Continuing our study of John chapter 10...

"Truly, truly, I say to you, he who does not enter the sheepfold by the door but climbs in by another way, that man is a thief and a robber; 2 but he who enters by the door is the shepherd of the sheep. 3 To him the gatekeeper opens; the sheep hear his voice, and he calls his own sheep by name and leads them out. 4 When he has brought out all his own, he goes before them, and the sheep follow him, for they know his voice. 5 A stranger they will not follow, but they will flee from him, for they do not know the voice of strangers." 6 This figure Jesus used with them, but they did not understand what he was saying to them. 7 So Jesus again said to them, "Truly, truly, I say to you, I am the door of the sheep. 8 All who came before me are thieves and robbers; but the sheep did not heed them. 9 I am the door; if anyone enters by me, he will be saved, and he will go in and out and find pasture. 10 The thief comes only to steal and kill and destroy; **I came that they may have life, and have it abundantly. 11 I am the good shepherd. The good shepherd lays down his life for the sheep.** 12 He who is a hireling and not a shepherd, whose own the sheep are not, sees the wolf coming and leaves the sheep and flees; and the wolf snatches them and scatters them. 13 He flees because he is a hireling and cares nothing for the sheep. 14 I am the good shepherd; I know my own, and my own know me, 15 as the Father knows me and I know the Father; and I lay down my life for the sheep. 16 And I have other sheep, that are not of this fold; I must bring them also, and they will heed my voice. So there shall be one flock, one shepherd. 17 For this reason, the father loves me, because I lay down my life, that I may take it again. 18 No one takes it from me, but I lay it down of my own accord. I have the power to lay it down, and I have the power to take it again; this charge I have received from my Father." 19 There was again a division among the Jews because of these words. 20 Many of them said, "He has a demon, and he is mad; why listen to him?" 21 Others said, "These are not the sayings of one who has a demon. Can a demon open the eyes of the blind?" 22 It was the feast of dedication at Jerusalem; 23 it was winter, and Jesus was walking in the temple, in the portico of Solomon. 24 So the Jews gathered round him and said to him, "How long will you keep us in suspense? If you are the Christ, tell us plainly." 25 Jesus answered them, "I told you, and you do not believe. The works that I do in my Father's name, they bear witness to me; 26 but you do not believe, because you do not belong to my sheep. 27 **My sheep hear my voice, and I know them, and they follow me; 28 and I give them eternal life, and they shall never perish, and no one shall snatch them out of my hand.** 29 My Father, who has given them to me, is greater than all, and no one is able to snatch them out of the Father's hand. 30 I and the Father are one."

This is a very interesting passage of scripture because Jesus uses the analogy of sheep and the shepard to teach the Jews of that time and us in the current time.

Shepherding was a major occupation in Israel and hence, most people could relate to the use of such an analogy. Many people don't realize that shepherds were a tough bunch. They had to be tough because their main job was to protect their herds of sheep from natural predators like wolves and from human predators that wanted to steal their sheep. Shepherds lived in some rugged country without much in the way of provisions. They were the "cowboys" of the Middle East in many ways and had to learn to survive and keep their herds together and protected to make a living. Their only protection was their staff and maybe a sling shot (remember David and Goliath, David was a shepherd).

Jesus uses the analogy of a shepherd and his sheep to teach us first that there is only one way (door) to enter the sheepfold and that is through Jesus. **He is saying that in order to have salvation a person must obtain it in a particular fashion, by entering through the one door that is Jesus.** He also warns us that others will say that they are the "way to salvation", but he says they are liars and although they will attempt to deceive his sheep, the true believers will not "heed any false voices". I understand that sheep will only listen to their shepherd, another person can give the same command and they will pay no attention to it. This is the analogy Jesus was using.

Secondly, Jesus explains why he is the "good shepherd" and is the one we should follow. He says that a hireling who is paid to mind someone else's sheep will run when danger approaches but the "good shepherd" will stand and fight to protect them. He further states that the "good shepherd" will lay down his life for his sheep. In other words, false teachers and prophets can be discerned by their lack of commitment to their followers. **Jesus literally gave his life for all of us so that we could have salvation.** He did this voluntarily although it may appear he was captured, tried and executed, he could have "walked" away from this process at any time. Think about it, the power evidenced by Jesus' miracles could have also been used to prevent his execution. Many times the bible recounts how Jesus disappeared when people were after him "because it wasn't yet his time". Yes, Jesus gave his life because he wanted to, just at the right time and in the right manner to give us eternal salvation. His entire existence on earth, about 33 years, was planned in every detail from his birth which was marked by a brilliant star, to his death which was as an innocent lamb sacrificied for the sins of many. Jesus died on the Passover, which is the Jewish holiday that involves the killing of an innocent lamb as a sacrifice to give salvation to others. This Passover celebration began in the time of Moses when the Egyptians would not let the Israelites leave their country and Moses said God would strike down all the first born sons if Pharaoh didn't comply (remember the movie TEN COMMANDMENTS). Pharaoh didn't comply, of course, and the death angel came through the town and all the first born sons were struck down. God told Moses to tell the Israelites they could be protected if they sacrificied an innocent lamb and put the blood on their door post which would result in the death angel "passing over" their home.

Don't think these items are just strange coincidences, because there are many more predictions in the Old Testament about Jesus, his life, death and resurrection. The life of Jesus is one of the most, if not the most, researched event in history.

Jesus is the most important person in all of history and as described in these verses it is only through him that man may have salvation. He is the only "door" to eternal life and forgiveness of our sins. He is the good shepherd that gave his life for the protection of his flock, mankind. Won't you ask Jesus to forgive you of your sins today ?

N. I. A. D. - A CHRISTIAN RUN BUSINESS

SEPTEMBER - ISSUE #80 INDEX

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N.I.A.D. PROCEDURES

⇨ N.I.A.D. is published monthly except for the months of May / June and July / August, which are combined issues by the Northern Illiana ADAM User's Group. Individual issues may be purchased for the current month or a backissue for $3.00 (always check Product List for current pricing). The September issue of N.I.A.D. is the 80th issue published by N.I.A.D., there are 79 preceding issues. When ordering backissues, please specify the number of the issue, month and year.

⇨ The standard membership rate for 10 issues is **$22.00 USA Third Class** and **$29.00 Canadian, USA First Class and it's possessions.** Contact us for membership rates outside of these areas.

⇨ N.I.A.D. welcomes contributions of original reviews, programs, articles, questions, suggestions and comments. Please include a SASE (Self-Addressed-Stamped-Envelope) if you want a written reply. Also, any contribution sent in on DDP or DISK will be eligible to receive a public domain program or volume in return at no charge!

⇨ Your N.I.A.D. member ID number is on the first line of your mailing label (affixed to the newsletter). The first four digits are the month and year of the final issue in your current membership. Please check this number each month to make sure that issues are not missed.

⇨ N.I.A.D. will not be held liable for any issues missed due to an address change which we are not informed of. Please get this information to us as soon as possible so as not to cause any type of difficulties. Also, include your member ID number.

⇨ N.I.A.D. accepts advertising for ADAM related products and services. Cost is $50 for a half page ad and $75 for a full page ad for one month. Contact us for multi-issue discounts. Well over a thousand ADAM owners receive our newsletter each month and many more get to see it second hand. You may send in your ad in either SmartWRITER, SpeedyWRITE, PowerPAINT, PrintWORKS, other ADAM formats, IBM ASCII or IBM PUBLISH IT! DTP format files or even supply us with a high quality print out for reproduction in the newsletter. N.I.A.D. reserves the right to not advertise certain products.

⇨ If **0991** are the first four digits in your member number, it is time to renew your membership to insure that you do not miss an issue.

⇨ N.I.A.D. welcomes software developers to submit their programs for us to evaluate for possible commercial sale. Send in your products for us to test and to review in the newsletter. N.I.A.D. offers a 50 / 50 split of the sale price on all items that we handle distribution of for all developers. You will find that this is one of the best offers around in the ADAM community. We will also publish a review on the product as soon as possible and handle distribution of demo copies.

⇨ Our Chicago Local Chapter Meetings are a great way to learn more about our beloved ADAM systems. You have the opportunity to meet fellow ADAM owners, ask us questions, see live demonstrations of hardware and software and also purchase products. We meet in our store, CompuKINGDOM, the third Tuesday of each month at **7:30 PM**. If you need directions getting here, just give us a call.

The meetings which will be held throughout the year will fall on the following dates (remember that there are no meetings scheduled for the months of June, July and August):

OCTOBER 15, 1991
Subject: MIDI-MITE, SEQuel & New Releases

NOVEMBER 19, 1991
Subject: Open

CompuKINDOM / N.I.A.D.
6460 College Rd.
Lisle, IL. 60532
(708) 961-5011

We have exercised due care in the preparation of this newsletter (that doesn't mean we're perfect!). No warranty, expressed or implied with regard to the information contained herein is given, either by interpretation, use or misuse. The opinions expressed herein do not reflect those of the editor or staff unless noted.

FROM THE EDITOR'S DESKS

LYLE M.

JIM N.
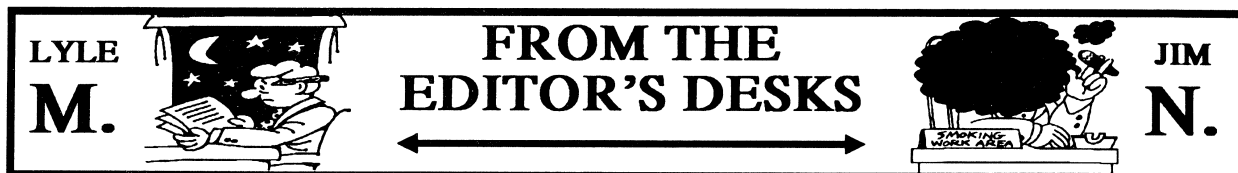
Hello everyone and welcome to the end of Summer. Yes, the kids are back in school, we all wonder where the Summer went and why we didn't get all our projects done as we had so ambitiously planned in the Spring !

Well, back on the NIAD front we are busy planning our activities for the busy fall and Holiday season when people have more time to spend with their ADAMs.

As Jim comments on in his editorial on this page, we had a great demonstration of some excellent hardware and software at our September 17th meeting. Terry Kayser showed how easy and practical it is to run a small business using his ADAM and some excellent TDOS software.

I was disappointed that we didn't have a better turnout at the meeting to see what is possible on your ADAM system. Many of you have long been asking for this type of software and now that it is here you should take every advantage of seeing demo's when you can.

The monthly meetings that we have here at the store in Lisle are for your benefit to demonstrate software programs, answer questions and meet other ADAMites to share information. Most computer owners don't have access to this type of support, especially for an older computer system. Don't abuse this privilege, take advantage of it.

At next months meeting we will have a demonstration of the MIDI-MITE music synthesizer interface for the ADAM and more new software. If you have any interest in music, come and see this demonstration - you will be amazed at what the ADAM can do!

Come and voice your opinions on what support you would like to have from NIAD. If you don't like the meetings tell us why so we can respond. If you think your ADAM is useless because you can't do certain things on it, tell us and we can show you how you can use your ADAM for the things you want. **Most computers are not used to anywhere near there full potential because people are not educated as to how to use them and what software is available for them.** Don't make this mistake and waste a valuable investment.

We are also on a membership drive to add more ADAM members to the group. Each of our current members can be a big help to us and themselves if they participate in this membership drive. There are many ADAM owners out there who have given up because they were not aware of what support is available locally or nationally for their system. Many think that since Coleco dropped the ADAM, there is no support for supplies, repair or software/ hardware. Only other ADAM owners can reach these people.

We are asking each of you to be on the look out for other ADAM owners by doing the following:
1. Watch for advertisements in local papers, contact these people and tell them about NIAD and the other groups around that support the ADAM. If you don't want to do this, send us their name and address or telephone number and we will do it. This is a great source of new ADAM members.
2. If you are a garage sale addict, watch for ADAMs and do the same thing - let people know about available ADAM support. Give them an old issue of NIAD or another newsletter/ catalog so they can see what is available.
3. Put an advertisement up in your local grocery store stating "ADAM COMPUTER CLUB" or something like that and people will contact you.
Each of you has contacts, friends and groups that know other people, etc. that can be used to spread the word about ADAM support.
Please get active and do this to help yourself and other ADAM owners.

"IT'S NOT A TOY!". Those four words seem to be on the lips of just about every ADAM developer, group president or newsletter editor. "Why?", you may ask, since the IT (ADAM Computer) was produced by a toy company and through out it's lifetime it has been spoken in the same breath as the Cabbage Patch Kids. The answer is simply that Coleco produced a full featured 8-bit computer system that was only beginning to realize a small portion of it's true capabilities when Coleco decided to bail out to save face with their investors. What each and every ADAM owner is in possession of is a tremendously flexible and upgradeable computer system which can be associated with the little train that thought he could. Eventually that little train made it up that hill after continuous self-motivation and determination. The ADAM, likewise, has been climbing that same hill over the last seven years and through the motivation and determination of many, it has succeded in providing owners with all the functions and capabilities to complete many a task.

There have been many stumbling blocks along the road, but there always seems to be ways around most of these little set backs. People complain that ADAMCalc, SmartFILER, SmartWRITER and other programs don't provide enough memory or functions for what they need to be done. Then they find out that with a little investment of time and money, CP/M 2.2 (or TDOS) compatible commercial programs are available and will provide all the necessary capabilities to get the job done. Recently demonstrated at our September meeting by Terry Kayser where such CP/M / TDOS compatible programs as SuperCalc 2 (a vast improvement over ADAMCalc), PC-File (a major improvement over SmartFILER and all the other FILER programs combined), WordStar (a major improvement over SmartWRITER and SpeedyWRITE) and also shown was Checks & Balances, a program which would put some of the IBM MS-DOS checking / accounting programs to shame. Best of all these programs can be run on a BASE ADAM SYSTEM, although a high capacity disk drive is recommended, a memory expander would offer more flexibility, an 80 column display would make working with these programs easier and a hard drive would be the icing on the cake.

But this is just an example of how far the ADAM can go to suite the individual needs of the user. If for some reason or another, a certain program in EOS does not perform all the needed functions then a CP/M program can be purchased configured for ADAM CP/M from a well known mail order company named Elliam Associates. This also holds true for CP/M users who might need certain features which an EOS program offers. There are so many options that an ADAM owner has that it is very depressing to see them jump ship to an IBM or MAC and end up investing thousands of dollars in the systems and software when all that was needed was to make a phone call to one of the many users groups or write a letter to one of the many knowledgeable ADAM owners asking for advice on a certain subject or program needed.

Don't misunderstand me, there are many advantages to owning an IBM or MAC (especially when work related), but after seeing Terry Kayser's demonstration of the business applications he uses in TDOS to maintain all his business needs, I was simply exasperated and I have to thank Terry for being so kind to bring his hardware and software with him for the meeting. My own personal needs don't require many of the the advanced programs which are available for CP/M (as I am sure many others would agree), but if you do have the need, the hardware and software is available. All that one needs to do is make a phone call or write a letter and to get everything which is needed might cost anywhere from $10 up to $800 on the ADAM where as for an IBM or MAC computer anywhere from $1,000 to $3,000 might have to be invested and an entirely new computer will have to be learned before the programs can actually be used to a point where they are providing the features which you need. Think about it!

N.I.A.D. NEWS & UPDATES

⇨ **MICRO INNOVATIONS**, operated by Mark Gordon, has recently announced the availability of three new ADAM hardware products: 64K Memory Expander - $29.95; 256K Memory Expander - $69.95; and Parallel Printer Interface - $34.95. The Parallel Printer Interface is fully compatible with all previous Parallel Interfaces by EVE, OBS and E&T as well as being fully compatible with 9 or 24-pin printers and Laser printers. This is good news for those who own or plan to purchase a 24-pin dot matrix printer. The memory expanders are fully compatible with all software and hardware products, but in order to access all the memory on a 256K board a Parallel Printer Interface is required (this holds true for all other 256K or larger memory expanders previously available). Also, very near to being released are the 3 1/2" 1.44Mb ADAMnet Floppy Disk Drive ($369.95 - price subject to change) and PowerMATE LC/40 40Mb Hard Disk Drive ($399.95). The PM LC/40 includes an interface board which plugs into Slot #2 and provides the Hard Drive Interface, Parallel Interface, Addressor hookup as well as a Boot Prom so that software is not needed to boot the Hard Drive. Following the release of the PM LC/40 will be the ADAMnet LC/40 40Mb Hard Disk Drive that will simply plug into the ADAMnet connector and all existing software should be compatible with it.

⇨ **E&T Software**, operated by Ed Jenkins, has informed ADAM vendors that the problem with the MegaRAM is one that can't be overcome due to the inavailability of the old style of SIPP Memory Modules. The new SIPP Memory Modules seem to work at first, but over a period of time they start to lose portions of information which is stored on them. A redesign of the MegaRAM would prove to costly especially in light of the release of the Micro Innovations 256K Memory Expander which is available for only $69.95. All other E&T products will also be discontinued due to E&T's decision to forgo any further production of ADAM products which include: Parallel Interface, 64K Memory Expander and 160K / 320K Disk Drive Accelerator Eproms. However, these are all products which are now being produced by other companies.

