
THE
AWAUG
NEWSLETTER

ADAM WASHINGTON AREA USER'S GROUP

Vol. 6, No. 3

June 1990

THE EDITOR'S CORNER

It has been an interesting two months since the big changes at AWAUG have taken place. The club continues.

Our SYSOP, Jeff Jodoin, has been on a trip and our BBS is hard down. I was not aware of how accustomed I'd become to making regular visits to the board and checking out what was going on. I miss the board!! I hope it will be back on the air by the time this newsletter is published.

As our board has been down, the primary source of newsletter articles dried up. I was unable to beg, badger, plead, etc., for a few contributions. I was able to leave a few messages on Mark Gordon's Powermate BBS, but to no avail. Fortunately, the Adam News Network (A.N.N.) provided a flock of excellent articles which I think you will all enjoy. The articles I included are but a few of the offerings. Each month, A.N.N. provides 2

disks full of good information. Barry Wilson is doing a super job with A.N.N. and deserves the support of all Adamites.

It's a beautiful day today, a clear reminder that summer is indeed here. Thoughts turn toward summer vacations, picnics, beach parties and various other outdoor activities. Our Adams frequently get neglected at this time of year, BUT, in a wonderful combination of summer fun and Adam, ADAMCON2 will be held in Toronto during August. A wonderful opportunity to enjoy Canadian hospitality, meet other Adamites, and learn more about the future of Adam. And if perchance you happen sell something once in a while for the Adam, like say a plug-in hard drive, you can probably deduct the entire cost. Such a deal!

As the summer progresses, please remember your poor ol' editor and write an article (or two) for the August edition. Have a nice summer! JM

Ed. note: Ron Collins' review of ALINK4 starts our series of articles from A.N.N.

ADAMLINK FOUR
A Preliminary Review
by Ron Collins

Yep! I've just gotten ANOTHER version of AdamLink to try out. Tom Clary has been VERY generous in letting me beta test each new revision. I hope everyone likes getting up to the minute reviews ...I like checking things out and letting you know what features are fair, great, etc. I also want everyone to know how their favorite modem program is progressing. OK, so now, on with the info. First of all, this version will let you create a MACRO file with SmartWriter and use it directly with the program. There is an OPTIONS smartkey that, when pressed, allows you to load a special file that tells AdamLINK IV alpha what text to send out when you are online and press the right button. For example, when I call this BBS, I can type in that my ID number is 2 ...that's only one key to press so there's no need in setting up a special key for IT. BUT, my password is another matter. When asked for my password, I just press smartkey 4. This sends out my 8 character password...only 1 button to press. The same goes for CompuServe. Smartkey 1 sends out my ID number and smartkey 2 sends out my password. Pressing smartkey 3 will transfer me to the CPMFORUM on CompuServe. It's really SUPER!. The next enhancement is this version's ability to let you connect your ADAM up to another computer via NULL MODEM and transfer files to or from it with XMODEM protocol at baud rates of up to

19,200! I tried this today by taking the demomacro file Tom had included for my and sending it via null modem over to my Kaypro 1 computer. I then booted WordSTAR 4.0 on the Kaypro and edited this SmartWriter file in non-document mode to reflect my choices of key definitions. The final task was to send it BACK to the ADAM. All of this was done at 9600 baud....the maximum storage speed the Kaypro is capable of. The Adam is easily able to take in or send out data at 19,200 baud from or to either a ramdisk (not loggable with AdamLink) or the hard disk. Our regular drives store much slower, but you could still use the faster connect speed...you'd just have to wait on the drives. This version will work on either an AdamLINK modem (only at 300 baud), or an external modem (tested to 2400 baud....in fact, that's what speed I'm using it at NOW on my 2400 baud ZOOM modem!). You can view what happens on either the TV/Monitor or an 80 CVU....or BOTH at the same time. You can set AdamLINK to print to either the standard SmartWriter printer or to your dot matrix printer and this version also has the special RLE file viewer built-in. If you have any questions about AdamLINK IV alpha, please feel free to ask and I'll get back to you as soon as I can. * Ron *

THE FOLLOWING IS BY RICHARD CLEE OF METRO-TORONTO AUG and, while it is directed to the members of his group, much of what he says is certainly applicable to ALL ADAMITES.

It makes good reading as do all of Rich's writings. (con't)

WHY STICK

by Richard Clee

There comes a time, as you wade through snow up to your armpits in -20 cold to get to an MTAG meeting, that you are going to wonder if it is all worth while. In fact, if you've been around for a couple of years, you'll wonder if the membership itself is even worth it any more.

After all, you've been to the meetings and gained an awareness of what your ADAM can do. You've bought all the software, PD and commercial, you can see any present or future use for. And you know what the sources are. The same is true of the hardware. You know who fixes ADAMs, and who the suppliers are. What has the club done for you - lately?

Are there any real reasons why you should squander the price of a tankful of gas for two dozen meetings, half of which at least you won't attend, and thirty pages of newsletter chatter every second month? Or is there more to club membership, something you're overlooking?

Maybe you just bought the ADAM because it's the best typewriter ever made, and have no ambitions beyond using Smartwriter. What are you going to do when you run out of printer ribbons? Sure, the club will sell them to you - if the club still exists and if you can find it.

People and institutions aren't eternal. The club executive exists at the pleasure of the membership. The whole executive, or any member, can be dismissed at any meeting. Suppose the members decide on a change, and you aren't there?

Suppose a population shift makes them decide to move to Mississauga? Suppose your regular, possibly only, contact quits or moves?

Then - who do you turn to when you need a ribbon? Where's a buddy to ask why your printer has suddenly taken to trying to beat its way through its side panel? Who might guess what subtle change in your style has caused the line marker to go into a terminal death spin and eat all your text, every time you try to save it?

Perhaps you gave the ADAM to your kids. They're doing fine - using it for homework, doing drills, playing games. If you're not there, who will tell you where to get SmartLogo when the youngest starts computer training in school? Where will you get the notice of new games, reviews that tell you which to buy (and which not to waste your money on), and hints on how to solve the mysteries and build scores on the action types?

Perhaps you're a serious hacker, and bored out of your skull at meetings because explanations you've heard a hundred times still have to be repeated for novice members. You know everything in the newsletter and more; maybe even wrote part of it. But, won't you miss the regular contact with Syd and Gary and Wade and Joseph, and the visitors from other ADAM groups who so often favour us with their presence? Won't you miss (let's be honest) the ego trip of seeing your work in print, especially now that with the developing ADAM News Network the good stuff is likely to be reprinted - with your by-line - all over the continent? Where will you find the corner flea market

where you can dispose of your old printer to subsidize a color dot-matrix, dump your early colour monitor for one that takes full advantage of the A.I.M. board, pick up a hot-rod EPROM for your second disc drive?

