ";
     ((T1/L1))*100; "%"
910  PRINT "Equity Ratio, this year ";
     (1-(S1/K1))*100; "%"
920  PRINT "Equity Ratio, last year ";
     (1-(T1/L1))*100; "%"
930  PRINT "Long term Debt as X Equity,
     this year "; (01/U1)*100; "%"
940  PRINT "Long term Debt as % Equity,
     last year "; (P1/V1 1)*100; "%"
950  PRINT
960  PRINT "Number of times interest
     earned, this year "; (J+Y+H)/H
970  PRINT "Number of times interest
     earned, last year "; (K+Z+I)/I
980  PRINT
990  PRINT "Current Ratio, this year ";
     E1/M1
1000 PRINT "Current Ratio, last year ";
     F1/N1
1010 PRINT "Quick Ratio, this year ";
     C1/M1
1020 PRINT "Quick Ratio, last year ";
     D1/N1
1030 PRINT "Liquidity Ratio, this
     year "; A1/M1
1040 PRINT "Liquidity Ratio, last
     year "; B1/N1
1050 PRINT
1060 PRINT "Accounts Receivable
     Turnover, this year ";
     B/((Y1+Z1)/2)
1070 PRINT "Accounts Receivable
     Turnover, last year "; C/Z1
1080 PRINT "Inventory Turnover, this
     year"; D/((Y2+Z2)/2)
1090 PRINT "Inventory Turnover, last
     year"; E/Z2
1100 PRINT
1110 PRINT "COGS as % of Sales, this
     year"; (D/B)*100; "%"
1120 PRINT "COGS as % of Sales, last
     year"; (E/C)*100; "%"
1130 PRINT "GSA expense as a % of
     sales, this year "; (F/B)*100; "%"
1140 PRINT "GSA expense as a % of
     sales, last year "; (G/C)*100; "%"
1150 PRINT "Net Income as a % of sales,
     this year "; (L/B)*100; "%"
1160 PRINT "Net Income as a % of sales,
     last year "; (M/C)*100; "%"
1170 PRINT
1180 PRINT "Fixed Assets as a % Long
     term Debt, this year ";
     (G1/01)*100; "%"
1190 PRINT "Fixed Assets as a % Long
     term Debt, last year ";
     (H1/P1)*100; "%"
1200 PRINT
1210 PRINT "Working capital flow, this
     year "; G2-I2-K2
1220 PRINT "Working capital flow, last
     year "; H2-J3-L2
1230 PR #0
```

Next month, we will determine where in an annual report the data inputs are found. We will also learn which ratio results would be "good" and which would be "bad."

Bob Trezevant
1865 Mountain View Dr.
Tiburon, CA 94920

In Response...

...For all those people who are tired of fumbling around behind the printer for the switch: Go down to your local hardware store and ask for a surge protector (with four or six outlets) that has an on/off switch. Not only will your computer be protected from power surges, but If you use drives, the entire system can be turned on and off more conveniently.

...If you own two disk drives, make sure you DO NOT stack them one on top of the other. Stacking prevents then from getting adequate ventilation.

...Line spacing: The return key = 1 1/2 lines, not 1. To adjust this problem, try moving the bottom vertical margin up. For single space, type a subscript space or nothing before a return.

...Moving window mode: To put 36 characters across the screen, use the following Smartkeys:

I = margln/tab/etc.
II = screen options
IV = right
VI = done
II = screen options
VI = moving window

That's it. RESET margin before printing.

Set to 70/80 columns for a full line across the paper.

...If your daisy wheel spins in place, remove the wheel. There are two sensors behind the head. Blow them clean end replace the head.

...If your printer fails, power down the system and check to see if the IC chips are loose.

[Thanks to John F. Busby II, 6634 SW 41 Street, Davie, FL 33314, for many of these hints.]

Library

#501 BUSINESS
#502 EDUCATIONAL
#503 TRAVELER GAMES
#504 ADVENTURE GAME
#505 JOURNEY GAME
#506 GAMES
#507 MISCELLANEOUS
#508 SCIENTIFIC
#509 MATHEMATICS
#510 GRADEBOOK
#511 GRAPHICS
#512 HOME FINANCE
#513 GAMES II
#514 EDUCATIONAL II
#515 HOME ADDRESS MANAGER
#516 GAMES III
#517 UTILITY I
* #518 BUSINESS II
* #519 GAMES IV
* #520 UTILITY II
* #521 ALPHA
* #522 TURTLE
* #523 SLOT

* New Contributions

Send a stamped self-addressed envelope to AUG Library, P.O. Box P, Lynbrook, NY 11563, for a description of library programs. Disks/data packs are available for $10.00 each. If you do not indicate that you want the program on disk, we will send the data pack. Include your ID number on your check made out to AUG.