⇨ **S.M. VIDEO**, operated by Shon McCallum, has released two new IBM type power supplies for use in powering the ADAM Computer versus using the ADAM Printer. The first is a 150 watt Olympics Power Supply (110V/220V, 50Hz-60Hz) with 2 year warranty for $85, the second is a 200 watt version with a super quiet fan and 5 year warranty for $125. These power supplies will provide enough power for any hardware attached to the ADAM. Also, you will no longer experience power drains or screen fading due to overloading your Coleco power supply. Another benefit will be less computer lockups, due to an excellent E.M.J. noise filter that gives cleaner power. Another new item for use with the Power Supplies is the AC Outlet Adapter, available for $5, which turns the Power Supply monitor outlet into a standard AC outlet which allows a monitor, etc. to be plugged directly into the Power Supply.

⇨ **G.C.A.U.G.**, the Gulf Coast ADAM Users Group operated by Joe Quinn, is back supporting the ADAM after a number of months in limbo when a new editor was to take over the responsibilities of publishing the newsletter and running the group. GCAUG can be reached at the following address: 6665 Timbers Dr. - Mobile, AL 36695.

⇨ **MAINE ADAM LIBRARY**, operated by Bob Sebelist, has announced the release of IBM Clip-Art for ADAM. These are volumes of Ibm clip-art pictures which have been brought over to the ADAM format in specialized RLE picture file formats which a number of programs including PowerPAINT can use. A viewer program is included on each volume and you are guaranteed to receive over 100 clip files on each and every volume. The first set/volume of 2 disks are only $10.00, each additional disk of clips is $2 plus $.60 shipping each. For every 10 disks

ordered, be it all at once or just a few at a time, you will receive the 11th disk absolutely free. To order contact: Maine ADAM Library - P.O. Box 85 - Waterford, ME 04088.

⇨ **AMERICAN SOFTWARE CO.**, operated by Herman Cherney, is a new mail-order vendor for the ADAM which is based out of Albany, New York. If you are interested in receiving further information on the products carried by A.S.C. write or call: 198 Sand Creek Rd. Suite #B - Albany, NY 12205-1817 - (800) 487-4211.

⇨ **ROADRUNNER PUBLICATIONS**, operated by Mel Ostler, has released two new Disassembly books for the ADAM. The first is by Mel Ostler and is an uncommented Disassembly of ADAM OS7 ($14.95), the second is by R. Havach and is an uncommented Disassembly of EOS7 ($24.95) as loaded into memory by SmartBASIC V2.0. Coming soon are the following in the "Learning to" series of Hackers Helpers book for the ADAM: Learning to MAKE GAMES with ADAM, Learning to MAKE MUSIC with ADAM, and Learning to TALK with ADAM. As soon as these become available we will have full reviews.

⇨ Some changes in product availability have taken place and the following products are no longer available: E&T MegaRAM, E&T MegaRAM SIPP, E&T Addressor Card, E&T 64K Memory Expander, Dragon's Lair by Coleco, Quickfax Quest and Strategy Strain by Data Doctor, and Card Set #1, 2, and 3 by Bryan's Software.

NEW ADAM HARDWARE

❏ ADAMLink of Utah's ADAM Home Automation Package...........$CALL
❏ Micro Innovations' 64K Memory Expander $29.95
❏ Micro innovations' 256K Memory Expander $69.95
❏ Micro innovations' Parallel Printer Interface...............................$34.95
❏ Micro Innovations' 3 1/2" 1.44 Mb Floppy Disk Drive ....$CALL
❏ Micro Innovations' PowerMATE LC/40 Mb Hard Disk Drive .. $399.95

NEW ADAM BOOK & MANUALS

❏ Uncommented Disassembly of OS7 by Roadrunner................$14.95
❏ Uncommented Disassembly of EOS7 by Roadrunner.............$24.95
❏ Basic Programming Tutorial by ADAM's House........................$14.95
❏ Software Review Manual by ADAM's House..............................$19.95
❏ The ADAM Survival Guide by ADAM News Network.................$19.95

NEW ADAM SOFTWARE

❏ Star Trek Pak for Phrase Craze (Disk / DDP) by ADAM Conn .$12.95
❏ SEQuel (Disk & DDP) by Bonafide Systems $26.95
❏ SmartBASIC V1.x (Disk / DDP) by Drushel Software................$29.95
❏ Bold Glory (Disk / DDP) by Eyezod Graphics $16.95
❏ Media Helper (Disk / DDP) by Hoosier Software $14.95
❏ Appointment Book (Disk / DDP) by Maine ADAM Library $24.95
❏ Norman's Railroad (Disk / DDP) by Norman's Software..........$14.95

SEPTEMBER N.I.A.D. SPECIALS
Valid September 27, 1991 - While Supplies Last

❏ E&T Parallel Printer Interface with Cable & Software (D/DP)....$34.95
❏ ADAMLink 300 Baud Modem with SmartTERM V1.02 (D/DP)..$49.95
❏ SpeedyWRITE V2.0 by White Co. (Disk / DDP).........................$29.95
❏ SpeedyWRITE Spell by White Co. (Disk / DDP)........................$19.95
❏ MisSpeller for SpellingAIDE by Walters Software (Disk / DDP) .$7.95
❏ Stratozap by Allied Creative Engineers (Disk / DDP) $7.95

AMSTRAD PC-1512 D.D.

FLOOR MODEL

SYSTEM PRICE: $299.95

✓ 100% IBM PC 'XT' COMPATIBLE
✓ 16-BIT 8086 MICRO-PROCESSOR
✓ 8 MHz OPERATING SPEED
✓ 512K RANDOM ACCESS MEMORY (RAM) EXPAMDABLE TO 640K
✓ 2 - 5 1/4" 360K FLOPPY DISK DRIVES
✓ 2 EXPOSED 5 1/4" HALF-HEIGHT DRIVE BAYS
✓ 3 8-BIT I.S.A. EXPANSION SLOTS
✓ MONOCHROME & CGA COMPATIBLE GRAPHICS ADAPTER
✓ CGA 13" COLOR MONITOR, 640x200 RESOLUTION & 16 COLORS
✓ TILT AND SWIVEL MONITOR STAND
✓ 1 PARALLEL PORT/1 SERIAL PORT/1 MOUSE PORT/1 VIDEO PORT
✓ QUARTZ REAL-TIME CLOCK WITH BATTERY BACK-UP
✓ 84 KEY 'XT' STYLE ADJUSTABLE ANGLE KEYBOARD
✓ JOYSTICK PORT BUILT INTO KEYBOARD
✓ MICROSOFT COMPATIBLE 2-BUTTON MOUSE
✓ PC-SPEAKER WITH VOLUME CONTROL
✓ MICROSOFT MS-DOS V3.2
✓ DIGITAL RESEARCH'S DOS PLUS OPERATING SYSTEMS
✓ LOCOMOTIVE SOFTWARE'S GEM BASIC2
✓ DIGITAL RESEARCH'S GEM DESKTOP & GEM PAINT
✓ MIGENT'S ABILITY PLUS INTEGRATED SOFTWARE
✓ WHITE CO'S THE ADAM CONNECTION
✓ PLUS CALCULATOR, CLOCK, SNAPSHOT, PRINT SPOOLER AND
  MANY MORE EASY TO USE UTILITIES

AMSTRAD PC-1640 D.D.

FLOOR MODEL

SYSTEM PRICE: $399.95

✓ 100% IBM PC 'XT' COMPATIBLE
✓ 16-BIT 8086 MICRO-PROCESSOR
✓ 8 MHz OPERATING SPEED
✓ 640K RANDOM ACCESS MEMORY (RAM)
✓ 2 - 5 1/4" 360K FLOPPY DISK DRIVES
✓ 2 EXPOSED 5 1/4" HALF-HEIGHT DRIVE BAYS
✓ 4 8-BIT I.S.A. EXPANSION SLOTS
✓ MONO., CGA AND EGA COMPATIBLE GRAPHICS ADAPTER
✓ EGA 13" COLOR MONITOR, 650x352 RESOLUTION & 64 COLORS
✓ TILT AND SWIVEL MONITOR STAND
✓ 1 PARALLEL PORT/1 SERIAL PORT/1 MOUSE PORT/1 VIDEO PORT
✓ QUARTZ REAL-TIME CLOCK WITH BATTERY BACK-UP
✓ 84 KEY 'XT' STYLE ADJUSTABLE ANGLE KEYBOARD
✓ JOYSTICK PORT BUILT INTO KEYBOARD
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✓ MIGENT'S ABILITY PLUS INTEGRATED SOFTWARE
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  MANY MORE EASY TO USE UTILITIES

AMSTRAD PPC-640

FLOOR MODEL

SYSTEM PRICE: $349.95

✓ 100% IBM PC 'XT' COMPATIBLE PORTABLE
✓ 16-BIT 8086 MICRO-PROCESSOR
✓ 8 MHz OPERATING SPEED
✓ 640K RANDOM ACCESS MEMORY (RAM)
✓ 8087 MATH CO-PROCESSOR SOCKET
✓ 1 - 3 1/2" 720K FLOPPY DISK DRIVE
✓ 2 3 1/2" DRIVE BAYS (1 AVAILABLE)
✓ SUPERTWIST LCD DISPLAY WITH 640x200 RESOLUTION
✓ LCD SUPPORTS ALL CGA & MDA GRAPHICS AND TEXT MODES
✓ LCD CONTRAST CONTROL FOR DIFFERENT LIGHTING
✓ MONOCHROME AND CGA COMPATIBLE GRAPHICS ADAPTER
✓ 1 PARALLEL PORT / 1 SERIAL PORT / 1 VIDEO PORT
✓ HAYES COMPATIBLE 2400 BAUD MODEM BUILT-IN
✓ 2 EXPANSION SLOT PIN CONNECTORS
✓ BATTERY BACKED REAL-TIME CLOCK WITH SCRATCHPAD RAM
✓ ENHANCED 101 KEY 'AT' STYLE KEYBOARD
✓ PC-SPEAKER WITH VOLUME CONTROL
✓ COMPARTMENT FOR 10 ALKALINE "C" CELLS - 8 HOURS USAGE
✓ AC AND DC POWER ADAPTERS
✓ MICROSOFT MS-DOS V3.3 OPERATING SYSTEM
✓ PPC ORGANIZER SOFTWARE
✓ SIZE: L - 17 3/4"; D - 9"; H - 4"; W - 11lbs.

AMSTRAD PC-2086 D.D.

FLOOR MODEL

SYSTEM PRICE: $499.95

✓ 100% IBM PC 'XT' COMPATIBLE
✓ 16-BIT 8086 MICRO-PROCESSOR
✓ 8 MHz OPERATING SPEED
✓ 16-BIT FULL WIDTH MAIN MEMORY
✓ 640K OF PARITY CHECKED RANDOM ACCESS MEMORY (RAM)
✓ 8087 MATH CO-PROCESSOR SOCKET ON-BOARD
✓ 4 - 8-BIT I.S.A. EXPANSION SLOTS
✓ ASYNCHRONOUS BUS OPERATION
✓ 2 - 3 1/2" 720K FLOPPY DISK DRIVE
✓ 2 EXPOSED DRIVE BAYS, 1 HIDDEN
✓ EXTERNAL 5 1/4" OR 3 1/2" F.D.D. / TAPE STREAMER CONNECTOR
✓ VGA GRAPHICS ADAPTER USING PARADISE CHIP-SET WHICH IS
  HERCULES, CGA AND EGA COMPATIBLE
✓ MAXIMUM DISPLAY RESOLUTION OF 800x600 WITH 16 COLORS
✓ VGA 14" PC-14HR VGA COLOR MONITOR (640x480 OR 320x200)
✓ 1 PARALLEL PORT/1 SERIAL PORT/1 MOUSE PORT/1 VIDEO PORT
✓ BATTERY BACKED REAL-TIME CLOCK WITH CONFIGURATION RAM
✓ MICROSOFT COMPATIBLE 2-BUTTON MOUSE
✓ ENHANCED 101 KEY 'AT' STYLE ADJUSTABLE ANGLE KEYBOARD
✓ SECURITY LOCK FOR KEYBOARD
✓ PC-SPEAKER WITH VOLUME CONTROL
✓ NOVELL NETWORK COMPATIBLE
✓ MICROSOFT MS-DOS V3.3 OPERATING SYSTEM & GW-BASIC
✓ MICROSOFT WINDOWS V2.03 & WINDOWS WRITE

SO FAR

Part I of VI: An Essay on ADD-ONS for the Coleco ADAM Computer

by Ron Collins of the Akron A.U.G.

INTRODUCTION

When asked to do an article on available hardware for the ADAM, recently, I began to consider the history of our favorite little computer. It was obvious, from my point of view, that the peripheral we NOW have will in no way dictate our future hardware resources! Since we have FAR more available to us now than even Coleco's engineers would have guessed possible in 1983, I've, in all fairness to the many talented designers and programmers in the ADAM community, titled this little essay "SO FAR". There was so much more to write about than I had earlier considered that I decided to present the article in parts.

At our local public library, I ran across a book entitled "THE PERSONAL COMPUTER BOOK" by Peter A. McWilliams. This book, revised in October of 1984 has an interesting view of our ADAM with respect to the other computers of the day. If you've missed this title at your public library, pick it up and give it a look see.... you'll get a chuckle at times and you might, yes... just might, learn something new!

Pete's book gives us an early specification run-down on the ADAM....

PRICE: $749
MAIN OPERATING SYSTEM: CP/M
WEIGHT: 39 lbs.
PROCESSOR: 8-bit Z80A
CAPACITY OF FORMATTED DISKS: 256K
SCREEN SIZE: Connects to a TV - 68 chars. x 36 lines
DISK DRIVE TYPE: Cassette
SCREEN COLOR: Color
STANDARD MEMORY: 80K
SOFTWARE INCLUDED: SmartWRITER, SmartBASIC and Super Buck Rodgers' Planet of Zoom
KEYBOARD: Detachable: Yes; Number of Keys: 75; Number of Function Keys: 15
OTHER: A 2 characters-per-second letter-quality printer is included

I'll leave to you the task of comparing this little table of information to what you already know about the ADAM and take the rest of "THE PERSONAL COMPUTER BOOK's" comments with a grain of salt. The book comments on CONSUMER REPORTS's problems with the ADAM's that they purchased for testing and the various production problems with quality, etc. experienced by Coleco, concluding "if this continues, I can't see the ADAM being around much longer." In all fairness, Mr. McWilliams stated that the unit he used worked just fine and that "the ADAM may not be able to expand enough to meet (our) needs. But that's tomorrow. Today, this is a good buy." He also made this amusing comment.....

"In the beginning, Coleco made video games, with superior graphics and an adapter to run Atari games, and Coleco saw what it had done, and it was good.
    And then Coleco said, "Let us make a home computer system in our own image, and let it run Coleco games as well as contain all the features that will compete with Commodore and Atari." And then Coleco saw what it had done, and called it ADAM."

And so here is.....

PART ONE
In The Beginning

At the onset, the management at Coleco had given a great deal of thought on just "what the public wants" with regard to a home computer. The high priced systems of the day were next to useless without the additional expense of high priced hardware add-ons. The Commodore 64 and the Atari 400xl come to mind as the predominant systems of the day. The price of such systems was by no means "easily affordable" to the general consumer market. Still, as Americans diligently did their dead level best to "keep up with the Jone's", everyone wanted, no, make that.... DEMANDED!.. "HAD TO HAVE!" an economical and USEFUL home computer system! The lure of the basic, simple keyboard was GONE!

To the rescue came Coleco Electronics! Sales of their commercially successful Colecovision Home Video Arcade System had placed them in the forefront of the home electronics market place. Just ask any kid of the time "who has the best graphics and games available today?" and you'd always hear "Coleco!". To take advantage of this excellent reputation and still enter an emerging commercial market (home computers) with a viable entry would be an asset to this still growing company. From this world of high competition and dollar signs, the ADAM was born!

The first stage in the ADAM's unusual development was to create an add-on expansion unit for the very well represented and successfully distributed Colecovision unit. If we pause to consider just how many hundreds of thousands of these game units were actually sold and how many of their proud owners might be willing to convert them into a relatively inexpensive home or small business computer system, well, we get an idea of what went through the minds of Coleco's upper management. If even half of them were to spring for the computer expansion accessory, sales could easily surpass those of Commodore and Atari combined!

Colecovision designers has wisely provided for the future expansion of their system by incorporating various expansion bus connectors into the overall system design (an idea adopted by SEGA for it's GENESIS line of 16-bit game machines). The ADAM was given not one but FOUR connector locations to provide for future new products. Under the cover of the CPU, engineers placed the first three slots. The fourth expansion slot is located on the right side of the CPU and accepts a 60 pin connector (used by the AutoDIALER device). This is the one most people refer to as the EXPANSION BUS.

The first such expansion unit was the ill-fated Coleco Expansion Module #1, an Atari 2600 game unit emulator. A nice little bit of thumbing their noses at Atari, here, that ended in a legal action and this units' subsequent removal from the market. The Module #1 plugged into the expansion bus with a specially constructed CARD EDGE CONNECTOR. The beauty of this new module was that the owner could play the hundreds of Atari video game cartridges already available as well as play the new Colecovision cartridges!

Next came the second entry from Coleco, Expansion Module #2. This was an interesting driving module for playing the car race games then popular at local game arcades. Unlike the cheap little spinner type hand controls released by Atari, this unit came with a steering wheel and even an accelerator pedal! The games released with it and for it are still rated as some of the best ever produced! The only real limit to the unit was it's need to be filled with C-cell batteries in order to operate. I had to finally install a plug in power supply to stop the never ending demand for "new batteries". These first two expansion units were unique and innovative, but the 3rd in line would outdo them ALL!