It's easy to say that though members may come and members may go, the club will continue. It ain't necessarily so. In Ontario, the Kitchener club is failing fast. In big cities, such powerful groups as the Montreal and Houston, Texas are history. Where, now, can their former members turn for support?

Your ADAM is an orphan computer. You know from bitter experience no dealer or commercial computer outfit wants to know you. You also know, from your MTAG membership, that you have a number of ADAM-enthusiast buddies, in your neighbourhood, in your city, and in hotbeds all over North America, who will fall all over themselves (sometimes at a price) to cater to your every need and whim. You have a very well-supported computer, the envy even of some equivalent model computer owners whose makers, while still in business, have long since abandoned their roots.

The ADAM support system will continue to exist as long as there is a demand for it. But for the demand to exist in reality, there has to be a way for developers to economically get out word of their new products, and for ADAM users to locate and communicate with suppliers who can't afford to advertise except by the most direct, specialist channels.

It's easy for Reedy or E&T or The Software Factory or M.W.

Ruth to meet your needs when one catalog sent to MTAG will notify a couple of hundred users of their offerings. If you're not a member, how do they find you? If they don't find you, how will you find them? Somewhere out there is someone desperate to sell something you are desperate to buy, that last completing touch needed to bring your ADAM to perfection (like a POWERMATE, for instance). As long as you are a member of MTAG (or of course any similar club) the contact is there. What happens if you walk away?

As long as all ADAM users stay as a tight community, tied together within and between their clubs, the visible market is there to keep everything from the smallest supplies to the most grandiose add-ons available for you. But when the clubs decline, the market dies too, and support dries up.

Yes, ploughing through the snow is tough. Many activities can be boring; the club has to serve every member, not just you. But in behind the scenes, in opening and keeping open the channels of communication, in making visible the mass of known interested users, your name on MTAG's membership list keeps available the support you count on. Because MTAG is you. Every new member helps you; every dropout brings nearer the day you will call for help and find "that number is not in service"

If you value your ADAM and all the rewards it can bring to you, stick with the people who are working to support you.

AWAUG MEMBERSHIP INFORMATION

AWAUG is an organization dedicated to the support of the ADAM computer system and the furthering of computer literacy. Membership in AWAUG costs \$15 per year. Members receive a bi-monthly newsletter and are entitled to purchase items offered by the club such as public domain software, WordStar 3.0, formatted tapes, and some hardware. Members receive free technical support through the AWAUG hotline support system. Our volunteers can help to answer your questions.

Hardware Hotline:
Volunteer(s) needed

Software Hotline:
Volunteer(s) needed

Meetings are held on the third Saturday of each month at the Tyson's Pimmit Regional Library at 10 AM. The address is 7584 Leesburg Pike, Falls Church, VA (1/2 mile inside the beltway on Route 7).

Meetings are free. For more information about the meetings or the club, contact Jim Howard at (703) xxx-xxxx or check in on the AWAUG BBS at (202) 561-2475 (2400/1200/300 8-N-1).

Your club officers are:

Jim Howard	President & Librarian
Scott Gordon	Vice President
Ralph Mason	Treasurer
Jeff Jodoin	BBS SYSOP
Tom Barrett	Membership
Jack MacKenn	Editor
Mark Gordon	Meeting Dir
Cliff Sinopoli	Procurements

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PrBOOT

By Stan Wong

This article originally appeared in the Edmonton (Alberta, Canada) ADAM Users Group newsletter, the ADAM's LEAF and is supplied by the ADAM NEWS NETWORK.

Have you ever wished that you could put all of your favorite Coleco programs onto one disk or tape? With a new program from Walters Software, you can now put up to six separate Coleco programs onto one tape! Before now, you could only back up each program onto a separate tape because each program was self-booting.

PrBOOT allows you to assemble SmartBASIC 1, SmartBASIC 2, AdamCALC, SmartFILER, AdamLINK and SmartLOGO on a single tape. If you wish, you can substitute Address Book or RecipeFiler for SmartFILER. In fact, you could probably put any program that has a Coleco boot block onto the tape as long as you don't exceed the maximum of 6 programs and as long as you rename it as one of the Coleco programs already named. More on this later.

To use this program, first use one of your back up utilities to copy PrBOOT onto the tape that you plan to use. Next, load SmartBASIC 1. When it

has finished loading, insert your backup of PrBOOT and type "CLEAR", then "BRUN TRANSFER". TRANSFER is a binary file that lets you move the appropriate Coleco program over to your PrBOOT media.

You are presented with a menu that asks you if you would like to (C)ontinue, (M)enu or (A)bort. Place the software that you wish to transfer into one of your drives. If you type "C", the program will ask you whether or not you wish to see a catalog. If you say yes, it will ask you which drive you would like to access, then present you with a listing of the directory. If you enter no instead, the program will then prepare to transfer the files of your choice. First, you must enter which drive contains the Coleco software. The tape will spin a bit while the program reads the directory. Next, it will display the files present on the Coleco tape one at a time, asking after each file name whether or not you wish to copy the file or not. As most Coleco software packages have multiple files, you might get confused as to which one you transfer. Not to worry! They are all listed on the middle page of the PrBOOT manual. For the SmartBASIC interpreters and AdamCALC, look for a file named BASICPGM and transfer that. For SmartFILER, look for SMARTFILE. For AdamLINK, look for ADAMLINK. For SmartLOGO, look for LOG. If you are transferring Address Book, look for SMARTFILE as well. If you are moving RecipeFiler, look for RECIPEFIL. To be sure that you don't get confused, transfer one file at a time and get it all set up before going onto the next one. You'll see why in a second. After you have .cb

transferred a file to your PrBOOT tape, you must rename it to the name that Walters Software has programmed into PrBOOT. For example, if you have transferred SmartBASIC 1, you must rename it to BASICPGM1. This is why you should transfer only one file at a time. SmartBASIC 1, SmartBASIC 2 and AdamCALC all have a file named BASICPGM but they must all be renamed something different. If you transfer them all at once, you won't know which BASICPGM is which and you won't be able to rename anything.

To rename a file, you must first Abort the TRANSFER program to return to BASIC. Type Poke 20482,2:Poke 20487,2. Next you type RENAME <old name>,<new name>. When you have finished, type Poke 20482,65:Poke 20487,65. Voila! Now you can BRUN TRANSFER and transfer your next file.

Once you are completely finished, and it does take a little while, the rest is easy. Just insert your PrBOOT tape and pull reset. A menu will appear with the names of the programs. These names are set as BASICPGM1, BASICPGM2, ADAMCALC, SMARTFILER, ADAMLINK and SMARTLOGO. If you transfer any other program with a Coleco boot block, you must use one of these names when renaming. Now all you do is push the SmartKey corresponding to the program of your choice and it will load! Although I haven't done it myself yet, I think that you can use any copy utility to transfer the appropriate support files for each program onto the PrBOOT tape, provided you have enough space. For example, you could move all of the help files for SmartLOGO onto the tape.