If you have a data pack or disk with a program (or programs) YOU developed, and you want to offer it to other ADAM users, send it in. Let us know which program you would like in return.

Make a duplicate copy of your data pack or disk before sending us your program. See earlier issues of AUGment for directions on making duplicates. Always keep backups of programs you mail in.

Please test your program carefully before sending it in. Include a READ.ME file—written with the word processor and copied to the data pack or disk—explaining how to use your program and giving any special information about it.
REMEMBER...DO NOT SEND COPYRIGHTED PROGRAMS OR PROGRAMS COPIED FROM OTHER PRINTED MATERIAL.

New Library Programs

518 BUSINESS II

LOANLENGTH will compute the length of time in months it will take to pay a loan. RATIOS will calculate the ratios for analyzing a company. Use SALPAY to prepare payroll checks, payroll register, and year-to-date payroll register. PAYROLL, modified to your own employees' names, salaries, tax rates etc., will calculate taxes and take home pay.

519 GAMES IV

In Russian ROULETTE you will be given a revolver, and you will pull the trigger...IF YOU DARE! In TICTACTOE two players use the game controller keypads as the playing boards. TICTACADAM is a one-player game played against ADAM. With SCRIBBLEN you can save low resolution screens on tape or in RAM. In MAZE you must find your way across a maze, racing against the clock while avoiding the dragon. IT is an adventure game. In CROSSFIRE, shoot the Green Meanie before time and ammo run out.

580 UTILITY II

INITDISK initializes the disk. MAILLIST enables you to create a list, add or edit records, search for a record, and print the list. DAMAGETAPE will help to recover some of your lost material. CHRASC gives the values for any key on the keyboard and the character or result of each CHR$(#) use.

521 ALPHA

ALPHABET (LOGO), designed to make titles for video tapes, makes any size letters on the screen. Each procedure has vertical size end color as external inputs. For example: "30 6" will print "A" that is 30 units high and red.

522 TURTLE

TURTLESHOP (LOGO) is a game similar to Frogger, where the player "hops" the turtle using game controller #1 joystick.

523 SLOT

SLOTMACHINE (LOGO) Is a Las Vegas style slot machine.

Chapter News

To meet other AUGies in your area, contact the following:

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Pekin, IL 61554

Derek Townsend
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Claresholm, Alberta, Canada TOL OTO

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7210 Bulen Drive
Anchorage, AK 99507

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8580 Buggy Whip Road
Alta Loma, CA 91701

Dave Sandahl
USNH, Box 2844
FPO Seattle, WA 98778

HOUSTON USER'S GROUP
Contact: Russell M. Clinton
8954 Shoreview Lane
Humble, TX 77346

Al Roginski
4327 Thorndale Place
Las Vegas, NV 89103

CENTRAL CALIFORNIA ADAM USERS GROUP
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20110 Avenue 19
Madera, CA 93637

ADAM WASHINGTON, D.C. USERS GROUP
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1811 St. Roman Drive
Vienna, VA 22180

INLAND EMPIRE ADAM USERS GROUP
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SEATTLE-TACOMA ADAM USERS GROUP
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3727 34 Avenue SW
Seattle, WA 98126

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ALPHA-1

DISCOUNT HOME COMPUTER SUPPLIER
1671 East 16th ST., SUITE 146   BROOKLYN, N.Y. 11229

COMPUTER PERIPHERALS FOR THE ADAM
ADAM 5¼ DISK DRIVE	$199.00
ADAMLINK DIRECT CONNECT MODEM	95.00
ADAM 64K MEMORY EXPANDER	95.00
EXTRA DIGITAL DATA DRIVE	99.00
ADDRESS BOOK FILER & AUTODIALER	29.00
TRACTOR FEED ASSEMBLY	80.00

COMPUTER SUPPLIES FOR THE ADAM
DAISY WHEELS - Pica 10, Courier 10, Emphasis, Courier 72	Each 5.50
PRINTER RIBBONS FOR ADAM	Each 5.95
DUST COVER FOR ADAM	18.50
(Vinyl brown 3 piece — CPU. KYBD, PRT)	
ADAM BLANK DIGITAL DATA PACK	5.50
ADAM ACCESSORY KIT	31.00
(3 different daisy wheels, blank tape, prt ribbon, head cleaning kit, care book)	
MAXELL 5¼ SS/DD DISKS (10)	18.00
MEMOREX 5¼ SS/DD DISKS w/case (10)	19.00
NASHUA 5¼ SS/DD DISKS (10)	15.00
NASHUA 5¼ SS/DD DISKS LOOSE	1.25 ea.