Expansion Module #3 was FAR ahead of it's time. This unit came with an expertly designed plate of matching plastic that not only joined the expansion module's CPU (central processing unit) with the Colecovision, but would also KEEP them joined! Thanks to this plate, the two units would simply "snap" together! A few minutes to set it all up and your existing Colecovision would become the greatest computer system of all time!

A great short coming of the competition's best units were their lack of capabilities! You could easily spend HOURS typing in all manner of complex computations using Commodore or Atari's built in BASIC interpreter programs only to LOOSE it all as soon as you turned off the power! Totally USELESS for practical home use! You could, of course, spend an additional sum to

KEEP YOUR ADAM RUNNING
PART I of VI
by John Burns

The following is the first of a six-part series of articles provided by Richard Clee, President of the Metro Toronto ADAM Group (MTAG), to the ADAM NEWS NETWORK. Mr. Burns articles will be reproduced in their original entirety. This should not be taken as editorial endorsement of everything that is stated or implied. I suggest readers view the articles as Mr. Burns informed opinions.

THE ORPHAN SYSTEM: The Coleco ADAM is an orphan but as an orphan, it's a friendly little cuss. It's really a shame that Coleco marketed the thing so ineptly because it could have been a great machine. I've had mine now since January 1984 and while I swear at it and, occasionally, I'm positive there's a microscopic gremlin living inside it, I still have a lot of affection for the machine. I started with the standard, single tape drive and printer but because I do a lot of word processing, I've made some additions. I still don't consider myself a true computer person because I don't program very successfully, but, I am a heavy user of hardware and application programs and I've learned some tricks that may help you keep yours running. Somebody once said, "By the time you understand your computer system, it's obsolete." He was right but you wouldn't be reading this unless you had an ADAM and maybe you're not aware of the changes that can economically modernize it.

EQUIPMENT: I've done some beefing up over the years. I've added: 1. Disk Drive; 2. ADAMlink Modem; 3. Printer Single Sheet Paper Feeder (Homemade); 4. Fan Fold Feed Guide (Homemade); 5. Printer Stand; 6. Cooling Fans; 7. Monitor Swivel; 8. Dot Matrix Printer; 9. 64K Additional Memory; and 10. EPROM Chip to the Disk Drive

THE ECONOMY SYSTEM: When I added my costs up the other day, I discovered that I had almost $1,500 invested in hardware and, perhaps, another $100 in software. When you look at it like that, it looks like a lot of money. However, if you take into account it's money making possibilities, it means I have put an average of about $320 a year into a productivity system that still has an asset value and has directly contributed an extra $2-5000 per year to my income. Sometimes the money making was as simple as just making it easy and convenient to get business ideas organized on paper. Aside from that, it has allowed a man born prior to World War II to get into the computer age and able to understand what the younger generation are talking about. In my books, it has been money well spent on a very economical education.

DISK DRIVE: Without a doubt, the disk drive is the greatest single addition anyone can make to the ADAM. I got mine as an end-of-line piece for $100 CDN, but it didn't have a manual, power supply or the Disk Manager Program. For $30 I was able to substitute an Atari power supply, (Part No. C017945-120V, 60 Hz, 50W Input, 9VAC, 31VA Output) and for $20 I was able to commercially buy the Disk Manager disk to operate it. I never did get a manual but friends told me the secret of using the D5 command to get the drive to Catalog (e.g. D1=Tape, D5=Disk Drive). You can still get disk drives from the States for about $200 US (about $240 CDN, no duties to import). It's well worth it and they won't last forever. Get it now!.

DISK SPEED: The Disk Drive will load a Word Processing document in 17 to 20 seconds compared to 70 to 100 seconds with the tape drive. If you do a lot of word processing like I do, save your pennies, beg, borrow or steal a disk drive. You'll never regret it.

DETRIMENTS: Disks store only 160 Kilobytes versus 256 for a tape. After formatting you have 158 on disk and 253 on tape. You will run into reading errors if you try to copy whole, fully loaded tapes onto disks. The Directory titles will all be there on the disk but many of the documents will be squeezed and only partially recorded or will show error message "Cannot Read This File" when you try to reenter the

disk. The answer is to transfer files individually using the Disk Manager disk to copy from tape to disk. Load only 2/3 of a tape onto a disk. Keep a running tally of the disk capacity by using Disk Manager to tell you the "Blocks Free" amount left on the disk.

COPYING: You can use the copying feature of Disk Manager for normal, individual files but it won't copy whole tapes or LOCKED programs ("THIS FILE CANNOT BE EDITED"). You should get a copy program. If you get the program PRO-COPY or similar, (about $20), you can copy your SmartBASIC tape or most LOCKED programs directly on to a disk. The only problem is that your datapack version of SmartBASIC V 1.0 will not "run" from disk unless modified, and it will "INIT" or initialize your disks by showing you have 253K of available space when you really only have 158K of useable space. That means that you have to deduct 95K from the amount shown when you CATALOG a disk. I understand that SmartBASIC V2.0 solves this problem.

ADAM Single Sided Disk Drives are very reliable but are persnickety on the disks they like. One brand my drive hates is Goldstar M-2D. They have too much ridge on the disk casing and do not eject well. There are a lot of cheap, Discount-No-Name disks available. They're OK for some things but they are NOT LONG TERM RELIABLE. They seem to wear and skid inside the drive. You'll format them, checking for bad sectors, and find them OK at the beginning but after a little usage, if you format them again to really clean them off, you'll hear a sort of grinding noise coming from your disk drive. That's the circular disk gripper trying to make the disk go round at normal speed but it's not gripping the disk properly. After that you'll usually find you are getting "BAD SECTOR" messages. Better to buy good, guaranteed disks, especially if you can't afford to lose any work.

NIBBLERS: Good disks aren't cheap but you can bring down the cost and double the useable space by buying a "Nibbler". That's a cutter like a paper punch that cuts a second square slot on the other edge of the disk and allows you to insert both sides of a normal double sided disk. Cost is about $8.00 but you suddenly get 20 useable disk sides to a package instead of 10. That brings the cost of good double sided disks down to the same level as the cheapies.

DAISY WHEEL PRINTER: I run a lot of printing. The so-called "Dinky Little Clacker" has done yeoman service. In the five years I have had my unit, I have probably printed out something like 2,500 pages a year (I do some documents that run 100 pages). A number of problems have become apparent but I have found solutions to cooling, paper feed and ribbon problems.

PRINTER STAND: Get a wire printer stand ($13 at Steals Ltd, Steele's Ave West at Hwy 400). They make life easier. They angle up the printer to keep it cooler, making it easier to switch on and off, easier to read and more compact because the paper box can go under the printer.

THE DEADLY PRINTER BUZZER: After you have done about 2,000 pages or so, your daisy wheel printer will develop some wear problems. Sometimes you will hear a Buzzing noise, the platen will jam, the print head halts and printing stops. You could have either a small problem or a large one.

SITUATION 1: THE JAMMED PLATEN ADVANCE COG: You will hear about three seconds of buzzing and the print head will stop, usually at the right end of line. It will not print even if you re-enter the print commands. It usually happens when you are printing single sheet and have rolled in a new sheet. The first immediate fix is to dump and reboot your program. Sometimes you will get the printer "clack" that

indicates it has jumped the normal first line. If it works, you are back in business. If it still buzzes, you have problems.

SOLUTION: Roll the manual platen wheel up and down to break it free, realign the paper, reboot and reprint. You can prevent it from jamming if you know how. If you can move fast enough, before the buzzing stops, just give the platen wheel a bunt, rolling it one notch up, and the printing will continue. Cause is a jam in the spring-loaded ratchet inside the manual platen roller wheel. If jamming continues regularly, remove the printer's upper casing, gently remove the roller wheel by pulling outward while wiggling the wheel, and slightly stretch the coil tension spring that activates the ratchet pawl. If that doesn't work, remove it completely. It will still print without the spring but you have to be ready to bunt the wheel up a line when printing single sheets. It will still work for fan-fold but sometimes it will jump a line.

SITUATION 2: BROKEN MICRO SWITCH: If your platen roller runs freely with no ratchet noise, you have just broken the micro switch controlling automatic line feed advance. You are screwed. This is a metal strip sticking up from a black plastic box under the right side manual roller wheel. To diagnose, first see if the platen wheel runs freely with no ratchet sound. If it does, then shake the printer casing. If you hear a piece of metal strip bouncing around inside the printer, you have had it!. To confirm, remove the printer upper casing by inverting the printer and removing the seven Phillips head perimeter screws (just the outer perimeter screws, not the four inner ones set in the metal strips). Look under the manual advance wheel. You should see a copper colored, metal strip sticking out of the black box. If it's not there, it will be laying somewhere around in the printer casing. THERE IS NO EASY HOME FIX. I am told the part costs only about $2.50 but total labour and repair will cost you about $70 to fix. Proper Coleco Micro Switches (Coleco Part No. 41296) are hard to come by. A good repair man can substitute another switch but the model and make is unknown to me at this time. I've had two breakages replaced at National Electric Co. in Scarborough, ONT, but frankly, they didn't do a very good job. Even after replacement, the cog kept jamming. Better to see if you can buy a whole printer out of the States or go for a substitute good quality dot-matrix printer at about $200.00. It will give a lot higher printing speed and cut down the impact noise. It's a lot of money but you can always use the new printer to another computer if you outgrow ADAM.

DAISY WHEELS:
Teeth break with regularity, at the most inopportune times. I like to replace mine with COURIER 10 rather than the original PICA 10. I think the COURIER gives better, more readable print. Daisy wheels are available as Coleco wheels or as DIABLO compatible 10 pitch (Grand & Toy, Steals or some Canadian Tire Stores have them priced between $3.50 and $7.50). Don't buy the one with the wordage "COURIER 10 WP". It is set up for other word processors and some minor symbols are different.

SINGLE SHEET PAPER FEED:
We all know the ADAM has trouble straight feeding single sheet paper. It usually pulls harder on the right side, giving print sloping low right. You can make a guide that will prevent it and keep the paper square. All you need is a wooden 12 inch ruler and some good glue.

(1.) Take out the two plastic hooks located on the printer housing above and on each side of the platen. They are just dummy plugs to block where the automatic tractor form feed device was originally to go.
(2.) Glue these hooks across the wooden ruler to form a paper chute. It drops in just above the platen.
(3.) To make, insert paper in the correct location, slip the ruler behind the paper, mark the paper width (not too tight, give a little clearance so paper runs freely).
(4.) Glue the plastic hooks across the ruler, vertically, about 1 1/2 inch from each end with the fat end of plug lined up with the back of the ruler, small hooks facing and just touching the platen.
(5.) Drop in for single feed, remove for fan fold.

FAN FOLD PAPER FEED:
To keep fan fold paper feeding properly, you can make a second chute. You need a piece of wood or plastic the same size as the printer cover plate (I used my printer cover plate - I have to clean more often, but it keeps the printer cooler anyway).

(1.) Glue the plate to the top rear of your printer housing with scalloped edge facing rear so it overhangs the housing.
(2.) Insert fan fold paper. Align exactly and mark width on plate.
(3.) Glue two vertically mounted small pieces of plastic or wood as guide posts (give some clearance because not all fan fold paper is cut exactly the same width beyond the tractor perforations). I used two pieces of plastic, about 1 inch high and 1 1/2 inches long.
(4.) When the two guide pieces are mounted on the plate, glue a piece of coat hanger across the top of the two vertical pieces.
(5.) Now the fan fold paper will come up from the back, over the guide plate, between the two vertical posts and down to the platen in the normal manner. The bar keeps the two vertical posts from being knocked loose and provides a friction free way for the printed paper to go back over the bar and down. It really works well.

FAN FOLD LINE FEEDING:
The ADAM can't count blank lines properly and automatically feeds 1 1/2 lines any time there is a blank line, even if you set it to single spacing. That's why you come to a page end in feeding fan fold. That's why you never seem to be able to get fan fold lined up properly after more than four pages. The feed just pulls up too much paper. For 1 1/2 line spacings try vertical margins set at 6 and 63 lines. For single line feed, try vertical margins at 3 and 63. Set paper start even with the top of the clear plastic daisy wheel guard. Don't try to set longer than bottom 63, or it will automatically go into 14 inch paper mode and then your fan fold will be all out of whack. If those settings fail, try the trick of using < CONTROL 6 > (press the "CONTROL" key and "6" at the same time) followed by a SPACE and RETURN. This puts an invisible command on the empty line and now ADAM will only jump one line instead of one and a half. Sometimes your printer will go crazy and give you a lot of typed garbage on the supposedly empty line.

PAPER WEIGHT:
Fan fold paper that is too heavy, resulting in creases that are too strong, will prevent proper fan fold feeding. The symptom is over printed lines of type indicating that the platen feed friction isn't strong enough. Use paper of 12, 15, or max 20 pounds weight (measured by how much 2500 sheets weigh). Some brands of 20 pound paper will jam in the platen roller, others feed well. I am told that if you take a couple of strong fat elastic bands and secure them to the chrome bar with the rollers, loop them around each end of the printer cover and lock it into place, they will provide increased friction by holding the roller bar down tighter. Try it. It doesn't cost anything.

COOLING:
The biggest killer of printers, tapes and drives of any kind, is heat. To cool them, I use a couple of cheap room air filter blowers that I picked up at a yard sale for $7.00. They make a big difference on reliability, especially on the tape drive. When tapes, or even disks, get hot, they don't read properly.

PLATEN WEAR:
The platen on the original ADAM printer will wear, get pounded down and result in lack of paper feed friction.

I have a platen that actually has a crack in the rubber platen covering. To reduce or actually prevent it, back off the printer pin head by slacking off the two metal screws (one on each side) and adjusting the third rear plastic screw so the pin has minimum impact on the daisy wheel. Keep it in just far enough to give good print quality. Adjusting it INWARD on the rear elliptical adjustment screw on the print head base will not improve print quality. It will rapidly wear out ribbons and make too much noise. Faint print means you need to rewind or replace the ribbon.

RIBBON TRICKS:
If your ribbon drags, stops, breaks or prints faint, it's time to rewind. Here's how:

(1.) Take the cartridge out of the machine.
(2.) Remove the rubber drive elastic.

(3.) CAREFULLY, using a flat, wide knife blade, and starting at the 3 o'clock and 9 o'clock positions, pry the cartridge cover up. It has several thin securing pins which break easily so be careful.

(4.) From the cartridge remove the white plastic splined drive post on the left side.

(5.) Use a ball point pen tip to rewind the ribbon onto the supply reel without removing the reels from the cartridge. INSERT the pen tip into the edge of the large, right, empty reel, and rewind COUNTERCLOCKWISE using SLOW, STEADY pressure.

(6.) Watch the take-up feed tension spring (metal). It must fit into the groove on the bottom of the feed reel and then into the slot on the side of the cartridge case. It must have some drag but will have too much if you don't rewind the ribbon evenly. If your ribbon flops around when impacted by the printer daisy wheel, it needs more drag. To increase drag, pinch wire loop smaller.

(7.) When the ribbon is rewound back to the feed reel, you still have to reinsert the white plastic drive spline. It pinches the ribbon between itself and the white plastic tension trigger and hauls the ribbon off the feed reel. Reinsert the drive post but make sure you slightly LIFT the tension trigger with a knife point. This allows the drive post to slip into it's hole in the lower cartridge case, and under the tension trigger.

(8.) Replace the cartridge cover, add the drive belt. If the drive belt tends to slip, clean it with alcohol before re-installing.

(9.) Ribbons can usually be rewound three to five times.

CASSETTE DOOR AND "NO ACCESS":
If you have datapacks that seemed to work perfectly previously but now you can't seem to get even the directory up, chances are the spring plates on the inside of the cassette door are either broken off the pins or are not secure enough to line up. If spring pressure is not even on each end of the datapack, it won't respond. To solve:

(1.) Remove CPU cover plate.
(2.) Unscrew the 3 screws holding down the drive.
(3.) Wiggle drive forward to release bottom hooks.
(4.) DO NOT DISCONNECT wires unless you really know your stuff.
(5.) Lift out the tape drive, just at an angle so you can access the bottom to get to one screw on the black hinge pin mount.
(6.) Unscrew one screw to release the hinge pin mount.
(7.) Slide door off hinges.
(8.) If spring (usually left side) is not on securely and evenly, one or both of the extruded plastic pins has either broken or the melted and flattened head has broken off. Glue springs back into place with curled ends at the top, using studs as line-up points, with styrene glue. If the entire pin has broken away and you can't use styrene to mold a new head, then use a good quality epoxy, (NOT 5 MINUTE TYPE) and remount the spring in a blob of epoxy. Do not use Krazy Glue. It does not have enough shear strength.
(9.) When glue has set AND CURED, you have to remount the door on the hinge pin mount. The lower flat end of the spring must be compressed so it fits between the door and the black hinge pin mount (glue that appears to be dry but is really uncured will pop loose when you try to compress the spring). Hold them down and together while you run the screw back into the body of the tape drive.

Make sure that the screws are in solidly. If not, they will back out, you won't get even pressure on each end of the datapack via the flat springs and you will get an Error Message "Cannot Read This File".

More in the next article on how to make cheap replacement ribbons.

Good ADAMing for this time.