PrBOOT requires a bit of work to set up, but the results are well worth it. You can save a lot of clutter and mess by putting all of your programs onto one tape. PrBOOT is available from most ADAM dealers. Try it!

Powermate Review

by Steve Major

Months ago I became very excited to learn that there finally was a hard drive available for ADAM. A short time later I was disappointed to learn that in order to install this hard drive I'd have to take my ADAM apart, cut holes in it, and then solder it into place. Needless to say with my experience in this area my ADAM would have turned into a hopeless pile of goo in trying to install it. I thought my days of seeing a hard drive were over.

Now comes the new PLUG-IN hard drive interface and it offers everything the first one does and a whole lot more. First we'll have a little background on it's creator. The owner of Micro Innovations is Mark Gordon. He is a professional hardware designer who applied his talents to ADAM when his son asked him to build a hard drive interface for ADAM. He did so and soon after Micro Innovations was born.

Lets get into talking about the Powermate itself. First thing that we should talk about is the interface itself. The interface is very designed and very professional looking. To install it, just plug it into the center slot-- that's it. Now what if you have a large X-RAM addressor card there? No problem, just detach the wire

from it and solder in onto the Powermate interface (complete instructions are included to do this, and even I did it), now what if you have a parallel interface there? Again no problem, you don't need it because the Powermate interface comes with one BUILT-IN, this is a completely compatible parallel interface that works great with all existing software. Now so far with all this you may have thought Mark would stop here -- no way!! You also have two SERIAL ports on his interface as well!! The only problem with these is that they are not compatible with any ADAM software although patches for this are available.

Second let's talk about the Powermate hard drive. To plug it into your ADAM just hookup to ribbon cable from the interface to the rear of the hard drive, it's much like hooking up a parallel printer or modem and the simplest thing in the world. The hard drive casing matches the color of your ADAM completely. To turn it on, just flip the switch in the back of the casing. It has it's own power supply and a cooling fan to keep the drives cool for extended periods of use. There are several options for the size of your hard drive. The casing has room for two IBM type drives. One of these is of course taken up by the hard drive. The hard drive can be of three sizes: 10, 20, or 30 megabytes. The other spot in the casing can be taken up by 1) nothing, 2) another hard drive, 3) 360K floppy disk drive, or 4) 720K floppy disk drive. The latter drive is compatible with existing ADAM converted 720K drives and makes this a super bargain!

The prices range from \$399 to

\$699 depending on what drive size you want or how many you need. To me Powermate gets a A+ for being the perfect addition for your ADAM. If you're just starting out, just a tape drive will do, but, once you get Powermate you're on your way to bigger and better things.

What's in store for the future from Micro Innovations? Mark is almost done his Powermate-4 which has space for four IBM type drive-- that's right you could have FOUR hard drives working with you ADAM. Another thing we may see are bigger hard drives available, one day I called Mark and he was working on a 50 Megabyte hard drive for his Powrmate. This company is sure to become a leader in the ADAM world for designing new and exciting hardware products for ADAM.

Power Supply Tip
by Frank Bobro

I have recently found a problem with the power to my Adam. It seemed that every so often the audio would break up and then everything would lock up. I found that if the power cord from the printer to the Adam console was moved, the problem could be simulated. It turns out that the solder joints on the small board that mates with the 9 pin printer cable were bad. I just resoldered and it works fine. Hope this'll help someone. (Ed. note: this tip was posted on the AWAUG BBS and is an excellent example of the value of a BBS for posting tips and lessons learned. It also gives your editor an opportunity to publish it and pass the word to others. Thanks, Frank, for the contribution.)

**ADVERTISE
IN THE AWAUG
NEWSLETTER!**

The AWAUG newsletter accepts advertising for publication. We believe that advertisements help ADAM owners to know what is available and, therefore, that they are a good service. In keeping with this notion, our rates are very competitive. Because it is to everyone's advantage to encourage enrollment in our club, we offer a discount to members who wish to advertise.

At present, our membership stands at just under 100 ADAM owners, so your advertising will reach a significant number of very interested people. Rates are as follows:

SIZE	Non-member	Member
Full page	\$9.50	\$6.35
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A column inch is 38 characters wide and 5 lines high. For each consecutive column inch, add one line.

Advertising may be for any legal goods or services. Material may be submitted in any intelligible form, from camera ready artwork to telephone orders voice, or by data transmission via the club's BBS, telephone (202) 561-2475.

To make inquiries or place an ad, call or write:

Jack MacKenn (703) 371-7548
415 Camden Drive
Falmouth, VA 22405

A.N.N. ADAM NEWS NETWORK

ADAM NEWS NETWORK [A.N.N.] is a monthly service which makes available to Adam newsletter editors, BBS sysops, AUG officers, etc. a pool or source of Adam information on disk. This includes articles, reviews, product information, programs, news, etc. from many Adam sources. Most newsletters, BBS and AUGS are cooperating in this venture by supplying or making available Adam information for distribution by A.N.N.

A minimum of 250 K of material is distributed monthly on disk. Normally two disk sides are sent with each monthly mailing. This service previously only available to newsletters, BBSs, AUGS, etc. is now being made available to Adamites in general on a subscription basis.

A trial month is available for \$4.00; 3 months for \$ 11.00; 6 months for \$ 20.00; and 12 months for \$35.00. ADD \$1.50/MONTH for DDP.

Contact A.N.N. % Barry Wilson, 12967 Weatherfield Dr., St. Louis Mo. 63146. Checks payable to Barry Wilson.

The various articles, reviews, information, etc. on the A.N.N. disks are also being collected and organized into special interest disks, which will include the following:

*Game Reviews
Logo
Graphics (Basic)
*Telecommunications
BarryPatch (Humor)
Machine Language

SW Reviews
CP/M
*Hardware
*BASIC
*INFOCOM
GoDOS

* AVAILABLE NOW

Not all are available as of yet. Contact the A.N.N. Librarian Dean Roades, 8522 Hohman Ave., Munster IN. 46321 for further information or to order any of these specialized A.N.N. disks. Send S.A.S.E. for catalog listing of Available Disks. Cost per volume is \$ 5.00 on disk; \$ 7.00 on DDP (Tape).

MAKE CHECKS PAYABLE TO DEAN ROADES

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This is necessary to help with the costs of media, postage, mailers, long distance, etc., necessary to both obtain the information for the A.N.N. disks as well as the costs involved in distribution of them.

Learning Foreign Tongues for the EOS Literate

By Joe Walters, aka, Falcon of Albuquerque N.M.