(Must order 15 or more for pricing)	
ADAM MONITOR CABLE	9.50
COMPUSERVE STARTER KIT	24.00
MEDIA MATE MM5 holds up to 50 5¼ Disks	11.00

SPECIAL INTRODUCTORY PRICE
STRATEGIC SOFTWARE
SmartSPELLER (DP, Disk)	34.00
DataCALC (DP)	21.00
FastFILER (DP)	21.00
PowerPRINT (DP)	21.00

SPECIAL INTRODUCTORY PRICE
COMPATIBLE PRE-FORMATTED BLANK
DATA PACKS By FAST FORWARD
(Ten or More Data Packs) .... 2.75 ea.

VICTORY SOFTWARE FOR THE ADAM
ADVENTURE PACK I (DP, DISK)	$22.00
ADVENTURE PACK II (DP, DISK)	22.00
BOUNTY HUNTER (DP, DISK)	22.00
SAVINGS & LOAN (DP, DISK)	18.00
TREK (DP, DISK) space adventure	22.00
STRATEGY PACK I (DP. DISK)	22.00
GAMES PACK I (DP. DISK)	22.00

COMPATIBLE PRE-FORMATTED BLANK DATA PACKS BY VICTORY
(Special Closeout Price Ten or More) .... 2.50 ea.

32 BASIC PROGRAMS FOR THE ADAM
Book/Data Pack Package by Dillthium Press 36.00

PACKCOPY by SAGE ENTERPRISES
This program will make backup copies of ADAM software. Makes backup copies of SmartFILER, SmartBasIc, SmartLOGO, etc.
Disk or Data Pack 29.00

PERSONAL ACCOUNTANT by SOFTSYNC INC.
Compiles financial reports, large data base breaks down expenses, amortization, payment schedules.
Digital Data Pack 24.00

COLECO SOFTWARE FOR THE ADAM
CP/M 2.2 & ASSEMBLER (DP, DISK)	50.00
ADAMCALC (DP)	39.00
(spreadsheet program)	
SMART LOGO (DP)	49.00
SMART FILER (DP, DISK)	21.00
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SMART LETTERS/FORMS (DP, DISK)	29.00
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DONKEY KONG JR (DP)	19.00
SUPER ZAXXON (DP)	19.00
DRAGON'S LAIR (DP, DISK)	25.00

ELECTRONIC FLASHCARD MAKER (DP)	$19.00
*FLASH FACTS - TRIVIA (DP)	8.00
*FLASH FACTS - VOCABULATOR (DP)	8.00
*FLASH FACTS - AMER HISTORY (DP)	8.00
ELECTRONIC WORD BOOK (DP)	21.00
RECIPE FILER (DP, DISK)	21.00
WACKY WORD GAMES (DP)	17.00
(Word Processing Game)	
BEST OF BRODERBUND (DP)	19.00
(Choplifter, AE)	
DAM BUSTERS (CART)	19.00

* NOTE: Flash Facts Requires Electronic Flashcard Maker

PARALLEL SYSTEMS SOFTWARE FOR ADAM
HOME BUDGET PLANNING (DP)	9.00
PERSONAL CHECKBOOK MGR (DP)	9.00
HOME FILES MANAGER (DP)	9.00
STATES & CAPITALS (DP)	9.00
WORLD CAPITALS (DP)	9.00
GREAT INVENTIONS GAME (DP)	9.00
PARTY TRIVIA (DP)	9.00

SUPER SKETCH by PERSONAL PERIPHERAL
Includes a CONTROLLER PAD and a SKETCH MASTER software cartridge compatible with ADAM 35.00

SUNRISE SOFTWARE FOR ADAM
GUST BUSTER (DP) arcade action	15.00
ROLLOVERTURE (DP) music education	15.00
QUEST FOR QUINTANA ROO (DP)	15.00
CAMPAIGN (DP) strategy action	15.00
MOUNTAIN KING (DP) sensory strat.	15.00

MARTIN CONSULTING SOFTWARE
SMARTBASIC BONANZA:
On Data Pack, priced at 29.00
FANTASY GAMER:
On Data Pack, priced at 29.00

FOR MORE INFORMATION OR TO BE INCLUDED ON OUR MAILING LIST SEND A SELF-ADDRESSED STAMPED ENVELOPE TO THE ABOVE ADDRESS.

— THANK YOU —

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POST OFFICE BOX P
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