Editor's Note. As I said at the beginning of this article, readers should treat the contents as the informed opinions of one ADAM owner. Read the series in that light and, if you are interested in following Mr. Burns advice, particularly where modifications are concerned, I suggest you discuss the subject with other ADAM owners, before proceeding. There may or may not be a better way of doing whatever it is you wish to do. Just don't be in a hurry to decide what is best without consultation from an experienced ADAM owner.

(SO FAR - Continued) purchase a specially adapted drive for either computer. To any who have used such an undependable system of data storage with any success go my congratulations for determination!

Keeping track of starting and stopping locations on a cassette tape recorder was at best questionable. Knowing of it's many problems, Coleco engineers elected to do things better and in so doing, give their customers something useful. The state of the art in magnetic media and data storage was the disk drive. These units possessed a high speed read/write mechanism and a facility of creating magnetic "markers" on the disk to keep track of the start and stop locations of your programs. In addition, the software to utilize these new disks also provided the user with a "catalog" of the disk's contents. The only problem was the COST of this new capability. If Coleco were to include a disk drive with their new computer, the cost would be so high that it would be cost prohibitive, and THAT would defeat Coleco's purpose of putting a Coleco computer in every home!

Coleco's compromise was to build the latest features into a DIGITAL storage medium. Cassette tape is an analog storage medium, but by using a digital recording mechanism along with the best features of the new disk drives, Coleco engineers created the DIGITAL DATA DRIVE! Holding a whopping 256K of data and keeping track of all of your various programs in an easy to read "catalog", these new drives would prove to be more advanced than the manufacturing facilities of the time could properly construct. Until months of bug tracking and redesign, these data drives would cause a barrage of bad rumors from other computer manufacturers. Despite all of the inherent problems of storage to a thin piece of stretching plastic (always stretching in the middle of an important program) Coleco had still managed to do what the others had not.... given buyers something less to HAVE to purchase.... a mass storage device!

Coleco also provided buyers with their own LETTER QUALITY PRINTER known as SmartWRITER. Containing the power supply for the whole computer system, this printer would provide ADAM owners with the ability to get TRUE letter quality printing at a small fraction of what another system would cost. Owners could even change the style of printing by simply plugging in a new daisy print wheel. The competition provided it's buyers with an expensive add-on option... a rather low quality printer of high cost. To utilize SmartWRITER, Coleco had given it's computer a word processing system and electronic typewriter! These were expensive software ADD-ons for the other computers of the time! This was an easily marketed selling point. "Why buy an electric typewriter when you can get a complete computer system for about the same price?"

Coleco then provided it's own special implementation of the BASIC programming language. This language, (fast becoming the most popular for home programmers and for small businesses alike) called SmartBASIC, was provided on one of these new digital data packs. In an effort to further consolidate it's proposed market, Coleco also provided expanded versions of some of it's more popular cartridge games on data pack. Called SUPERGAMES, these data packs, it was hoped, would make the ADAM a "must have" by all dedicated Colecovision game owners.

Competition between rival computer companies was fast and furious in the early years of the 1980's. Coleco was being hard hit with production difficulties and bad publicity from the Atari and Commodore camps. As problems with those new digital data drives and the print head mechanism were being overcome, Coleco engineers decided to resolve the next major stumbling block to wide-spread sales.... the Colecovision. It was obvious that by selling the system as an add-on for a toy they could reach a typical toy market.... but what about the family seriously in search of... not a toy, but a COMPUTER? To reach these new buyers and therefore sell MORE systems, Coleco developed a stand alone version of it's CPU. This one did NOT have to rely on a game machine's presence in order to work, since the Colecovision was built in and because of this the new CPU retained the fine and often used ability to play Colecovision cartridge games.

EXPLORING SmartBASIC
Part I
by Guy Cousineau

LOOPING

Looping is a method of repeating a group of instructions several times; it helps reduce the number of program lines required for a task. Following are all valid ways to start a loop:

```
FOR x = 1 TO 10
FOR x = a TO a + b
FOR x = 10 TO 5 STEP -1
FOR x = x TO 100
```

Note in the last example that the loop assigns it's "start value" in the variable which is used as the loop counter; that's OK and really no different than " x=x+1 ". Consider the following program:

```
10 FOR x = 1 TO 10
20 PRINT x
30 NEXT x
```

As you would suspect, the program would print the numbers 1 through 10 and then stop. X is used as a counter by the BASIC program and the NEXT X instruction returns control to line 10 until such time as X is greater than 10. But what is I want to print even numbers from 10 to 20?

```
10 FOR x = 10 TO 20 STEP 2
20 PRINT x
30 NEXT x
```

Note the new STEP instruction in line 10. It tells the program to increase the value of X by 2 on each pass.

The STEP instruction can be any positive or negative real number: -3.2, +3.66, .001, are all valid values, you can even use a variable!

Note that the STEP instruction is optional and a value of +1 is assumed if no STEP is given on the FOR line.

Say you want to print multiplication table for values from 0 to 5. Here you need 2 loops, a loop nested inside the other loop:

```
10 FOR x = 0 TO 5
20 FOR y = 0 TO 5
30 PRINT x * y
40 NEXT y
50 NEXT x
```

Note the large loop which extends from line 10 to line 50, and the smalled NESTED loop from line 20 to line 40. The second loop will run for values of Y from 0 to 5 and then fall through to the X loop which will ask to repeat the Y loop one more time.

It is not generally necessary to specify the variable name when giving a NEXT command. BASIC keeps track of the CURRENT loop and will execute it automatically.

Furthermore, NEXT instructions will actually run FASTER if no variable is supplied. The multiplication table routine could therefore be written

as:

```
10 FOR x = 0 TO 5
20 FOR y = 0 TO 5
30 PRINT x * y
40 NEXT
50 NEXT
```

If you have several nested loops, giving "umpteen", and that is a whole bunch, NEXT instructions may get tedious and take up valuable program space. There is another alternative: put your NEXT instructions in one command:

```
10 FOR x = 0 TO 5
20 FOR y = 0 TO 5
30 PRINT x * y
40 NEXT y, x
```

This program will run just as the others, albeit a trifle slower because the Y and X are specified.

The instructions on line 40 means DO A NEXT Y UNTIL THERE ARE NO MORE, THEN DO A NEXT X. Note that if the variables are specified, it is very important to specify them in the correct order.

What if you want to break out of a loop? Let's go back to the table above. Say I want to print my multiplication table just for results that are smaller than 10....

```
10 FOR x = 0 TO 5
20 FOR y = 0 TO 5
25 IF x * y > 9 GOTO 50
30 PRINT x * y
40 NEXT y
50 NEXT x
```

Note the new line 25 which branches the program to the NEXT X instruction.

You don't have to worry about leaving the NEXT Y loop open since SmartBASIC and most other BASICs will automatically terminate the 'y' loop when it encounters the NEXT X instruction which is higher in the shell.

Note that when using this technique you must always specify the variable name in NEXT statements.

Use this approach only with extreme caution; it is very easy to get all tangled up.

Furthermore, if you jump completely out of the outside loop without closing it, it will remain on the stack and may eventually overflow.

Next time out, BRANCHING.

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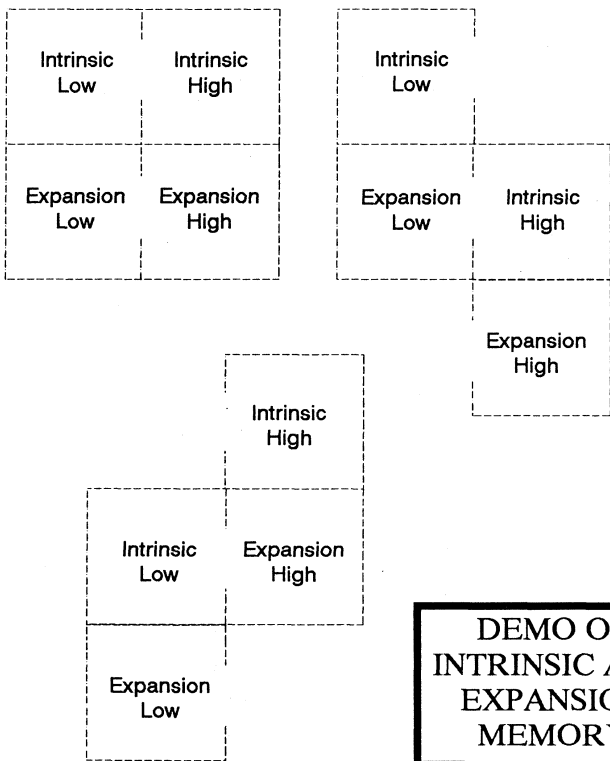Ottawa, Ontario, Canada K2P 2K4

ACCESSING THE LOWER-HALF OF THE 64K MEMORY EXPANDER
by Bruce Walters

This is my first attempt at technical writing, so please have patients with me. The subject of my article will be, accessing the lower half of the 64k memory expander. First, for those of you that don't know what the memory is in the Adam computer, an example is in order.

Think of the memory in the Adam as two rooms with one door in each room. The doors face each other, much like the doors in an elevator. Most of the time, when using the computer, you don't even know that the doors are there. Half of the 64k of memory, for the Adam, is kept in each of these rooms. Think of 32768 pigeon holes, with 8 little lights in each. Each of these little lights, might be on or off, in any of 256 different combinations. These little lights can be a symbol, standing for anything you want them to be. You might need them to be numbers, letters of the alphabet, chess pieces, or a part of the pattern on the monitor screen. They can be anything you decide. Your imagination is the only limit.

These rooms, if you use them like an elevator, can be moved from one bank to another, but only a high bank to another low bank. or a low bank to another high bank. Picture the intrinsic memory and an expansion memory like this.

```
 -----------------------          -----------------
|          |          |          |                 |
| Intrinsic | Intrinsic |          | Intrinsic       |
|   Low    |   High   |          |   Low           |
|          |          |          |                 |
 -----------------------          |                 |
|          |          |          |-----------------|
| Expansion | Expansion |          | Expansion | Intrinsic |
|   Low    |   High   |          |   Low    |   High    |
|          |          |          |          |           |
 -----------------------          |-----------|          |
                                            |                 |
                                            | Expansion       |
                                            |   High          |
                                             -----------------

        -------------
       |             |
       | Intrinsic   |
       |   High      |
  -----|-------------|
 |     |             |
 | Intrinsic | Expansion |
 |   Low    |   High    |
 |-----------|         |
 |     |             |
 | Expansion |         |
 |   Low    |         |
  -------------
```

```
 _____
|                        |
|        DEMO OF         |
|    INTRINSIC AND       |
|     EXPANSION          |
|       MEMORY           |
|_____|
```

These combinations are the arrangments that the 64k memory expander and the intrinsic memory can be set to, intrinsic high and intrinsic low, expansion high and expansion low, expansion high and intrinsic low, and intrinsic high and expansion low. I will only use two combinations this time, to simpify this example as much as possible.

To make the switch, I have to be in the right room, so as not to be left behind when the switch is made. In this situation the correct room would be intrinsic high, because I will be switching between intrinsic low, and expansion low. If I want to switch the low memory rooms, I must be in a high memory room to do this. I also have to take care of a few other conditions that are happening all the time in the Adam too.

1. I have to stop the maskable interrupts.

   243 Disable the maskable interrupts.

2. Next I have to load the accumulator with the same value as location 64866. This is the value of the last byte written to register 1 in the VDP (Video Display Processor). I will reset bit 5 of this word, and write to register 1 of the VDP. This will tell the VDP to stop interrupting the Z80, so the switch and read or write of the expansion memory can be done.

⇨ 58 98 253	Load the accumulator from memory location 64866.
⇨ 203 175	Reset bit 5 of the value in the accumulator.
79	Load register C with the same value that is in the accumulator.
⇨ 6 1	Load register B with 1.
⇨ 205 32 25	Call the EOS routine WRITE REGISTER.

In order to do an interrupt, the Z80 needs the information in the bank of memory we are switching off, so we have to stop this from happening, or the computer would crash.

The only thing left to do, before we can access the lower half of the expansion memory is the switch. To do this, all I have to do is to load the accumulator with a 2 and output it to port 127. The Z80 commands for this are:

⇨ 62 2	Load the accumulator with 2.
⇨ 211 127	Output the value of the accumulator to port 127.

Now I can load a byte from, or store a byte to any location in the lower half of expansion memory, or any location in the upper half of the intrinsic memory.

Now that I am here, I will test to see if the memory expander is working. I think I will start at location 0 and store a 0 there, then go to location 1, and store a 1 there, and so on till I get to 255, which is as high a number as I can have for only one memory location.

⇨ 62 0	Load the accumulator with 0.
⇨ 33 0 0	Load the HL register with 0.
⇨ 119	Store the value of the accumulator to the location equal to the value of register HL.
⇨ 35	Make the HL register one more.
⇨ 60	Make the accumulator one more.
⇨ 32 251	Jump relative to the 119 instruction if the accumulator isn't 0.

Now if all went well, I will have the series of numbers, 0 to 255 in the memory locations 0 to 255. For the rest of the test I will move these numbers from the locations 0 to 255 in the lower half of the expansion memory to locations 56832 to 57087, of the upper half of the intrinsic memory.

⇨ 33 0 0	Load the HL register with 0.
⇨ 17 0 222	Load the DE register with 56832.
⇨ 1 0 1	Load the BC register with 256.
⇨ 237 176	Move the data from the location equal to the value of the HL register to the location equal to the value of the DE register, then increment both the HL and the DE registers, and decrement the BC register, and if the BC register isn't zero, do the same operation again until the BC register is equal to zero.

At this time, I need a control to show you that this really did work. I am now going to switch the lower half of the expansion memory off, and

the lower half of the intrinsic memory back on.

⇨ 62 1   Load the accumulator with 1.
⇨ 211 127   Output the value of the accumulator to port 127.

Turn the interrupts back on.

⇨ 58 98   253   Load the accumulator with the same value as
                     memory location 64866.
⇨ 203 239   Set bit 5 of the value in the accumulator.
⇨ 79   Load register C with the same value that is in the
                     accumulator.
⇨ 6   1   Load register B with 1.
⇨ 205 32 253   Call the EOS routine WRITE REGISTER.
⇨ 205 35 253   Call the EOS routine READ REGISTER.
⇨ 251   Enable the maskable interrupts.

Now that we are back in the intrinsic memory, I will make the same move of data as I did before, except I will save it in a different buffer.

⇨ 33 0   0   Load the HL register with 0.
⇨ 17 0   223   Load the DE register with 57088.
⇨ 1   0   1   Load the BC register with 256.
⇨ 237 176   Move the data from the location equal to the value
                     of the HL register to the location equal to the
                     value of the DE register, then increment both the
                     HL and the DE registers and decrement the BC
                     register, and if the BC register isn't zero, do the
                     same operation again until the BC register is
                     equal to zero.
⇨ 201   Return from subroutine.

The only thing left, for us to do, is to check to see what is in our buffers. A simple Basic program will allow us to very easily check this.

```
1 REM read the first buffer at 56832
2 for x=56832 to 57087
3 ? PEEK(x);" ";
4 NEXT
5 REM read the second buffer at 57088
6 for x=57088 to 57343
7 ? PEEK(x);" ";
8 NEXT
9 END
```

This short Basic program will print the buffers to the display, so we can see the difference. There should be a difference, even if there isn't a memory expander installed in your Adam.

The next article, will include access of the other half of the memory expander, and access of larger memory expanders. Hope you enjoyed this and the series which is to come in following issues of this and other newsletters.