Prologue: How Falcon got Started with CP/M

(Before I get into the prologue, a pre-prologue: I tend to ramble on a lot; if I do, I apologise, but I have always had a problem sticking to a subject instead of wandering off on tangents. I think it's got something to do with either a) inbred senility in my parents genes, or b) the fact that there is no large body of water near Albuquerque for 200 miles. Not sure which. ANYWAY...)

When I recently entered the national ADAM telecommunications community in early December of 1989, I found something quite unexpected. I live in relative ADAM seclusion in Albuquerque, New Mexico. I know there must be other ADAMites out here; I was #2 on the Sears waiting list when the first [turned out to be BETA test] versions of the ADAM came out here. However, I haven't found anybody else who owns one of these remarkable computers, so my knowledge has been developing in a rather different direction from goings-on in the rest of the international ADAM community. What I found when I entered the national telecom community startled me: a nation of ADAMites, split directly down the middle by some strange feud over the two major ADAM operating systems: EOS and CP/M. Some die-hard EOS people out there claimed that they hated CP/M and refused to use it... I couldn't follow this, as I had been using CP/M increasingly for about the last five years out of simple necessity. Then the thought occurred to me (watch out, lightbulb alert! Run for the hills!) to simply ASK one such EOS person why they didn't switch to CP/M. I found Barry Wilson (actually, he sort of found me first) and discovered that the majority of EOS-only people out there don't use CP/M because on the surface, it seems just too confusing. So I began to think about it some more (watch out again- two lightbulbs in one article could spell trouble!) and remembered how I started out with CP/M, and what a hellish time I had trying to get it all figured out.

I soon remembered that my reason for using CP/M was out of necessity, not because I wanted to. I was one of the first people to lay my hands on the Hacker's Guide to ADAM, by Peter and Ben Hinkle... In the two short years that I had had my ADAM, I had been doing a lot of programming, all of it in SmartBASIC, most of it dealing with games of one sort or another. The problems with SmartBASIC reared their ugly heads to me quickly; chief among them was that SmartBASIC was just too slow and shape tables too ungainly for any decent animation. So I tried another approach: I read the Hacker's Guide to ADAM, and came away completely confused. Almost everything in that manual was done in machine language (or machine language with SmartBASIC drivers) and I didn't know machine language in the least. So, I bought Coleco's CP/M 2.2 and Assembler package in hopes of learning. Unfortunately, by the time I was finished with that huge manual, I was worse off than when I started. (You must remember - I was in 7th grade at the time)... Chief among my problems with CP/M were thus:

1) The disk drives were all strange. At that time I had one disk and one DDP drive. When I booted CP/M from DDP, the DDP drive was drive A: and the CP/M drive was drive C:. No problem there, except that then I tried to boot CP/M from the disk drive; suddenly, the disk was drive A: and the DDP was drive C:. As if I wasn't lost enough already,

2) CP/M didn't include BASIC! I was dumfounded. I had expected to be able to boot CP/M and start hacking away at newer, faster games immediately. Then I found out that CP/M wouldn't really do much of ANYTHING! All the stupid thing did was load programs that somebody ELSE wrote (at this time, I had some misguided and thoroughly demented idea that the "and Assembler" part of "CP/M 2.2 and Assembler" was a program that would quickly and efficiently convert all of my BASIC programming into fast, efficient machine code. I still had a lot to learn. And as if I wasn't annoyed enough already at having spent so much money on a worthless program,

3) There was that damn scrolling thing! No word wrap, no 40 columns, not even a standard 32 column screen. Just that stupid, ridiculously slow 80 column scrolling thing.

Needless to say, CP/M went onto a high, dusty shelf somewhere until I bought my first modem - an ADAMLink 300 BPS made by Coleco. I started calling local BBSs, and was shocked to find that THERE WASN'T ANOTHER ADAM OWNER ON THE FACE OF THE PLANET! (slightly warped, yes, but I was still in 7th grade, remember.) However, I did find a few CP/M bulletin boards - chief among them the Remote Operating System (ROS) boards. These boards had CP/M software galore -languages, utilities, and *GAMES*! I was excited, until I found that ADAMLink 2 couldn't support XMODEM downloads, so there was no way for me to get all those wonderful programs! Luckily, a friend of mine was a Kaypro junkie - he took a look at my modem, made some calls to Coleco, and managed to configure a version of MODEM7 for me, and then proceeded to make a hex file that my ADAMLink modem could receive, along with detailed instructions on how to recompile the program and make it work. I was ecstatic - I could get new programs after all! (Remember that at this time, as far as I could tell, there wasn't another ADAM user on the face of the planet; for all I knew, they had all been herded up and destroyed by a tactical nuclear weapon built by IBM.) At any rate, the new programs FORCED me to learn CP/M - things started to make sense. I continued on like this, getting new programs, figuring out how they worked, and learning about CP/M bit-by-painful-bit, for a long time (seemed like an eternity) until I finally understood Z80 assembly language and found a CP/M Z80 assembler to run my programs from. I tend to ramble a lot; I hadn't intended to write so much for the prologue to this series of articles. The main goal of this series is to get you EOS-only people who have a "CP/M complex" using this operating system, because when you get right down to it, EOS is a dead-end street. Don't get me wrong, I still use EOS for lots of things - you can't beat it with a stick for graphics stuff from assembly language (until GoDOS comes out, things will probably stay that way, too.) The problem is that EOS just isn't as versatile as CP/M; EOSers are still using the brain-damaged (sorry, personal prejudice, but I

feel that it's true) ADAMLink x series of programs, which as I understand it right now, STILL don't do XMODEM transfers right. (However, see Ron Collins' latest review of ALINK4 elsewhere in this issue..Ed) Meanwhile, most CP/M users are using ZMP or QTerm; ZMP supports XMODEM, XMODEM-1K, YMODEM BATCH, and ZMODEM BATCH transfers. The EOS BBSs out there (the popular A-net series, based off of C-net) is only capable of doing ASCII file transfers, meaning that they can't access the majority of software out for the ADAM, unless it's BASIC source code. In addition, SmartBASIC is just so sloooow. Out of necessity, everything in CP/M is 100% machine language; the speed differences are incredible. Going from a two benchmark programs that do conventional bubble sorts, one written in SmartBASIC and the other written in CP/M Turbo Pascal 3.0 by Borland International, one will see a speed increase of probably around 500%. The last real qualm I have about EOS - SmartWriter. I abhore this program with everything within me that is hackerlike. This has got to be the single slowest word processor on the face of the planet. I use WordStar 3.3 from CP/M - and WordStar is a slow program, relative to some of the others that are out in CP/M, but there is still an incredible speed increase over SmartWriter. I'm sorry, there's a little bit (just a teeny little bit) of prejudice in there, but everything I've said is true.

Three Easy Steps to CP/M-Speak

Okay, back to the story. Step-by-step instructions to using CP/M. Instruction #1: GET A COPY OF TONY MOREHEN'S TDOS. This program is what Coleco's CP/M should have been in the first place. Tony's installation program is so simple that my computer illiterate mother (well, she's not COMPLETELY illiterate; she took a WordPerfect class for her secretarial job once and now believes that all the computers in the known universe boot into WordPerfect) could install it. The dialog is extremely simple, the instructions well-written. At first, I had thought this program was only for people who had all of the expensive hardware add-ons like the 80CVU, the hard disk, and three separate 720K drives. Not so. While TDOS is undoubtedly the single best OS currently out for support of these hardware items, my system consists of 1 DDP drive, 2 standard Coleco 5.25" disk drives, the SydModem 1200 BPS modem, a generic Coleco 64K memory expander, and a PAI2 printer interface with an Epson LX-810, TDOS still beats the living *marbles* out of Coleco's CP/M, and it would even for a user an ADAM with but a single DDP drive. The benefits are too numerous to go into here (no they aren't, ace; you're already babbling too much, babble a little more.) except that I'll go into them any way, 'cause this article's already way too long. First, that confusing drive configuration system where all the drives change depending on which one you boot from in Coleco CP/M is FIXED. When you run the TDOS install program, TDOS tells you EXACTLY which drive corresponds to which name, be it A: or B: or C:, and THE DRIVE NAMES NEVER CHANGE! No matter which disk drive you boot from, A: will always be the RamDisk, B: will always be the 1st disk drive, C: will always be the 2nd disk drive, D: is the first tape, and E: is the second tape (assuming you have a system configuration similar to mine.) That one fix alone is enough to switch for. Another incredible

enhancement is the disk resetting system. One of the most confusing aspects about CP/M from an EOser's point of view is "the deal with the disk switching thing". In standard CP/M, every time you change a disk that you want to write to, you must put a CP/M system disk into the drive that you booted on and type <CTRL>-C. Depending upon how fast your drives are, between 5 and 30 seconds later, you will finally be able to access the disk you just put in. This is hard to explain, as it is still confusing to me. This system is totally eliminated in TDOS; Tony puts the system tracks into VRAM on the Video Display Processor (which wasn't being used anyway, since this is CP/M and there's not much in the way of graphics) and reloads instantly, without the user ever even having to type <CTRL>-C. As if this weren't enough. TDOS can be configured to use any of the popular 80 column video units on the market today; if you have one of these, you're already golden. If not, you still have to live with the scrolling screen. But there's GOOD NEWS: the standard screen is now *40 COLUMNS!*! In SmartWriter, if you're in "moving window" mode, you have 34 (I think) columns available that can be scrolled. In TDOS, you have 40 columns, and the scrolling is *FASTER!*! It's incredible. One note - by the time you read this, TDOS should be publicly available, along with an incredibly in-depth instruction manual from Tony Morehen. If you have an 80 column screen, you'll want the "80TDOS40.COM" program. If you don't have an 80 column screen but want the 40 column scrolling system, you'll want to use "40TDOS40.COM". TDOS is incredibly easy to install; after reading Ron Collins' very in-depth set of instructions, you should be able to install TDOS for your specific system configuration with your eyes closed.

Okay, Instruction #2: If you have a modem, get a good CP/M terminal program. I figured out most of how everything works from simply using a terminal program, calling a local ROS, leeching hundreds of CP/M programs, and running them. My personal preference in the way of term programs is ZMP, as I have already said. There are versions of ZMP out for both the SydModem 1200 BPS modem (contact me at the address below if you can't find it or any of the other software mentioned in this article) as well as the most common RS-232 serial interfaces that were put out by Orphanware and Eve Electronics. You will most likely need to get your first term program on disk from another ADAM user (as opposed to over the modem) because trying to download a CP/M program with AdamLink and convert it to CP/M is not only extremely tedious but positively worthless, because 9 times out of 10 either AdamLink will mess up or the conversion process will kill the program. Be sure to read all of the instructions carefully, and then try to find some good free CP/M BBSs locally. This shouldn't be hard; ROS systems, RCPMs, and many other CP/M BBS systems are *everywhere*; if I could find one in Albuquerque, NM (the town consists of a few straw huts in the middle of the desert with electric and phone company cables strung out the top) then you should be able to find a free system near you.

Instruction #3: Grab as many utilities as you can, and play with them until you can figure out how they work. You will want to grab some public domain editor like EXPRESS; the editor that comes with CP/M is just trash that I wouldn't wish on the worst

Intel beaurocrat in existence. You will also need a file maintenance utility such as NSWEEP.COM; this simply allows you to copy, rename, delete, move, etc files between disks, much like Coleco's Disk Manager program. Finally, to really get started on this thing, you will need the de-archive/library utilities called NULU.COM, UNARC16.COM, and UNCR.COM to uncrunch files. The last two major utilities that you need to get your hands on if you have a modem are CLONE.COM and IMAGE.COM. These programs go together and allow a CP/M user to put ANY disk "image" into a file and send it over to the modem to another user, who can then "clone" the file onto a disk, thus duplicating the disk in question. Now you can actually transfer Coleco software (such as the SmartBASIC program disk in case yours dies and you don't have a backup <not that that happened to anybody *I* know or anything>) from one computer to another over the modem... Sometimes this is cheaper than sending the disks through the mail, sometimes not, but mainly it is much more convienient (not to mention the fact that I get real antsy when I'm waiting for software in the mail...) At this point, the only thing left to learn before I send you out on your own is what these "file extension things" are all about.

Confusion Factor #130 of 1024: Collect Them All! CP/M File Extensions

All CP/M file names consist of two parts: an 8-character file name followed by a 3-character file extension. Most of the time, a file extension is a description about the type of file that you're looking at. A file name will look something like this: THISFILE.TXT. The TXT extension identifies this particular file as a text file, that is, one that contains just text. While a file extension can be any 3 letters you want, such as ZYC, most of the time people follow certain conventions, just because it is easier that way. For example, just as TXT is usually a text file, DOC is a document file, which is the same thing as TXT. The actual CP/M program files (the ones that you run) all have the extension of COM. You can think of this as a "COMmand file", because in order to run that program, you simply type it's name (the part on the left side of the period) in and hit <RETURN>, just as if it was a command, from say, BASIC. Those are the basic file types. I could go on and on about all the different types; literally hundreds exist, and I couldn't possibly remember all of them off of the top of my head if I tried. There are, however, four other important file types you should know. First, a file with a LBR extension means that the file is a "library file". In plain English, this is one big file that contains a lot of little files. To get the "little" files out of the "big" file, you need the public domain CP/M utility NULU.COM (notice extension COM, identifying it as a program file.) You run NULU, and you can look at the help menu by typing "-H <RETURN>" at the main prompt. You should read the instructions that come with NULU thoroughly; you will be using this program a lot. NULU allows you to open a LBR file, look at the directory of "little files" inside of it, and extract whichever of those files (could be some, could be all of them) to whatever disk drive you want to. Another file type is a ARC or ARK file. This file is similar to a LBR; the ARC stands for "ARChive". Files with the extension of ARC are different from