HEXACE SOFTWARE
C/O Bruce Walters
Rd. #2 Box 51
Franklin, PA 16323
(814) 432-3563

Also, look for the following and other Hexace Software programs:

SmartWRITER'S HELPER - $10.00
COPX - $10.00
FORMAX - $10.00

DEMO PROGRAM

```
1   REM Program to test the lower half of the 64k memory xram
4   REM Written by Bruce L. Walters
6   REM remove one of the next rem statements as needed to print.
7   REM PR#1
8   REM PR#2
9   REM machine code for test
10  DATA 243,58,98,253,203,175,79,6,1,205,32,253,62,2,211,127
11  DATA 62,0,33,0,0,119,35,60,32,251,33,0,0,17,0,222,1,0,1,237,176
12  DATA 62,1,211,127,58,98,253,203,239,79,6,1,205,32,253,205,35,253
13  DATA 33,0,0,17,0,223,1,0,1,237,176,201
14  REM load machine code and call it
15  FOR x=56320 TO 56386
16  READ y
17  POKE x, y
18  NEXT
19  CALL 56320
20  REM read the first buffer at 56832
21  FOR x=56832 TO 57087
22  ? PEEK(x); " ";
23  NEXT:?:?
25  REM read the second buffer at 57088
26  FOR x=57088 TO 57343
27  ? PEEK(x); " ";
28  NEXT
29  ?:PR #0
30  END
```

DISASSEMBLY OF MACHINE CODE USED IN THE DEMO PROGRAM

Address		Code	Instruction
56320:	.	243	DI
56321:	:b.	58 98 253	LD A<(64866)
56324:	..	203 175	RES 5 A
56326:	O	79	LD C<A
56327:	..	6 1	LD B< 1
56329:	..	205 32 253	CALL 64800
56332:	>.	62 2	LD A< 2
56334:	..	211 127	OUT A>(127)
56336:	>.	62 0	LD A< 0
56338:	!..	33 0 0	LD HL< 0
56341:	w	119	ST A>(HL)
56342:	#	35	INC HL
56343:	<	60	INC A
56344:	.	32 251	JR NZ 56341
56346:	!..	33 0 0	LD HL< 0
56349:	...	17 0 222	LD DE< 56832
56352:	...	1 0 1	LD BC< 256
56355:	..	237 176	LDIR
56357:	>.	62 1	LD A< 1
56359:	..	211 127	OUT A>(127)
56361:	:b.	58 98 253	LD A<(64866)
56364:	..	203 239	SET 5 A
56366:	O	79	LD C<A
56367:	..	6 1	LD B< 1
56369:	..	205 32 253	CALL 64800
56372:	.#.	205 35 253	CALL 64803
56375:	!..	33 0 0	LD HL< 0
56378:	...	17 0 223	LD DE< 57088
56381:	...	1 0 1	LD BC< 256
56384:	..	237 176	LDIR
56386:	.	201	RET
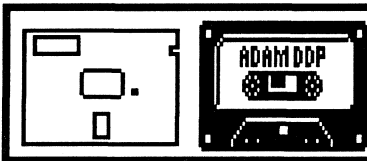
PRODUCT REVIEWS
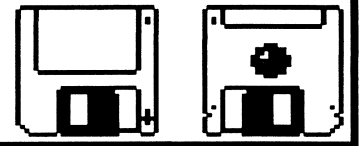
SmartWRITER'S HELPER
by Hexace Software

Reviewed by Jim Notini

TYPE	PRICE
UTILITY / PATCH	$10.00
RELEASED	**MEDIA**
MAY 1991	DISK OR DDP

SmartWRITER'S HELPER is one of three new utility programs which have recently been released for the ADAM by Bruce Walters of Hexace Software. SmartWRITER'S HELPER is a major enhancement to the SmartWRITER Word Processor which is built into each and every ADAM Computer System. Numerous bugs in the Operating System of the ADAM are fixed as well as the ability to access different hardware products which were previously not accessible in the original SmartWRITER program. Not only does it provide these functions, but also if the ADAM configuration consists of a dot matrix printer (dmp for short) numerous print styles are available to the user through the use of embedded commands. Previously, if a dmp was to be used to it's fullest potential on the ADAM either a new word processor would have to be bought and learned or the user would have to embed special commands into the document and then load up an entirely different program in order to print out the document with all the special print styles.

To start out, the purchaser of SmartWRITER'S HELPER (SWH for short) will have to print out two SmartWRITER documentation files which are contained on the media (if you have a dmp, boot SWH first in order to print on the dmp). The first of the 'DOC' files contains the specific information on how to use the basic features of SWH while the second 'DOC' file contains a list with examples of all the built-in type styles which are available. The instructions are fairly short and straight forward, but should provide all the information which is needed to get started with SWH. What would have been a nice addition in the 'DOC' file is a list of what SmartWRITER features do and don't work with a dmp: IE, SWH does not allow page numbering or fix the space and one-half bug that occurs when printing a blank line having only a hard return marker, but it does allow for underlining, subscript and superscript through embedded commands but not through SmartWRITER's menu options. Perhaps we will see this additional list in an update since it will save a lot of time in experimentation by the user.

To boot SWH all that is required is to place the media in drive #1 and pull the COMPUTER RESET. The screen will go blank for a brief time and the new Operating System and enhancements will load in before returning to the Electronic Typewriter, from here press the ESCAPE/WP key and the enhanced SmartWRITER will be at your disposal. The initial setup for SWH is: dmp, disk drive #2 and ramdisk active. If this is not the setup which you desire, you may easily change it through "CONTROL" and specific letter keypress. The CONTROL sequence keypresses are as follows: < CONTROL + A > sets output to a dmp attached through a Parallel Interface; < CONTROL + B > sets output to the ADAM Daisy Wheel Printer; < CONTROL + C > sets up a Ramdisk according to the size of the Memory Expander available in place of Tape Drive #2 even if you don't have a second tape drive; < CONTROL + D > returns to use Tape Drive #2 in place of the Ramdisk; < CONTROL + E > allows for SmartWRITER to recognize Disk Drive #2 where previously it was never useable in SmartWRITER, but this causes Tape Drive #1 to be unrecognizable; < CONTROL + F > returns the ability to use Tape Drive #1; < CONTROL + J > disables the ability to use embedded commands so that all ASCII character combinations which use the caret sign will print out normally; < CONTROL + G > returns the ability to use embedded commands. The use of these CONTROL sequences is a tremendous advantage when needing to switch between different hardware items since you will no longer have to first save your work, then boot a different patch program, then reload your work and proceed from there.

The use of embedded commands for accessing a dmp's built-in capabilities is a function which many ADAMites are familiar with through their usage of such programs as EVE's SP-1 Patch and Digital Express' ShowOFF II. SWH uses the caret sign " ^ " as well as either a lower or upper case letter to specify when to start the new print style and when to end the style. For instance, if you wanted the words "SmartWRITER'S HELPER" printed in emphasis you would type it into SmartWRITER like this: ^ASmartWRITER'S HELPER^B. When you print out the document, the ^A and ^B will not be printed but everything in between the two caret combinations will be printed in emphasis.
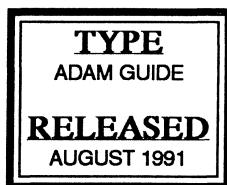
Currently, SWH as distributed by N.I.A.D. is setup with the following dmp capabilities for the Panasonic KX-P1080, KX-P1080i, KX-P1090, KX-P1090i, KX-P1180 and all EPSON RX-80 compatibles: Emphasis, 2/72 inch paper feed, Double-strike, Elite, Pica, 4/72 inch paper feed, Italic, 6/72 inch paper feed, Form feed, Compressed pitch, Expanded pitch, 8/72 inch paper feed, 1/6 inch paper feed, Underline, Near letter quality on BOLD PS for KX-P1091i only, Superscript, Subscript, Near letter quality, Proportional spacing, Left alignment, Auto centering, Right alignment and Auto justification. Also the following will only work on a KX-P1180: Courier, Sans Serif, Prestige and Bold PS. Users will have to consult their dmp owner manual for specific information on what styles can be mixed with one another.

SmartWRITER'S HELPER is a very welcome enhancement to the most popular ADAM word processor. It is very surprising that this type of enhancement was never made available previously, but thankfully it is now available due to Hexace Software. So many little things were missed by SmartWRITER's programmers and SWH takes a giant step in clearing up a good portion of these little miscues as well as adding the tremendous ability to embed printer commands to take advantage of a dmp if owned. Not only are the above listed dmp features available, but Hexace Software can customize SWH for anyone's dmp. If your dmp is not one of the listed printers from above, I would recommend ordering SWH directly through Hexace, otherwise the embedded commands provided should cover just about everything needed (but not everything available) on the Panasonic and Epson printers listed. Definitely a must have for all SmartWRITER users.

SYSTEM REQUIREMENTS

- ❑ **MEMORY:** BASE ADAM SYSTEM
- ❑ **PRINTER:** ADAM PRINTER OR DOT MATRIX PRINTER
- ❑ **DRIVES:** 1 DISK DRIVE OR 1 DIGITAL DATA DRIVE
- ❑ **OTHERS:** R80 MEMORY CONSOLE
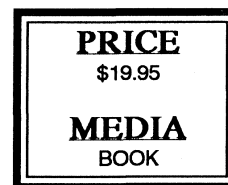- ❑ **OPTIONS:** MEMORY EXPANDER, 2nd DISK DRIVE OR DATA DRIVE

SOFTWARE RATINGS

- ❑ **GRAPHICS / SCREENS**......................N/A
- ❑ **MUSIC / SOUND**...............................N/A
- ❑ **INSTRUCTIONS**................................B+
- ❑ **EASE OF USE**...................................A+
- ❑ **VALUE FOR THE DOLLAR**.................A+

OVERALL

A

TYPE		PRICE
ADAM GUIDE		$19.95
RELEASED		**MEDIA**
AUGUST 1991		BOOK

THE ADAM SURVIVAL GUIDE
by The ADAM News Network
Reviewed by Jim Notini

The ADAM Survival Guide (ASG for short) is a long overdue, in the sense that a directory listing of ADAM supporters as well as important information hasn't been compiled into a book for some years now, and much needed manual which has been brought to us ADAMites through the tremendous efforts of Barry Wilson (St. Louis AUG) and Mel Ostler (Roadrunner Publications). These are not the only contributors to the ASG as you will see. The ASG spans a whopping total of 233 pages, and best of all, the information contained on each and every page is solely on the ADAM and for the ADAM. Diligent planning was put into the development of the ASG as can be seen and each of the chapter authors' computer strengths are what they deal with in their writing (some even have contributed multiple chapters). Everything that an ADAM owner might want or need is contained in the ASG as you will see. The ASG is a manual which should be owned by every ADAMite due to it's tremendous volume of information! The chapters are split up into different subtopics and consist of the following:

INTRODUCTION SECTION OF THE ADAM SURVIVAL GUIDE
INTRO I. INTRODUCTION TO ASG, by Bart Lynch, is a reflection of how the ASG project began and all the steps that lead up to it's completion. INTRO II. TABLE OF CONTENTS. INTRO III. IMPORTANT NAMES AND ADDRESSES, by Dean Roades, is a quick reference of addresses for the A.N.N. staff, ADAM User Groups, ADAM Suppliers, ADAM BBSs and other important ADAMites. INTRO IV. A.N.N. - IT'S HISTORY AND PROJECTS, by Dean Roades, is a walk down memory lane on the birth of A.N.N. and a vision into the future on many projects which are planned.

FOR THE ADAM NEW-COMERS & THE MEDIUM EXPERIENCED
CHAPTER 1. WELCOME TO THE WORLD OF ADAM, by Tom Keene, discusses what one can and can't do with ADAM as well as discuss some software and hardware available. CHAPTER 2. NOSTALGI-A-DAM, by Tom Keene, is a look back at the early years of support for the ADAM by ADAM User Groups and newsletters around the country. CHAPTER 3. THE CREATION OF ADAM, by Phil Kosowsky, takes you behind the scenes at Coleco for some truly enlightening news on the entire process behind the evolution of the ADAM. CHAPTER 4. THE BASE ADAM, by Dean Roades, is a look at software which can be used with the ADAM as it was sold in stores with no additional hardware or accessories. CHAPTER 5. SmartWRITER, by Bill Reynolds, is a discussion on the abilities and functions of the built-in word processor for ADAM. CHAPTER 6. SmartBASIC V1.0, by Guy Cousineau, is a detailed tutorial on how to program in SmartBASIC which covers a whopping 29 pages! CHAPTER 7. SOFTWARE FOR THE EOS, by Eric Danz, is a catalog listing of business, graphics, utility, etc. programs which operate in EOS. GAME SOFTWARE FOR THE EOS, by Eric Danz, is a catalog listing of entertainment programs in EOS.

FOR THE MEDIUM EXPERIENCED TO EXPERIENCED
CHAPTER 9. AN OUTLINE OF SmartBASIC V2.0, by Guy LaForest, is a listing of V2.0 addresses for routines, pointers and tables compared to V1.0. CHAPTER 10. GRAPHICS WITH PowerPAINT, by Pat Herrington, is a wonderful discussion of the potential which the PowerPAINT program offers along with graphics to demonstrate what is being talked about. CHAPTER 11. TELECOMMUNICATIONS, by Bart Lynch, explains the functions and features of Bulletin Board Systems which can be accessed via a modem. CHAPTER 12. A LIST OF BBS-S, by Bart Lynch, is a listing of all BBSs known which support or are run on an ADAM.

IF YOU ARE SERIOUS ABOUT POWERFUL SOFTWARE
CHAPTER 13. CP/M FOR THE NEW ADAM USER, by Tom Keene, is a look at CP/M for those who have never used it previously and discusses what it can do. CHAPTER 14. T-DOS - NEW POWER FOR THE ADAM -

AND FREE!, by Ron Collins, discusses the features and capabilities which this CP/M replacement provides as well as how to go about using it. CHAPTER 15. SOFTWARE FOR T-DOS OR CP/M, by Tom Keene, is a listing with descriptions of some of the more popular CP/M programs which will work on the ADAM with only small or no modifications needed.

FOR THE ADAMite WHO WANTS TO DO MORE
CHAPTER 16. ADam-INFINITUM, by Rich Lefko, is a compilation of little and well known facts about ADAM, the system, and it's software. CHAPTER 17. THE BEST OF A.I.M., by Terry Fowler, is an informative listing of things you should know about the ADAM and some of it's software. CHAPTER 18. HANDY INFORMATION + PEEKS AND POKES, by Guy Cousineau, is a listing of tricks and fixes which will clear up many of SmartBASIC V1.0's bugs and limitations. CHAPTER 19. ADAM, APPLE and IBM RELATIONSHIPS, by Ron Mitchell, outlines some of the similarities and differences in the Basic programming language for these computers with a heavy emphasis on Apple to ADAM. CHAPTER 20. COMPUTER PROGRAMMING IDEAS, by Peter Hartzler, is a discussion on programming philosophies and strategies. CHAPTER 21. Z-80 MACHINE LANGUAGE PROGRAMMING, by Guy Cousineau, is a look at three different ways to access machine language from SmartBASIC to speed up operations.

THE PHYSICAL GROWTH, CARE AND FEEDING OF ADAM
CHAPTER 22. HARDWARE FOR THE ADAM, by Ron Collins, is a look at hardware which has been developed for the ADAM since it's creation and it's uses. CHAPTER 23. ADAM MUSIC WITH MIDI, by Chris Braymen, is a discussion of the capabilities of the MIDI-MITE Interface on the ADAM. CHAPTER 24. ADAM SERVICE AND REPAIR, by Phil Kosowsky, is a do-it-yourself repair / maintenance section on the ADAM if you don't want to send it out to be repaired. CHAPTER 25. MAKING LOW TECH HARDWARE, by Jerry Vrancks, contains tips and hardware projects the average ADAM owner can make without any specials skills.

THE CARE AND FEEDING OF THE ADAM COMMUNITY
CHAPTER 26. ADAM USER GROUP NEEDS, by Ron Mitchell, discusses items members can do to insure the continued existence of ADAM User Groups. (An oversight was made and there is no Chapter 27). CHAPTER 28. STARTING A NEW ADAM USER GROUP, by David Cobley, is intended for those ADAMites who are interested in starting their own A.U.G. CHAPTER 29. ADAM NEWSLETTERS, NEW AND OLD, by Norm Castro, is a listing of all ADAM newsletter known to the author along with addresses and subscription fees, etc. CHAPTER 30. ADAM BOOKS, by Rich Clee, is a listing of published books for the ADAM, some of which are still available. CHAPTER 31. ADAM BOOKS, REVIEWED, by Joe Alford, is further listing of ADAM related books with a number of them reviewed.

WHERE TO GET WHAT YOU WANT
CHAPTER 32. ADAM DEALERS AND SUPPLIERS, by Dean Roades, is a listing of mail-order firms which carry products for the ADAM. CHAPTER 33. LINE BY LINE-ERS are brief descriptions of products which a number of ADAM supporters provide. CHAPTER 34. DEALER ADS.

Overall, ASG is a tremendous collection of ADAM information. The book is professionally bound and all pages are printed in two-column format to allow for as much information as possible on each page. ASG should provide for countless hours of reading and also should make things a lot easier when looking for that important piece of information, address or phone number since everything is together in one book instead of spread out over a countless number of newsletters. Pick this one up immediately, it is a life-saver, a time-saver, an ADAM-SAVER!

TYPE		PRICE
MIDI UTILITY		$26.95
RELEASED		**MEDIA**
JULY 1991		DISK & DDP
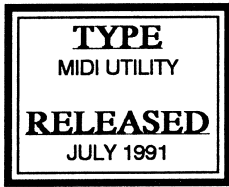
SEQuel
by Bonafide Systems

Reviewed by Terry Fowler
Reprinted from the ADAM INTERNATIONAL MEDIA

SEQuel is the long awaited advanced software program for use with the ADAM installed MIDI-MITE unit. For those of us who have invested in this ADAM expansion and a sequencer keyboard, the resulting music is indescribable. Even with the basic sequencer keyboard costing less than $100, the sound is truly good. But with a stereo keyboard connected to the home stereo system, you'd just have to hear it to believe it! The huge selection of MIDI songs available virtually free are as high quality as CD disks you buy. And now we have an advanced program to allow even novice keyboard users to record their own songs and edit them until they sound great.

First let's provide an introduction to music sequencing as provided by Chris Braymen in the nicely done 36 page manual. "A MIDI sequencer is a computer program that allows you to record, edit and play back sequences of musical notes. Your physical actions when playing a MIDI keyboard (or other MIDI instrument) are stored, not as audio signals (as with a tape recorder) but as computer codes that define various characteristics of the music such as pitch, attack, release, pitch bend, etc. These 'MIDI events', as they are called, can be viewed and edited on your computer. You can change, insert, move, copy or delete anything in your sequence, from a single event to a whole region of data. You can transpose whole sections of music to a different key. You can use a wide variety of MIDI events such as poly pressure, mono pressure, controllers and pitch bends to create various effects. You can use your sequencer as if it were a multi-track tape recorder. For example, you can record a drum part, then while listening to that part played back, you can record a bass part. You can listen to any combination of tracks you have by selecting only the ones you want to hear and you can instantly jump from one section to another without waiting for a tape to rewind. If you have a drum machine or some MIDI unit that supplies it's own MIDI clock you can synchronize a sequence to the drum machine's own tempo. Sequencers that support the standard MIDI file, as defined by the International MIDI Association, can interchange their sequencer files. So you can share sequences with your poor, unenlightened IBM and MAC user friends!"