LBR files in that most of the time, the "little files" inside the archive are compressed, thus saving disk space and transfer time over the modem. The difference between the "C" and the "K" in the last letter is purely cosmetic; some people treat ARC files as MS/DOS only files and ARK as CP/M-only, but CP/M archive utilities don't care whether it says ARC or ARK; it's an archive either way. To un-archive a file, you must use the public domain de-archive utility UNARC16.COM. Read the instructions that come with the program carefully; it is invoked slightly differently from it's library companion, NULU. The primary advantage of ARC files over LBR files is that ARC component files are compressed automatically when they go into the archive, and UNARC16.COM automatically decompresses them at the time that they are extracted. Which brings us to the last major point about file types. Often, you will see a file with a "Z", "Q", or "Y" as the middle character of the file extension, such as DZC, CZM, or TZT. These programs are compressed using the public domain CP/M compression utilities CRUNCH.COM, SQUEEZE.COM, and CRLE11.COM. These files must be decompressed before they can be used properly. In order to decompress a file with a "Z" in the middle character of the extension, use the program UNCR.COM. To decompress files with the "Y" in the middle character, use CRLE11.COM. To decompress characters with a "Q" in the middle term, use UNSQ.COM or NSWEEP.COM (NSWEEP includes a file unsqueezer, among it's many other utilities.) Remember to read the directions for each program carefully, as each is slightly different. Many times you will see a file compressed with one of the above programs INSIDE OF A LIBRARY. This is because libraries themselves do not do automatic compression like archives do, and so compressed programs in libraries must first be extracted with NULU.COM, and THEN DECOMPRESSED WITH THE RESPECTIVE DECOMPRESSION UTILITY. Newer versions of NULU.COM do support unsqueezing (.?Q? file extensions), but squeezing is being used less and less because LZW (Lempel-Zev-Welsh) compression (.?Z?) is more efficient than squeezing. That'll do it for me for now; I think I've written enough to last a while, and I'm tired. Summary: GET CP/M PROGRAMS AND USE THEM. That's the best way to learn anything. These are the CP/M programs that you should get, and the order that you should (ideally) get them: 1) Tony Morehen's TDOS to replace Coleco's brain-damaged CP/M system; 2) A Terminal program, such as ZMP or QTERM configured for your serial interface and modem; 3) NULU.COM, UNARC16.COM, UNSQ.COM, UNCR.COM, and CRLE11.COM. That should be enough to get you started. Make sure you have a lot of disk space! I hope SOMEBODY gets some use out of this little mini-series; the way things look now, CP/M is going to be a necessity to the survival of the ADAM. If you have questions, comments, or you wish to throw money (yeah, right) I can be reached at the following address. Please enclose a SASE if you want me to reply, and please DON'T CALL COLLECT; I will NOT accept charges. (Sorry, but New Mexico has the highest per capita price of living/lowest average salary of anywhere in the United States...) However, if I am not home, do leave your name and telephone number if anybody else is, and I *WILL* call you back ASAP. Joe Waters (Falcon Federation.hack.com), 13009 Gray Hills Rd. NE, Albuquerque, NM 87111 U.S.A. (No need for extra postage!) (505)292-0824

THE BARRY PATCH:

A SURPRISE USE FOR THE MODEM.

More good info from the fertile mind of Barry Wilson

As you are aware in prior columns I have covered many of the major uses for the modem (paper weight, door stop, fishing sinker, base for baseball game, etc.) but a reader has suggested a NEW and NOVEL use for the MODEM-----TELECOMMUNICATIONS!

I know, one you never would have thought of, I know I didn't. Well, I am sure some of you are asking---HOW DO YOU USE THE MODEM FOR TELECOMMUNICATION---WHAT DO YOU DO----WHAT DO YOU NEED--ETC. ?????

I will give you a summary from the book Leroy's Lessons on Telecommunications (for sale wherever the police will allow it, at sleazy bookstores everywhere).

1. Get a modem. (An obvious need but one that the average user is sure to overlook)
2. Get a telephone. (Another aspect often overlooked by novice modemers)
3. Purchase electric service from your local utility as this is important.
4. Purchase phone service from your local phone company as this is also important.
5. Hire electrical/nuclear engineer to hook up phone, modem and computer. OR if you are rich and can afford to REPURCHASE your entire setup, hook it up yourself.
6. Send Leroy \$100.00. (This advice appears very often and therefore must be of prime importance).
7. Buy from Leroy the private unlisted phone numbers of the rich & famous BBSs and BBS operators (which are called sysops - terms explained in the competitively priced companion dictionary of terms that can be purchased to go with Leroy's Lessons).
8. Buy, read and study all books listing names to name your baby. (Look in maternity department of store). Study this carefully as well as at least three foreign languages , besides CP/M.
9. Send Leroy \$100.00.
10. Go back to step 8 and complete it again, go to step 9, comply with that and then go to step 11.

11. Pick out your handle (like an alias or also known as, i.e., aka) and password (like open sesame, shazam, etc.). You will need a handle and password for most BBSs. It's like joining a secret club with code words, passwords, secret rituals, human sacrifice, etc.
12. Next get a large supply of food, drink, portable bathroom facilities, shaving equipment, etc. ready by your modem/computer/phone area.
13. Next take Leroy's Learn to Type course, correspondance only.
14. You are now ready to call your first BBS.
15. From this point one I will start numbering the lessons as A,B,C,etc. as these will be what to do while you are on-line (like that term, it's a technical term which is defined in Leroy's companion dictionary as indicated above).
 - A. Dial your BBS from the list previously purchased from Leroy.
 - B. Read the screen as the BBS answers your call. It will ask some questions, which you will be prepared to answer IF you have taken Leroy's Computer Literacy course AND Leroy's Modem Literacy Course, have purchased your cap and gown, diploma, graduation pictures, etc.
 - C. Some of the questions will deal with your password, code word, handle, sexual preference, physical measurements, etc. All of which you will be prepared for IF you have followed steps 6 & 9 above.
 - D. After this grueling examination (for those of you who have not taken Leroy's course), the BBS screen will say you are "VERIFIED" (See Leroy's companion dictionary for meaning).
 - E. At this point you will be given choices as to what you should do, etc. DO NOT FALL FOR THIS TRICK OF THE SYSOP.
 - F. Most sysops are paid by the hour and therefore all they want to do is put in their time with as little problems and interuptions as possible. So they have set up this MENU (See Leroy's dictionary) so YOU will DO THEIR WORK FOR THEM. DO NOT FALL INTO THIS TRAP.
 - G. HIT C(hat) for CHAT on most BBSs and check on others to see what you need to do to call the SYSOP.
 - H. LET HIM EARN HIS LIVING. Don't bother looking over the menu, JUST TELL THE SYSOP what area you want to see. He can get you there quicker than you could do yourself. IF he is hesitant remind him who pays his salary.
 - I. If the above fails, do NOT threaten to go to another BBS, as he may have one he is in competition with and will try to send you there to MAKE HIS RIVAL WORK. Instead threaten to have all your friends call his BBS and tell him you will give them ALL of Leroy's secrets including the C(hat) secret. This will usually bring him around.