"MIDI sequencing has revolutionized the way modern music is recorded and performed since much of music heard today has been sequenced in some way using synthesizers and computers. MIDI sequencing has given amateur as well as professional musicians and composers the ability to work with their music the way a writer uses a word processor. The ability to 'preview' your music and change it to your liking has become a necessity for the professional and just plain fun for the novice."

SEQuel comes with a tour to guide you into the ease of sequencing. The program utilizes the commonly used keys on your keyboard. To get a song, press the Store/Get key and the SmartKEY labels change on the screen. Many sequenced songs are provided to choose from, but you will get the first selection to learn how to edit, insert, and copy a measure or track. In essence, this will take very little time. You will quickly create a song played in the "round". The reference section of the manual will provide additional information on the many features of SEQuel along with definitions and user interface information.

SEQuel uses a Hi-Light cursor bar to select fields. Once hi-lighted, the return key is pressed to provide input to change the information in the hi-lighted area. Where a field actually has more than one field it is called an event, and field information is separated by a colon or colons. The tracks store a series of MIDI events within a sequence. You are allowed to create eight independent tracks, each holding a separate stream of MIDI events. Each track has a name which can indicate the

choice of instruments desired. Up to 16 channels can be used to communicate with the MIDI instrument. You may elect to play the track or select the track on which to record. The screen shows this data along with the number of events in each track. Instead of recording to a track, you may select an Overdub mode which does not erase the date, but merges newly recorded data with existing data.

Also on the main screen is a Conductor track that is used to control meter, tempo, key signature and metronome clicks. You cannot use any range editing commands with this track. The tempo and meter fields simply show the current tempo and meter as set in the conductor track. They cannot be modified from the main screen, but only through editing the Conductor track. The metronome is an audible click that helps you keep time with the music you are recording or playing back. It may be turned on or off. SEQuel operates on an internal clock, but can sync to the clock of an external MIDI device.

The Main Screen SmartKEYS consist of: I - Rewind, II - Forward, III - Edit, IV - Record, V - Play SONG and VI - MORE. I and II select the current position in the song file, moving in one measure increments. EDIT takes you to the edit screen where you may Hi-Light selected data to change. RECORD is indicated when a track is record enabled. PLAY will play a song from the measure indicated at the top of the screen. MORE changes the SmartKEYS as follows: I - TRANSPOSE, II - VELOCITY SCALE, III - QUANTIZE. Transpose allows you to shift all of the pitch values in the edit range by up to an octave up or down, allowing parallel harmonies or key changes. Velocity scale allows you to shift all the note velocities in the edit range. Velocity is the measure of the strength with which the synthesizer key was pressed. Quantize changes the attack times of note events to make them more rhythmically precise. It is useful in correcting rhythmic inaccuracies in your sequence.

Other active keys include: MOVE/COPY, CLEAR, DELETE, STORE/GET and INSERT keys. Move/Copy allows you to move or copy an edit range from one location to another. Clear allows you to clear either a single track or an entire song from memory. Delete will cause the data in the edit range of the Hi-Lighted track to be deleted from memory. Store/Get allows you to store or retrieve song files. Songs may be saved in two formats, one more common than the other. Loading songs also allows you to select from the Backup directory, or songs you have replaced. You may also merge a song with one that has already been loaded into SEQuel. You may also send a System Exclusive file, a special type of file that contains commands to load new sounds into specific types of synthesizers.

Other screen include the Event List Screen and the Conductor Track Even List Screen. The Event List Screen displays one measure of MIDI data on one of the eight tracks for editing purposes. The Conductor Track Event List screen displays one measure of Conductor data in the Conductor track where information may be changed. We will not go into specifics of all changes these two screens allow since it represents a considerable amount of control and power over your song data.

SEQuel is able to use the power of your memory expander to lengthen your songs. SEQuel can also be run and used from a hard disk drive., allowing you to Store/Get song files almost instantly. SEQuel can be as powerful as you desire, or as simple to use for playback of an extensive library of MIDI songs. While the Mini-Recorder packaged with the MIDI-MITE was good for short recording of songs played precisely, it very often missed doing the job even then. SEQuel captures subtle delays and nuances, allowing for a great deal of expression and human quality in the performance. And for $25.00 it is a bargain.

SYSTEM REQUIREMENTS	SOFTWARE RATINGS	OVERALL
❏ **MEMORY:** BASE ADAM SYSTEM ❏ **PRINTER:** ADAM PRINTER OR DOT MATRIX PRINTER ❏ **DRIVES:** 1 DISK DRIVE OR 1 DIGITAL DATA DRIVE ❏ **OTHERS:** MIDI-MITE INTERFACE AND MIDI MUSICAL EQUIPMENT ❏ **OPTIONS:** MEMORY EXPANDER, HARD DRIVE	❏ **GRAPHICS / SCREENS**.....................A ❏ **MUSIC / SOUND**...............................A+ ❏ **INSTRUCTIONS**...............................A+ ❏ **EASE OF USE**...................................A ❏ **VALUE FOR THE DOLLAR**................A+	**A+**

TYPE	SmartBASIC V1.x	PRICE
LANGUAGE	by Drushel Software	$29.95
RELEASED		**MEDIA**
AUGUST 1991	Press Release by Richard Drushel	DISK / DATA PACK

SmartBASIC V1.x
by Drushel Software
Press Release by Richard Drushel

WHAT IS SmartBASIC 1.x? SmartBASIC 1.x is a major rewrite of the SmartBASIC 1.0 interpreter for the Coleco ADAM computer. SmartBASIC 1.x provides the programmer with 40 new commands and 37 functions, and enhances the operation of 7 existing commands and 7 functions. SmartBASIC 1.x allows the programmer COMPLETE access to the hardware and software capabilities of the ADAM, using simple, high-level commands - without arbitrary PEEKs, POKEs, or CALLs, and without the programmer needing to understand Z80 machine language.

SmartBASIC 1.x makes it easy to:
* read and write absolute disk/tape blocks
* change screen colors
* select 31, 40, or 80-column TEXT, complete with FLASH and INVERSE
* define a scrolling TEXT window smaller than the physical screen
* manage interpreter memory independent of absolute addresses
* print to a parallel printer
* initialize and communicate through serial ports
* access all system RAM, ROM, and expansion RAM
* invoke EOS operating system functions without M.L. subroutines
* use larger disk drives, including hard drives
* format floppy disks for any size drive
* keep time and date with hardware and software clocks
* communicate directly with Z80 I/O ports

Additionally, SmartBASIC 1.x fixes some annoying bugs and oversights in SmartBASIC 1.0:
* parameters are range-checked for all commands and functions
* repeated error trapping does not crash the system
* ERRNUM returns rational error codes
* the keyboard line buffer is 254 characters long instead of 128
* control characters echo on the screen when typed
* INSERT and DELETE keys replace ^N and ^O
* the cursor is hidden unless waiting for typed input
* LIST does not pad everything with extra spaces
* LIST starts printing in column 2, so you can edit line #s above 9999
* the parser error reprint of a bad line starts in column 2
* S.B. 2.0-type parser errors--beep/sadface replacement of bad line
* POS and VPOS are 1-based vice 0-based & return absolute positions
* dummy arguments not required for ERRNUM, POS, VPOS, FRE, RND
* color commands & functions use TI color codes instead of AppleSoft
* RANDOMIZE command gives true random numbers (seeds optional)
* RESTORE, RESUME, and RETURN to any line number
* values set by SPEED, ROT, etc. can be found without PEEKs
* multiple programs can be MERGEd in memory

SmartBASIC 1.x provides shorthand synonyms for a few common commands:
* LOCATE line, column instead of VTAB line: HTAB column
* BEEP instead of PRINT CHR$(7);
* PUT x instead of PRINT CHR$(x);
* CLS instead of HOME

Lastly, SmartBASIC 1.x implements directly a few "miscellaneous" command and functions which previously could be achieved only by multi-statement, multi-line subroutines:
* WHILE...WEND loops
* HEX$(x) to return INT(x) as a hexadecimal string
* Z80-type bit test/set/clear functions
* Z80-type logical AND/OR/XOR/CPL functions
* MOD function to return remainder after integer division
* SPC$(x) function to return a string of x spaces
* STRING$(count,value) to make a string of count CHR$(value)'s
* LINPUT command to get a whole line of text up to the CR, ignoring (,)

All the enhancements of SmartBASIC 1.x take a little more than 8K of extra RAM, leaving approximately 17K of programming workspace. While this is, of course, less than SmartBASIC 1.0, the compactness of SmartBASIC 1.x commands and functions means that whole subroutines in older programs can be replaced by a statement or two.

The following hardware is supported directly by SmartBASIC 1.x:
* Coleco ADAMlink modem (initialization only)
* Coleco 64K memory expander (and clones by Orphanware and OPA)
* Orphanware 256K and 512K memory expanders
* Micro Innovations 1024K memory expander
* Orphanware PIA2 parallel board (all clones, including PowerMate)
* Eve/Orphanware RS-232C serial board (all 4 possible ports)
* Micro Innovations MIB2 serial board (both ports)
* Eve SS/SC board (clock only)
* Orphanware clock board
* Trisyd SmartClocks ("no-slot" and Dyno-Mite digitizer versions)
* Eve/Orphanware 80-column video unit
* 320K, 360K, and 720K double-sided disk drives
* Non-256K tapes created by the MegaCopy tape formatter
* Mini Wini hard drive
* PowerMate hard drive

The following hardware is not supported directly by SmartBASIC 1.x, but may be accessed using the appropriate IN variable,port and OUT port, value commands:
* Coleco ADAMlink modem (dialing and data transfer)
* Coleco Autodialer
* Eve SS/SC board (speech synthesizer)
* MIDI interface board
* Dyno-Mite sound digitizer

SmartBASIC 1.x is available on either disk or digital data pack, at a cost of $30.00 U.S. It includes a comprehensive, 70-plus page, laser-printed manual. More than a simple programming reference for SmartBASIC 1.x commands and functions, it includes 6 technical appendices for advanced programmers. These include: how to write relocatable, position-independent Z80 machine code routines; a complete summary of EOS function calls 0-100, with full descriptions and required register setups; the detailed structure of EOS processor control blocks (PCBs), device control blocks (DCBs), file control blocks (FCBs), directories, and the first published listing of EOS's own internal error codes 1-24; how to create external terminal emulations for use in TEXT80; and complete memory maps of the SmartBASIC 1.x interpreter and VRAM in all screen modes (TEXT31, TEXT40, TEXT80, GR, HGR, and HGR2).

SYSTEM REQUIREMENTS

□ **MEMORY:** BASE ADAM SYSTEM
□ **PRINTER:** ADAM PRINTER OR DOT MATRIX PRINTER
□ **DRIVES:** 1 DISK DRIVE OR 1 DIGITAL DATA DRIVE
□ **OTHERS:** NO OTHER REQUIREMENTS
□ **OPTIONS:** ALL ADAM HARDWARE DEVELOPED TOO DATE

SOFTWARE RATINGS

□ GRAPHICS / SCREENS.....................N/A
□ MUSIC / SOUND...............................N/A
□ INSTRUCTIONS.................................A+
□ EASE OF USE....................................A+
□ VALUE FOR THE DOLLAR.................A+

OVERALL

A+

TYPE
GRAPHICS
RELEASED
AUGUST 1991

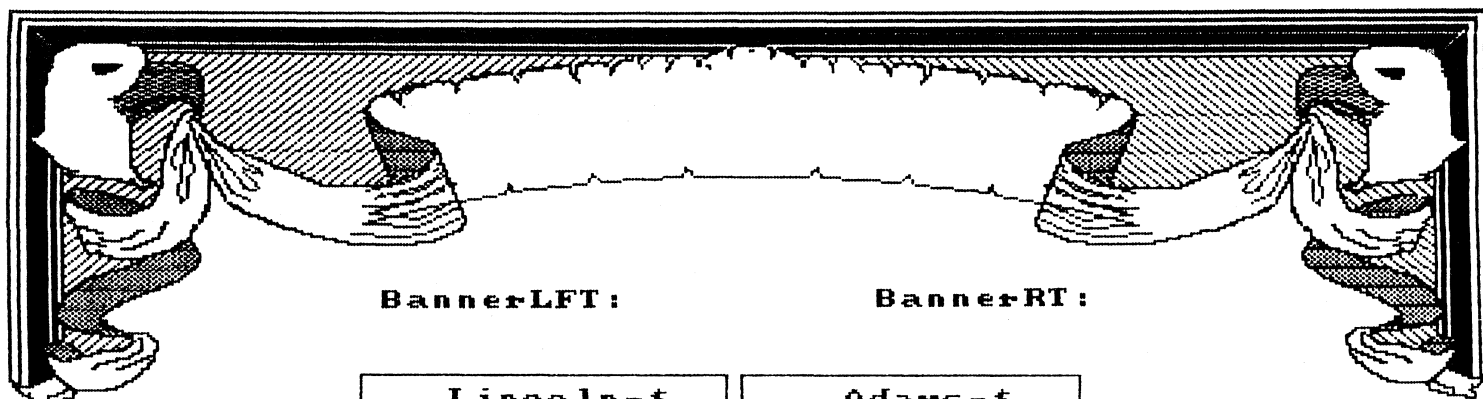# BOLD GLORY
by Eyezod Graphics
Reviewed by Jim Notini

PRICE
$16.95
MEDIA
DISK / DATA PACK

Bold Glory is the third commercial graphics compilation released by Eyezod Graphics for the ADAM, the first two being Powertools and Yuletools. This volume takes a patriotic theme throughout all it's graphics. As a whole, there are: 40 American Flag clip-art letters and symbols; 46 Miscellaneous clip-art graphics which deal with patriotic days of the year, caricatures, fireworks, the American flag, etc.; 8 alphabet sprite file sets that are made up of different patterns; 2 graphic sprite file sets; and 4 full screen picture files (2 of which make up a beautiful banner as you can see below). Best of all, the files were drawn using colors and not just black so if you have a color printer, you won't have to edit the pictures to add color. Well, as they say, "A picture tells a thousand words", so lets cut out the small talk and take a look at some of what Bold Glory offers. There's A LOT!!
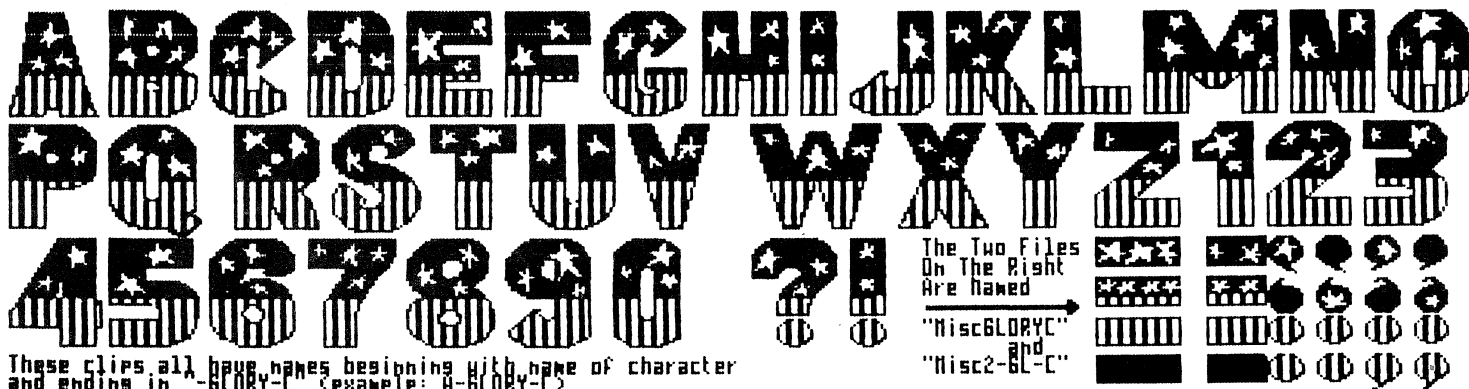
These clips all have names beginning with name of character and ending in "-GLORY-C" (example: A-GLORY-C)

The Two Files On The Right Are Named → "MiscGLORYC" and "Misc2-GL-C"

BannerLFT: BannerRT:

CRACKER4-C

FLAG-6-C

Lincoln-$

ABCDEF GHIJKL MNOPQR STUVWX YZ?!&$

Adams-$

ABCDEF GHIJKL MNOPQR STUVWX YZ?!&$

FLAG DAY
FLAGday-C

MEMday-1-C
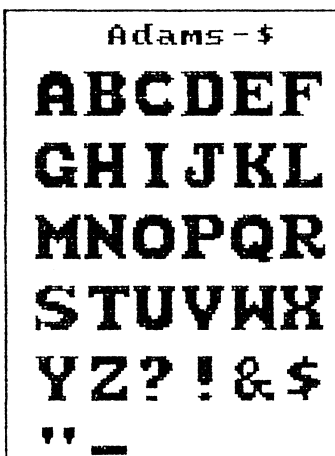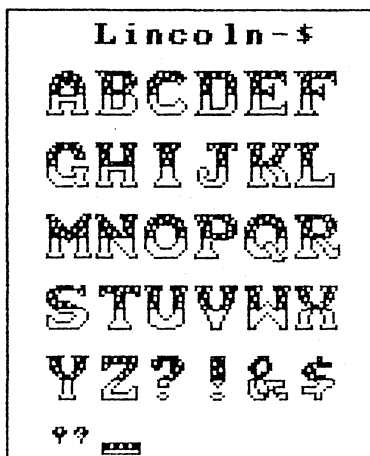
SYSTEM REQUIREMENTS

- ❏ MEMORY: BASE ADAM SYSTEM WITH 64K MEMORY EXPANDER
- ❏ PRINTER: DOT MATRIX PRINTER FOR PRINTING GRAPHICS
- ❏ DRIVES: 1 DISK DRIVE OR 1 DIGITAL DATA DRIVE
- ❏ OTHERS: PowerPAINT BY D.E.I. OR COMPATIBLE PROGRAM
- ❏ OPTIONS: 256K OR LARGER MEMORY EXPANDER

SOFTWARE RATINGS

- ❏ GRAPHICS / SCREENS......................A+
- ❏ MUSIC / SOUND..............................N/A
- ❏ INSTRUCTIONS...............................A+
- ❏ EASE OF USE...................................A+
- ❏ VALUE FOR THE DOLLAR.................A+

OVERALL

A+

N.I.A.D. PRODUCT LIST

PRODUCTS & PRICING SUBJECT TO CHANGE WITHOUT NOTICE

ADAM HARDWARE

● **ADAM COMPUTER SYSTEM** $239.95
Complete reconditioned or new ADAM Computer System with Printer, includes all components, accessories and software which was originally sold by Coleco (1 piece Memory Console). 90 day warranty. Price includes Shipping & Handling!!

● **ADAM COMPUTER SYSTEM EXP. MOD. #3** $209.95
ADAM and Colecovision Game System attaches together to make a complete ADAM Computer System (2 piece Memory Console). Includes all components, accessories and software which was originally sold by Coleco. 90 day warranty. Price includes S/H

● **ADAM DAISY WHEEL PRINTER**...$89.95
New ADAM Printer for replacement of a defective unit or for spare. Identical to what was originally packaged in ADAM system, but these are the newest revisions.

● **ADAM DIGITAL DATA DRIVE**..$49.95
Replacement or second digital data drive for the ADAM Computer. Great to own to speed up the backup process and also as a convenience to eliminate the need for swapping data packs constantly.

● **ADAM DISK DRIVE POWER SUPPLY**..$14.95
New, more reliable power supply transformer for ADAM Disk Drive (5 1/4" or 3 1/2").

● **ADAM KEYBOARD**... $24.95
New keyboard for the ADAM, great to have as a spare or for replacement of defective keyboard. Comes with a 2 foot coiled cable.

● **ADAM MONITOR CABLE**... $9.95
Allows attachment of a Composite Monitor, Monitor ready T.V., or RGB (with composite jacks) to the ADAM Memory Console providing both audio and video. Monitor must have separate RCA Audio and RCA Video input jacks. **NOTE:** Note available for the ADAM Expansion Module #3 Unit that attaches to the Colecovision.

● **ADAM PRINTER POWER SUPPLY**.. $49.95
Standalone power supply which can be used in place of the ADAM Printer (saves wear and tear) to power the ADAM. Great to own if you have a dot matrix printer so that the ADAM Printer can be unhooked and stored for future use.

● **ADAM PRINTER POWER SUPPLY COVER with ON / OFF LIGHT** $14.95
Protect your ADAM Printer Power Supply from dust, dirt and accidents with this cover and power on / off light. Instructions for hookup included.

● **ADAM TAN HAND CONTROLLER** $5.95
New Coleco Hand Controller with 12-button numeric keypad and two fire-buttons.

● **ADAMLINK 300 BAUD MODEM** (DDP)..$49.95
The original Coleco made modem which plugs into Slot #1 in the Memory Console and allows the user to connect to any BBS or Information Service. Comes with ADAMLINK I and as a special SmartTERM V1.02 (Disk or DDP) while supplies last.

● **ADAMNET CABLE**... $2.95
Flat, 7 foot cable for use with either the ADAM Keyboard or ADAM Disk Drive.

● **COLECOVISION GAME SYSTEM** $49.95
Complete Coleco Game System with two hand controllers, tv-hookup, power transformer, instructions and Donkey Kong cartridge. Great for a spare unit.

● **EXPANSION MODULE #1 ATARI 2600 ADAPTER** $44.95
Plugs into the front expansion slot on the ColecoVision or the right side expansion slot on the ADAM Memory Console. Allows for the use of ATARI 2600 compatible cartridges on the Coleco / ADAM systems. No additional hardware is required, just plug-in and then play Atari games on the Colecovision or ADAM.

● **EXPANSION MODULE #2 DRIVING CONTROLLER** $44.95
Steering wheel controller with gas pedal for use on the ColecoVision or ADAM. Comes with a free TURBO game cartridge and manuals. A number of other Coleco cartridges require this controller in order to play.

● **MIDI-MITE INTERFACE** (Disk or DDP) $74.95
Allows your ADAM to communicate with MIDI compatible synthesizers. It has one MIDI-IN, one MIDI THRU and two MIDI OUT jacks. Included are two MIDI cables for connection to your synthesizers and a ribbon cable for connection to the ADAM side port. Advanced software is included. Developer recommends the purchase of VideoTunes by FutureVision.

● **ROLLER CONTROLLER** $44.95
Trakball controller with two joystick slots which creates a control center for use on the ColecoVision or ADAM. Can be used as a mouse-type controller in numerous ADAM programs. Is required by a number of colecovision game cartridges. Comes with a free SLITHER game cartridge and manuals.

● **SUPER ACTION CONTROLLERS** $49.95
The ultimate in joysticks for the ColecoVision or ADAM. Package includes two arcade style joysticks each with a 12 button keypad, 4 fire-buttons and speed wheel. Comes with a free SUPER ACTION BASEBALL game cartridge and manuals. A number of other Coleco cartridges require these controllers. Works with all Coleco programs.

MEMORY EXPANDERS

Plug in memory boards for the Coleco ADAM Computer. All boards plug in to Expansion Slot #3 (the right expansion slot). They are currently available in 64K and 256K sizes. The 256K Memory Expander requires the connection of a Parallel Interface to it in order for ADAM to recognize all of it's memory.

● MICRO INNOVATIONS' 64K MEMORY EXPANDER $29.95
● MICRO INNOVATION'S 256K MEMORY EXPANDER $69.95

SERIAL & PARALLEL INTER.

● **MICRO INNOVATIONS PARALLEL PRINTER INTER** (Disk or DDP) ... $34.95
Plug-in board for the Coleco ADAM Computer that provides a Centronics compatible parallel interface for a 9-pin or 24-pin dot matrix or laser printer. Also includes addressor function for 256K or larger Memory Expander boards.

● **MULTI-PURPOSE INTERFACE BOARD 2** (Disk or DDP).........................$74.95
Provides two RS-232 Serial Ports and 1 Parallel Port along with Addressor Connection for 256K or larger Memory Expanders. Includes patch software for dot matrix printer and specially configured telecommunications software for non-standard serial ports along with the most current version of TDOS. Serial & Parallel cables sold separately.

● **PARALLEL PRINTER CABLE** $14.95
Cable which attaches between Parallel Interface and Dot Matrix Printer for either the M.I.B. 2 or Micro Innovations Parallel Printer Interface.

● **SHIELDED PARALLEL PRINTER CABLE** $24.95
6 foot shielded cable which provides for extra shielding from interference.

● **RS-232 SERIAL CABLE**... $14.95
6 foot cable which attaches between M.I.B.2 and Serial hardware device.

DOT MATRIX PRINTERS

● **PANASONIC KX-P1180 DOT MATRIX PRINTER** $189.95
   (with ADAM Printer Interface & Cable (Disk or DDP)) $229.95
9 pin dot matrix printer with 6K buffer and parallel connector. Draft speed 192 CPS, Near Letter Quality speed 38 CPS. Many built-in print styles and size adjustable. Bottom/Rear paper feed. One ribbon enclosed. Two year limited warranty.

● **PANASONIC KX-P1123 DOT MATRIX PRINTER** $239.95
   (with ADAM Printer Interface & Cable (Disk or DDP)) $279.95
Identical to KX-P1180i but 24-pin with draft speed 240 CPS and Near Letter Quality 53 CPS., 10K buffer and a Front paper feed. One ribbon. Two year limited warranty.

● **PANASONIC KX-P1124i DOT MATRIX PRINTER**............................$299.95
   (with ADAM Printer Interface & Cable (Disk or DDP)) $339.95
Identical to KX-P1123 but 24-pin with 10K buffer. Draft speed 192 CPS and Near Letter Quality 63 CPS. and more One ribbon. Two year limited warranty.

MONITORS & MODEMS

● **MAGNAVOX 1CM135 13" COLOR RGB MONITOR**.........$299.95
13" Color RGB / Composite compatible monitor, green text display option, sharpness control, vertical & horizontal centering controls, comb filter, built-in stand, IBM compatible as a CGA Monitor, capable of 80 column display with 25 lines and 640 horizontal pixel resolution. Requires ADAM Monitor Cable.

● **GOLSTAR 2105G 12" GREEN COMPOSITE MONITOR**...................$109.95
12" Green composite / monochrome monitor that offers resolutions up to 640 x 200, with up to 80 columns with 25 lines. Requires ADAM Monitor Cable.

● **GOLDSTAR 2105A 12" AMBER COMPOSITE MONITOR**$109.95
12" Amber composite / monochrome monitor that offers resolutions up to 640 x 200, with up to 80 columns with 25 lines. Requires ADAM Monitor Cable.

● **GOLDSTAR GSM-1200 BAUD MODEM**...........................$89.95
100% Hayes compatible, asynchronous, auto answer, auto dial, call progress monitoring with speaker. Requires Serial Interface and cable.

● **GOLDSTAR GSM-2400 BAUD MODEM**...$129.95
100% Hayes compatible, asynchronous, synchronous, full or half duplex, auto answer, auto dial. Requires Serial Interface and cable.

M.I. ADAMnet DISK DRIVES

Stand-alone floppy disk drives for the ADAM Computer. Plugs into the ADAMnet connector on the Memory Console. Comes with external power transformer and ADAMnet Cable. 100% compatibility with Coleco's ADAMnet Disk Drive and E&T Software's Disk Drive upgrades. Contact Micro Innovations for custom configurations.

● 5 1/4" 320K M.I. ADAMnet FLOPPY DISK DRIVE $219.95
● 3 1/2" 720K M.I. ADAMnet FLOPPY DISK DRIVE $269.95
● 3 1/2" 1.44K M.I. ADAMnet FLOPPY DISK DRIVE ....$CALL

M.I. HARD DISK DRIVES

Standalone Hard Disk drives for the Coleco ADAM Computer. The 40Mb Powermate version includes a new interface board which mounts in Expansion Slot #2 providing a BOOT PROM, a parallel printer port and a memory expansion addressor port. The ADAnet version plugs directly into ADAMnet and requires no interface card. An external power supply provides all power to the unit. The LC/40 includes the external hard disk enclosure, the power cube, cable, and all necessary software to run the unit.

● M.I. PowerMATE LC / 40 Hard Disk Drive $399.95
● M.I. ADAMnet LC / 40 Hard Disk Drive ....$CALL

N.I.A.D. SERVICES

● **UPGRADE 5 1/4" 160K SINGLE-SIDED DISK DRIVE TO:**
○ 5 1/4" 320K DOUBLE-SIDED DISK DRIVE UPGRADE $89.95
○ 3 1/2" 720K QUAD-SIDED DISK DRIVE UPGRADE $109.95
Send in your Coleco 5 1/4" 160K Single-Sided Disk Drive to be upgraded. Don't send the power supply transformer. Repair charge for defective drives. will be accessed (minimum of $50.00). Send payment to N.I.A.D. and drive to ADAM's House - 1829-1 County Rd. 130 - Pearland, TX 77581 - (800) 999-5040.

● **DATA PACK CONVERSION to DISK FORMAT** $4.00
Send in your title card from your Coleco data pack to be converted to disk. Titles which can be converted are: Buck Rodgers, Donkey Kong, Donkey Kong Jr., Dragon's Lair, Zaxxon, Recipe Filer, 2010: The Text Adventure, Richard Scarry's Best (specify 320K or 720K disk size), The Best of B.C., SmartLetters & Forms, CP/M 2.2. If you don't see a program listed above that you can't produce a working copy of on disk, call during regular business hours to see if we can do so for you.

● **SmartFILER UPGRADE to VERSION 27D** $4.00
Send in your SmartFILER Disk or DDP to be upgraded to Version 27D which provides numerous fixes to bugs contained in Coleco's original release.

● **INFOCOM CONVERSION to ADAM CP/M FORMAT**...................................$4.00
Send in your INFOCOM titles to be converted to an ADAM CP/M format. We can convert: Zork I, II & III, Planetfall, Deadline, Starcross, HitchHiker's Guide to the Galaxy, Leather Goddess' of Phobos, Stationfall, Plundered Hearts, Seastalker and Ballyhoo. Most, if not all, Infocom titles are still available in just about any computer store. Does not matter what computer it is for, we can convert it to ADAM format.

MANUALS & BOOKS

● **ACCESSING VRAM** $12.95
A detailed explanation and overview of the Video Display Processor and VRAM covering 15 pages which demonstrates how to set up the two most used graphics modes on ADAM in Z-80 code. Numerous SmartBASIC and Z-80 code listings.

● **BASIC PROGRAMMING TUTORIAL (Disk or DDP)** $14.95
A terrific series of tutorials and program listings which walk the beginner through the many different phases of programming in SmartBASIC by L.C. Austill. A must have for those seriously interested in learning how to program or even brush up on their skills. Plus a great replacement to Coleco's SmartBASIC Manual.

● **DISASSEMBLY: EOS**...................................$14.95
The complete Operating System is disassembled. All routines are separated by title of function. The EOS routines were principally designed to be used separately as called upon by other programs. This is a listing of the EOS, not a study of it or demos.

● **DISASSEMBLY: SmartBASIC V1.0**...................................$24.95
The complete SmartBASIC program is disassembled. All separate routines are listed by title of function. Invaluable for the hacker who wants to follow the disassemblies with a view toward CALLing these subroutines directly or revising them for ones own designs. Listing only, no comments or explanations.

● **EzREF GUIDE 101**...................................$5.95
Approximately 700 Z-80 instructions listed in Numerical sequence. Decimal, hex, op code and operands. Good for disassembling machine code in SmartBASIC. A total of 9 pages in all.

● **EzREF GUIDE 102**...................................$5.95
Approximately 700 Z-80 instructions listed in Alphabetical sequence. Decimal, hex, op code and operands. Good for assembling machine code in SmartBASIC. A total of 9 pages in all.

● **EzREF GUIDE 103**...................................$9.95
A study of ADAM's EOS jump table vectors, routines, setup for CALLs, exit register meanings, plus several assorted tables. A total of 21 information packed pages which were originally printed in the Nibbles & Bits Newsletter.

● **FROM BASICS TO BASIC** $19.95
A beginners look at computers. The first step in moving from SmartBASIC programming to machine language. Contains detailed overviews of the systems used in the computer and why they are required. When the reader has completed, machine language programming will be possible. Numerous machine code listings.

● **HACKER'S GUIDE TO ADAM VOL. I**...................................$11.95
Detailed look at the operation of the ADAM hardware and software. Operating system routines are identified and instructions given to control all aspects of the ADAM. Numerous SmartBASIC program listings included.

● **HACKER'S GUIDE TO ADAM VOL. II**...................................$11.95
Continues from Vol. I plus: Basic overview, zero page, keywords, math routines, basic commands, screen and data / disk drive routines, schematics, etc. A must for the serious SmartBASIC programmer. Numerous SmartBASIC program listings included.

○ **HACKER'S GUIDE VOL. 1 & 2 PROGRAMS (Disk or DDP)** $5.00

● **LEARNING TO DRAW WITH ADAM (Z-80) (Disk or DDP)** $24.95
Deals with graphics in general and teaches one how to address the video screen via the Z-80 microprocessor in all four standard modes of the ADAM Video Display Processor (TI-9928). The reader will finish this 161 page book with a vast understanding of the VDP through considerable drilling exercises and through the included SmartBASIC demo programs and listings.

● **LEARNING TO READ WITH ADAM (Z-80)**...................................$24.95
A discussion of machine language instructions, some specifically, and a great many generally, as the author develops the disassemblies of all that transpires after the reset button is activated. Promotes direct use of routines in ADAM's EOS.

● **LEARNING TO WRITE WITH ADAM (Z-80) (Disk or DDP)** $24.95
Assumes the reader has a knowledge of Z-80. Discusses write to media operations, memory mapped ports vs. standard IN/OUT ports, device control blocks, creation of new routines to replace EOS write-block is created, mass storage, Master 6081 processor and much more. Comes with outstanding SmartBASIC demo programs.

● **MacADAM MANUAL** $19.95
An enlightening 72 page manual that aids the user of the public domain title "MacADAM" with simple step-by-step methods of programming macros. Numerous assembly language routines listed.
○ **MacADAM DEMO FILES (Disk or DDP)** $5.00

● **N.I.A.D. PRODUCT REVIEW BOOK** $19.95
Contains detailed reviews of over 100 ADAM products previously reviewed in the N.I.A.D. Newsletter through 1987. Save money by knowing about the products you are thinking about purchasing.