J. ONE AREA YOU WILL WANT TO SEE WILL BE THE MESSAGE AREAS, PRIVATE AND PUBLIC. As these message areas will require some further instruction (which can be quickly obtained by purchasing Leroy's Message Lessons), I will again change going back to numbers, so as to keep this section separate also.

MESSAGES:

1. One easy way to leave a message is to JUST COPY some other message word by word, letter by letter and then leave it as your own. At best no one will notice that it is a copy of another and at worst just bluff your way out claiming that YOUR message was left FIRST and the other person COPIED YOUR MESSAGE.
2. In case you are not able to find someone else's message that says what you want to say and therefore copying another's message will not work, go to step 3.
3. Send Leroy \$100.00.
4. BE SURE NO ONE IS LOOKING OVER YOUR SHOULDER, WHAT I AM ABOUT TO TELL YOU IS SO SIMPLE, SO TRUE, BUT SO SELDOM REALIZED THAT YOU CANNOT TAKE A CHANCE ON SOMEONE ELSE SEEING THIS.
5. HERE IT IS -----MESSAGES are JUST a series of symbols, numbers and letters in various groupings and order. That's it. The secret of messages. You just take letters, numbers and symbols and arrange them in various (pleasing to the eye) patterns and shapes and you will have created messages.
6. NOW for FANCY MESSAGES. You can leave messages that look like you are an expert in CP/M. AGAIN BE SURE NO ONE IS LISTENING OR LOOKING OVER YOUR SHOULDER, THIS ONE IS A HIGHLY GUARDED SECRET.
7. Just use the following approximately every 4th or 5th word. (Use in any order, may repeat if you wish). Squeeze, unsqueeze, crunch, uncrunch, library, delibrary, archive, de-archive, COM, TXT, ARC, IMP, ZMP, CHIMP, TDOS, VDOS, VD-DOSE, FALCO, XMODEM, YMODEM, ZMODEM, MEMODEM, UMODEM, IT-SHE OR IT-MODEM, LIB, ZIP, (for further terms to use when speaking CP/M, purchase Leroy's Languages of the World, Vol.12-CP/M).
8. To appear to be an OLD PRO at modeming, use the following terms, much in the way indicated for CP/M above.....Download, DL, Upload, UL, Sysop, Access Level, Subop, Hop-op, Sock-hop, ram drive, adamlink34.5+++ (Purchase Leroy's Mastering the Modem for Midgets).
9. Now we will conclude your use of the modem. (Again I change to letters to keep this separate).
 - A. NEVER TIP A SYSOP. They are all well paid and it is not proper to tip them.
 - B. Again make them do their job. When you want to sign off, tell them you DEMAND THEY GIVE YOU A FORCED SIGNOFF (this has the least amount of work for you).

C. If they refuse #B, then do NOT bother to go thru the long procedure of formally signing off, answering some dumb questions, etc. JUST HANG UP. If the sysop was rude, do not MERELY HANG UP BUT SLAM THE PHONE DOWN.

D. Send Leroy \$100.00.

E. Consider Leroy's other courses.....

How to use your bathroom.

How to cook on your car's engine block.

Auto-Window repair co-authored with J.D.

Thank you for your attention, there will be a test on this material at the next session.

A QWIKKEY Success Story

by Jack MacKenn

At the AWAUG meeting in March, Nat Eiseman demonstrated the use of QWIKKEY, a TSR utility that allowed a single key to be defined as a string. Nat also wrote an article describing its' use for the April edition.

Recently, I've been able to save a considerable amount of time by using QWIKKEY. I am in the process of developing an amortization program for the Adam using Fortran. The process requires coding using an ASCII text editor (I use VDE), compiling the program, and finally linking the program with various library functions to produce an executable program. Of course, these things never work right the first time so many changes are required.

The keystrokes required for the entire evolution are: 1, VDE AMORTIZE.FOR (this brings the source code into the editor); 2, F80 = AMORTIZE (this compiles the program after exiting the editor); and 3, L80 AMORTIZE/N, AMORTIZE/E (this "links" the file with the library functions, produces an executable file [AMORTIZE.COM] and exits. I would use these

commands 8 to 10 times a session trying to get it right.

QWIKKEY provided a handy shortcut that proved very useful. I defined the ^ key as VDE AMORTIZE.FOR, the \ key as F80 = AMORTIZE, and the | key as L80 AMORTIZE/N, AMORTIZE/E. Thereafter, all I did was hit ^ to get into the editor, \ after leaving the editor, and | to complete the process. Compiling & linking take several minutes so I was able to save time by hitting | immediately after \ and the linker would be called after the compiler finished. I was free to get a cup of coffee, stretch my legs or whatever. QWIKKEY is a work saver that should be part of every CPMer's (or TDOSer's) utility library.

Speaking of TDOS, Tony Morehen's latest version, 4.56, has a batch file capability which is even better than the QWIKKEY process I described above. That, however, will have to be the subject of a separate article. JM

LATE FLASH! QWIKKEY does not appear to work with TDOS version 4.56.

FACILITIES FOR THE ADAM JKL UTILITIES

In the first article on JKL Utilities I discussed the use of the program to transfer blocks. At that time I restricted the discussion to the procedure for copying an entire disc. This disc copying procedure is good for copying any kind of system, whether it is a LOGO system, a CP/M system, an EOS system or a databank for SMARTFILER or any sort of machine language program. It will make a faithful duplicate of any ADAM formatted disc.

There are times when a copy of a program or file is desired, but not an entire disc. Sometimes there are unique requirements for the copying that can't be met with a file copier such as BACKUP+ or the JKL file copy program or PIP in CP/M. The Xfer Blocks program is extremely versatile and permits you to duplicate any block on one disc to any block position on another disc. This will meet just about any situation that I can envision. This has an unparalleled advantage in the repair of discs that have developed a CRC error that often renders the entire disc unusable. If you have a disc that has developed a bad block, due to either physical damage or to a CRC error, it is impossible to copy that entire disc to another disc with any copying program, even JKL. But you can transfer the blocks that are good and you can transfer them to the same position on the new disc that they had on the original disc. The only deficiency will be the missing defective block. Very often, means can be found to rebuild even that block. It has happened to me that the bad block that developed was the first block, which is the system block in both CP/M and EOS. Without that block the entire disc is KAPUT! However, this is one of the easiest blocks to replace. Replacing just that one block will restore the entire disc. A damaged directory block can be devastating. But in the majority of cases, it can be rebuilt by studying the file contents themselves with JKL or other disassembler. It takes a while, but if it is an important disc, it is worth the effort.