● **N.I.A.D. PUBLIC DOMAIN REVIEW BOOK** $5.00
Booklet contains descriptions of all programs in the SmartBASIC (Vol. 1-33), SmartBASIC Utilities (Vol. 1-2) and SmartLOGO (Vol. 1-5) public domain libraries.

● **TDOS OWNER'S MANUAL** $2.00
A 47 page manual for owners of the CP/M replacement system TDOS which is available in the Public Domain. Covers all necessary topics on how to use TDOS and make use of it's many enhancements.

● **TEMPLE OF APSHAI MANUAL** $2.00
A 32 page owner's manual for the Public Domain title Temple of Apshai by Epyx. This manual also includes maps for Levels 1, 2 and 3 along with all ADAM specific control listings. Without it, the game is almost impossible to play.

● **THE BEST OF ELECTRONIC ARTS MANUAL**...................................$2.00
The original 41 page owner's manual from Coleco for The Pinball Construction Set and Hard Hat Mack Supergame pack which was released into the Public Domain. Without this manual, using P.C.S. will be very difficult and tedious.

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```
SCRIPT                                    PICA 10
*1234567890-+@ qwertyuiop[]               \1234567890-+^ qwertyuiop[]
¶!@#$%_&*(|`.=  QWERTYUIOP$†               !!@#$%_&*()`=~ QWERTYUIOP{}

COURIER 10                                EMPHASIS
\1234567890-+^ qwertyuiop[]               \1234567890-+* QWERTYUIOP[]
|!@#$%_&*()`=~ QWERTYUIOP{}               |!Q#$%_&*()`=† QWERTYUIOP¦¦

ELITE                                     LETTER GOTHIC
\1234567890-+^ qwertyuiop[]               \1234567890-+^ qwertyuiop[]
!!@#$%_&*()`=~ QWERTYUIOP{}               !!@#$%_&*()`=~ QWERTYUIOP{}
```

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● SOFTWARE DEMO VIDEO #1 (VHS) $14.95
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$4.00 DISK   **$6.00 DDP**

PLEASE NOTE: Specify VOLUME #, TITLE and DISK OR DDP

MISCELLANEOUS VOLUMES

□ SmartBASIC BNDV # 1 - 38: 36 different volumes containing assorted SmartBASIC entertainment, application, graphics, patch, utilities and other misc. programs. Most volumes are auto-booting and contain SmartWRITER documentation.

□ SmartBASIC UTILITIES UNDV # 1 - 2: 2 different volumes containing SmartBASIC utility programs such as file copiers, backup utilities, patches and other misc. programs. Volumes are auto-booting and contain SmartWRITER documentation.

□ SmartLOGO LNDV # 1 - 5: 5 different volumes containing SmartLOGO graphic files for use with these programs such as file boot SignSHOP/NewsMAKER first and contain SmartWRITER documentation.

□ ADAMCALC ANDV # 1 - 17: 17 different volumes containing ADAMCALC spreadsheet formulas, tutorials and demonstrations. All volumes require the user to boot ADAMCALC first and contain SmartWRITER or ADAMCALC documentation file(s).

□ CP/M 2.2 CNDV # 1 - 59: 59 different volumes containing CP/M 2.2 utilities, games, interpreters, patches, compilers, word processors and other misc. programs. Volumes require the user boot CP/M 2.2 first, most programs contain documentation.

□ PD SIGNS SNDV # 1 - 2: 2 different volumes containing SignSHOP/NewsMAKER graphic files for use with these programs and contain SmartWRITER documentation.

□ PINBALL GAMES PNDV # 1 - 7: 7 different volumes containing Pinball Construction Set pinball games which were designed with SmartWRITER documentation. Each volume is auto-booting and contains SmartWRITER documentation.

□ VIDEOTUNES SONGS NNDV # 1 - 3: 3 different volumes containing many assorted song files each that are for use with VideoTunes, then load the song file.

□ MIDI SONGS MNDV # 1 - 9: 9 different volumes containing many assorted song files each that are for use with Mini-Recorder by Bonafide Systems for the MIDI-MITE.

□ SOLO-ADVENTURE PACK VOL. # 2 - 3: 2 different volumes of Solo Adventures for use with Mega Quest by Reedy Software. Each volume requires the user to boot Mega Quest first and contain SmartWRITER documentation.

□ SUPER FRONT LINE DEMO: A Coleco In-House demo of the never completed supergame version of the Colecovision cartridge Front Line. Program is auto-running.

□ NIAD BACKISSUE INDEX: SmartFILER database detailing the contents of past NIAD Newsletters through 1987. Requires that the user boot SmartFILER first.

□ UKAS MINI-REVIEWS VOL. #1-2: 2 different SmartFILER databases with mini-reviews of hundreds of software and hardware products. Requires that the user boot SmartFILER first and then follow the included instruction sheet on how to access.

□ FLASH FACTS: MUSIC STUDIES: Eight flashcard files for use with the Electronic Flashcard Maker by Coleco dealing exclusively with music theory. Requires the user boot E.F.M. by Coleco first and contains SmartWRITER documentation.

□ COLECO PRESENTS: SOFTWARE: Coleco self-booting database program containing lists of planned Coleco software and cartridges for the ADAM and ColecoVision. DDP ONLY.

□ N.I.A.D. GOLD VOL #1 - 5: 5 different volumes of enhanced SmartBASIC programs: Vol. I - Games, Vol. II - Text Adventures, Vol. III - Science & Education, Vol. IV - Home & Business and Vol. V - Utilities. Each volume contains documentation.

GRAPHICS VOLUMES

□ RLE PICS VOL. # 1 - 4: 4 different volumes of RLE picture files which can be viewed in SmartBASIC V1.0 with the included CBpicFAST program or in PowerPAINT, also contains SmartWRITER documentation.

□ REEDY ART GALLERY VOL. # 1 - 4: 4 different volumes of 13 SmartPAINT format picture files to be viewed in SmartBASIC V1.0 with the included loader program or in PowerPAINT and other picture programs which support the SmartPAINT format.

□ N & B PIX VOL. # 1 - 29: 29 different volumes of 13 SmartPAINT format picture files to be viewed / edited in PowerPAINT, ShowOff !, etc.

□ PAINTMATES VOL. # 1 - 13: 13 different volumes of clip-art, sprite and font files for use with PowerPAINT, SpritePOWER and CLIPPER by Digital Express, The Print Works or The Label Works by Walters Software Co., and other assorted programs.

□ PAINTFORMS VOL. # 1 - 4: 4 different volumes of assorted letterheads, labels font files and miscellaneous graphic files for use with PowerPAINT by Digital Express.

□ C.G.P. PIX VOL. # 1 - 3: 3 different volumes of picture files for use with the Coleco Graphics Processor. All pictures are taken from Coleco / ADAM programs and carts through the use of the cartridge version of The Coleco Graphics Processor.

ENTERTAINMENT VOLUMES

□ SUPER BUCK RODGERS: This is the supergame which comes with the ADAM

□ Computer and is offered here for replacement in the case of damage to your original.

□ PINBALL CON. SET / HARD HAT MACK (Best of Electronic Arts): Coleco supergame pack contains two great games in one package. New bug free version w/ 2 demo pinball games and an instruction sheet. Add $2.00 for 40 page manual.

□ SUPER SUB-ROC: Coleco supergame pack version of the Sub-Roc cartridge. This is a tremendous 3-D arcade action game with great graphics and a Hall of Fame option as well as an instruction sheet.

□ TROLL'S TALE: Coleco supergame pack originally developed by Sirius Software. This is a children's adventure game with good graphics and offers a strong challenge as well as an instruction sheet.

□ JEOPARDY!: Coleco supergame pack of the popular television game show. Fabulous game with great graphics, multi-player ability, load / save games and a Hall of Fame options as well as an instruction sheet.

□ CABBAGE PATCH KIDS: ADV. IN THE PARK: Enhanced version of the popular ColecoVision cartridge of the same name, but with better graphics and added obstacles to be avoided by the gamer(s).

□ TEMPLE OF APSHAI Revision 2: Epyx supergame pack which was never released. This is a role playing adventure with graphics and some arcade sequences. DISK and DDP not compatible. Comes with instruction sheet.

□ YOKE'S ON YOU / MATH WIZ: Carts which were developed by Fox Games & Sierra. Play the role of a roster in helping the chicken collect her eggs and a tremendous math skills arcade builder for ages 4-up. Comes with instruction sheet.

□ A-CHESS (SARGON): Great graphics version of chess game which was developed in CP/M and modified by Chris Braymen. Comes on an auto-booting media and includes documentation on how to use.

□ 5 SCREEN DONKEY KONG JR.: Coleco's In-House version of Super Donkey Kong Jr. with an additional 5th play level, MARIO'S BAKERY (arcade version doesn't even have this level!). This version automatically runs through all screens.

□ CHESS SOLITAIRE: Great graphics version of chess where you try to guess the moves of the masters (15 different classic games are included). Also contains a second game, Knight's Tour, and documentation in program.

□ SUPER DAM BUSTER: Supergame version of the cartridge with added screens and Hall of Fame. The only flight simulator available for ADAM and one of the best games ever made. Are you good enough to defeat the NAZI forces?

□ THE BEST OF B.C.: A two supergame pack with B.C.'S QUEST FOR TIRES and B.C. II: GROG'S REVENGE developed by Coleco of Canada. Help Thor past obstacles to find Cute Chick and to find the Meaning of Life.

□ MOAIG PHRASE PAK: An additional 300 phrases for use with Phrase Craze by Reedy Software. Compiled by George Drenk. Contains SmartWRITER documentation.

□ THE ABOMINABLE SNOWMAN: Search the Great White North for the illusive Abominable Snowman. Be careful in your quest, there are many pitfalls that you will face. Contains SmartWRITER documentation.

□ CLASSIC UNRELEASED CARTS: A collection of 8 cartridges: Fall Guy, Video Hustler, M.A.S.H., Super Cobra, Memory Manor, Word Feud, Artillery Duel and Tomarc the Barbarian which were never released or wouldn't work on the ADAM in their cartridge form. Contains SmartWRITER documentation.

UTILITY VOLUMES

□ EOS DISK MANAGER: Coleco utility program which was supplied with the 5 1/4" 160K Disk Drive. Also, contains the most current Coleco EOS Revision, Rev. 7.

□ SPEED CHECK V2.0: Enhanced Coleco digital data drive test program to assure proper speed operation of drives for best read / write performance. Best results will occur by purchasing disk from us instead of ddp and then copying over to ddp.

□ ADAM UTILITIES: Coleco In-House utilities, test and demo programs contained on an auto-booting media. Memory expander required for some of the system testers. Also, includes Adam Diagnostic and an instruction sheet.

□ MacADAM: Z80 / EOS Assembler written in machine code for the intermediate to advanced machine code programmer. Contains manual in SmartWRITER format.

□ STRATEGIC SOFTWARE PATCHES: SmartBASIC V1.0 programs for patching Strategic Software's SignSHOP, NewsMAKER, MultiWRITE, MicroWORKS, etc. programs for use with dot matrix printers with all major enhancements made to the MultiWrite Word Processor. Contains SmartWRITER documentation.

□ COLECO GAME COPY: Coleco In-House cartridge copy utility as well as a media backup utility roled into one program. Will copy most of the available cartridges.

□ SHAPEMAKER: Great SmartBASIC V1.0 utilities for creating shapes and placing text on the HGR or HGR2 screen. Shapes created can be used in PowerPAINT. Contains SmartWRITER documentation.

□ MEDIA MATE: Three tremendous utility programs for editing data packs and disks in SmartBASIC V1.0. Contains informative SmartWRITER documentation.

□ QUICKCOPY V5.0: Excellent machine code copy program (block and file) with additional ramdrive and ramcopy software. Compatible with all memory expanders and disk drive sizes. Contains a 37 page manual in SmartWRITER format.

□ COLECO IN-HOUSE PROGRAMS: Six separate programs: three diagnostic

PRODUCTIVITY VOLUMES

□ ADAMLINK II: Coleco's advanced telecommunications software with all the features of ADAMLINK I and the added ability to up and download ASCII files. Comes with addendum instruction sheets to the ADAMLINK I manual.

□ MARKET MONITOR: Coleco of Canada management system program for the personal investor. Not totally bug free. Contains SmartWRITER documentation.

□ TAX PLANNER: Coleco of Canada business software which will create a clearer and more complete picture of your tax situation. Contains SmartWRITER docs.

□ VISI-SPRITE V6.0: Advanced sprite development package with many powerful built-in features. This is the crippleware version of the copyrighted version 6.5 and is made available for demo purposes and a chance to test out before buying V6.5.

□ daVINCI: Great graphic design utility from France using a point-and-click method of operation along with a SmartBASIC V1.0 utility to convert daVINCI files into GraphixPAINTER files. Contains SmartWRITER documentation. DISK ONLY.

□ X-10 CONTROL SOFTWARE: Home appliance control / security system software. Requires a Serial Interface, Serial Cable and the X-10 Hardware. Contains SmartWRITER documentation.

□ COLECO GRAPHICS PROCESSOR: Coleco's graphic design utility used to create graphics for cartridges and supergames. Now, on an EOS media. Instructions are provided as well as a picture file conversion program. Requires memory expander.

□ TDOS V4.58: Super enhanced version of CP/M 2.2 which operates much like MS-DOS. Adds many new features. On 1 - Data Pack $6.00 and $2.00 for 30 page manual OR on 2 - 5 1/4" Disks $8.00 with manual in Doc file.

□ FRENCH BASIC: Great modification of SmartBASIC V1.0 with demos. Must have version for the serious programmer that includes 10 new commands for using sprites, windows, easy color changes, etc.

□ SmartBASIC V2.1: Nice modification of SmartBASIC V2.0 that adds macros for string inputs, formatter and backup programs. Contains SmartWRITER documentation.

□ SmartBASIC V2.0 40 COLUMN: 40 column text version of SmartBASIC V2.0 which works in STDMEM or EXTMEM modes. No longer do you have to bother with a non-standard 31 column screen. Contains SmartWRITER documentation.

□ AUSTRALIAN SmartBASIC: Enhanced SmartBASIC V1.0 with SmartKEY display of some of the most often used SmartBASIC commands (ie: RUN, LIST, SAVE, etc).

□ ADAM FORTH V1.1: ADAM compatible version of this popular programming language. Comes with a number of programs on media and instruction sheet.

□ COLECO PERSONAL CP/M: Coleco's In-House version which evolved into CP/M 2.2. Made available for collectors and as an easy way to test the ADAM components. Comes with instruction sheet.

□ TRACKER: Allows for the tracking of Hurricanes in the Gulf Coast area. Enter 14 x high-resolution map of the area. Includes SmartWRITER documentation file.

□ SP-1 CUSTOM PRINTER SOFTWARE: Specialized software patches for use in SmartWRITER. Used to imbed software commands. Available for the following printers: Panasonic 1080 / 91 / 92 / 93, Star G10 / G20, Epson FX / RX, Blue Chip, Olympia R80, Brother 2024, Smith Corona Fastext 80 / D2000, Oki 182 / 192.

□ BASEBALL STATISTICIAN: Comprehensive stat compiler for pitching, batting and team statistics with full line of edit features, save option, print features for ADAM Printer or dot matrix by Wizard's Lair. Comprehensive instructions in SmartWRITER.

□ PAINT PALETTE: For use with PowerPAINT. Will provide you with over 200 different shades of color, where normally the total number of colors accessible is 16. Contains SmartWRITER documentation.

□ SmartBASIC CONSTRUCTION KIT: Designed to aid the novice programmer better understand the many commands resident in SmartBASIC V1.0. Fully menu driven and auto-booting. Contains SmartWRITER documentation.

□ DAWGONE DAWGS: This program will, on a consistent basis, select the dog most likely to win at the local dog track through data that is inputted by the user. However, this is not a get-rich-quick scheme. Contains SmartWRITER documentation.

(continued from previous) programs along with the Tunnel'N Trolls, ADAM and Music demos.

□ MIDI DRIVERS & DEMOS: A collection of MIDI SmartBASIC V1.0 utilities programs along with technical information of the MIDI file setup. Contains SmartWRITER documentation.

□ SOFTWARE BACKUP V1.0: Allows for the backing-up of bootable programs onto the same media. Up to six self-booting programs can be placed on one Software Backup media. Most program work fine. Contains SmartWRITER documentation.

□ R.I.D. TEST: Coleco's own In-house utility designed specifically for testing the operation of the 5 1/4" 160K Coleco made disk drive. No technical knowledge required, just boot-up and wait for the results. Contains SmartWRITER documentation.

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Northern / Iliana ADAM User's Group

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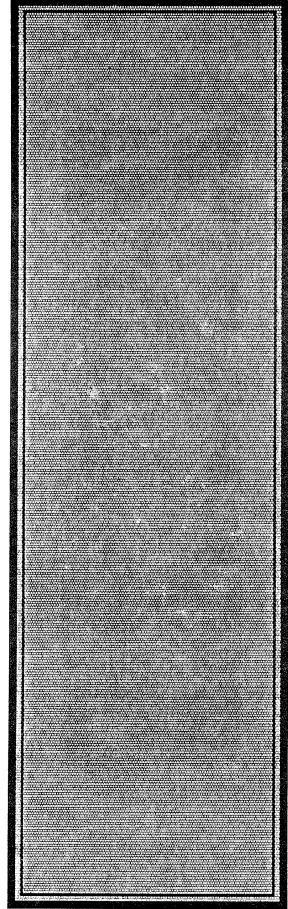
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