Occasionally, a block from one disc must be relocated to a different block position on another disc. All of these maneuvers are possible with the Xfer Blocks program. Let's consider the case of repairing an EOS disc that developed a bad block in Block zero, the system block. I would recommend that the first thing to do would be to duplicate the damaged disc onto another disc, except for that bad first block. This isn't absolutely necessary. You might be able to transfer a new block zero onto the defective block, but only if that defect is not due to physical damage. And then there is the possibility that you might do irreparable damage to the disc by a mistake in the process, ---such as transferring a block to the wrong position. There would be no undoing that blunder. So let's go about copying the bad disc to a new disc and omit the one bad block, which is block zero.

Load JKL into memory with a cold boot, and then remove the JKL disc. Put a new, formatted disc into B:Drive and the defective disc into A:Drive. Then I would check the directory of both discs with the Catalog command just to be sure that both discs are what we want. Now we are going to copy all blocks, except block zero. So we start the block transfer with block ONE and we will only be transferring 159 blocks (9F Hex) instead of 160 blocks (A0 Hex) when copying an entire disc. It is interesting, that it really doesn't matter to JKL if we try to transfer 255 blocks (FF Hex). When JKL gets to the end of the available blocks, it will stop and give you an error message. But the transfer will have been accomplished.

With the discs in place, type this command:

U>X <CR>

You will now see the following prompt:

Select Drive for Source
DDP1:DDP2:DSK1:DSK2:

The source is on the A:Drive (Disc drive number one), so we hit SMARTKEY III. The screen now changes to this:

Select Drive for Source
DDP1:DDP2:DSK1:DSK2:
Select Drive for Destination
DDP1:DDP2:DSK1:DSK2:

The new disc is on B:Drive so hit SMARTKEY IV. We will get the following screen which asks for the starting block:

Select Drive for Source
DDP1:DDP2:DSK1:DSK2:
Select Drive for Destination
DDP1:DDP2:DSK1:DSK2:
Enter Starting Block: _

As I explained above, the starting block will be block number ONE. We enter 01 here. Although in HEX and DECIMAL the number ONE is the same, it is well to remember that we are entering a HEX number here. In some other situation, the HEX number might be different from the DECIMAL number. After entering the starting block number, we will get the next prompt for the number of blocks to be transferred. In this case that will be 159 blocks in DECIMAL or 9F in HEX. The screen will now appear like this:

```
Select Drive for Source  
DDP1:DDP2:DSK1:DSK2:  
Select Drive for Destination  
DDP1:DDP2:DSK1:DSK2:  
Enter Starting Block: 01  
Enter Block Count: _
```

The next prompt requests the location of the block on B:Drive where the transferred blocks is to start. Contrary to the earlier example in the first discussion of the Xfer Blocks program, we cannot ignore this request. We require that these transferred blocks reside on the NEW disc in exactly the same location that they were on the original disc so we must direct JKL to locate them starting at block ONE. The screen at this point looks like this:

```
Select Drive for Source  
DDP1:DDP2:DSK1:DSK2:  
Select Drive for Destination  
DDP1:DDP2:DSK1:DSK2:  
Enter Starting Block: 01  
Enter Block Count: 9F  
Enter Opt Dest Block: _
```

Having entered 01 as the optional destination block, we will get the final prompt to begin the operation. The screen will now appear like this:

```
Select Drive for Source  
DDP1:DDP2:DSK1:DSK2:  
Select Drive for Destination  
DDP1:DDP2:DSK1:DSK2:  
Enter Starting Block: 01  
Enter Block Count: 9F  
Enter Opt Dest Block: 01  
Hit Y to start Xfer Blocks _
```

Upon hitting Y, the transfer commences and its progress is displayed on the screen. We will now have a disc that duplicates the defective disc but with no Block ZERO. We can transfer this one needed block from any EOS disc of the same ilk as the defective disc. If the defective disk was just an ordinary EOS disc, then we can use block ZERO from another ordinary EOS disk. Remove the source disc on A:Drive and replace it with a good EOS disc. We will now repeat the Xfer block routine, only this time we will transfer ONLY Block ZERO. At the "Enter Starting Block: _" prompt we enter 00. At the "Enter Block Count: " prompt we enter 01. At the "Enter Opt Dest Block: " prompt we enter 00. The complete screen will appear like this:

```
Select Drive for Source  
DDP1:DDP2:DSK1:DSK2:  
Select Drive for Destination  
DDP1:DDP2:DSK1:DSK2:
```

Enter Starting Block: 00
Enter Block Count: 01
Enter Opt Dest Block: 00
Hit Y to Xfer Blocks:

You will see just one block transferred. We now should have a completely usable disc. This process is applicable to any number of similar situations. A lot of common sense is all that is needed. For example you shouldn't use the JKL disc as a source for block ZERO in the example above. JKL has a very unique file structure and the system block has a great many special instructions, one of which automatically loads and runs the Utility program. Nor should a SMARTBASIC disc be used because its system track is also unique and it too has a direction to initiate the operation of SMARTBASIC. Other specialized discs like SMARTFILER would not be appropriate.

The purpose of this discussion is not to envision applications for unique block transfers. Such situations abound. I personally have encountered dozens of situations where I had need to put blocks from one disc onto another disk, but in an entirely different location on the second disc. There are very few programs around that have this capability. It is just another of the incredible features of JKL.

I have just about come to the end of the tools that are in JKL. I have saved the best for the last. A sort of piece de resistance, as it were. In the next article on JKL I will discuss the Juxtapose program. It will do things that NO other program that I know of will do. It is, in my opinion one of the most valuable analytical devices available to the ADAM user. If you have ever run across a program, either in CP/M or in machine language, that has modified an earlier program to do certain things and you wonder just what was done to the program to change it, this is the program that will do that. One time I noticed that someone from England had posted a file on GENIE called PMASTER. Someone had downloaded it and, without checking it out, uploaded it to the ORPHANWARE BBS. I was a little suspicious of the file so I used JKL and the Juxtapose program to compare the file with the copyrighted program "PRINTMASTER". It turned out that the files were identical!. I called UNISON WORLD, the publishers and copyright owners of PRINTMASTER and they were outraged by this infringement. They told me that they would institute a lawsuit against any BBS that was guilty. I called John Lingrel of ORPHANWARE and let him know what I had been told. He took appropriate action and deleted the file from the BBS. The interesting thing here is that JKL, which is strictly an ADAM program, could make such an incredible evaluation of a machine language program written for a completely different computer.

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The Fine Print

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