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Issue #81 - October, 1991

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Continuing our study of John chapter 10...

<sup>31</sup> The Jews took up stones again to stone him. <sup>32</sup> Jesus answered them, "I have shown you many good works from the Father; for which of these do you stone me?" <sup>33</sup> The Jews answered him, "We stone you for no good work but for blasphemy; because you, being a man, make yourself God." <sup>34</sup> Jesus answered them, "Is it not written in your law, 'I said, you are gods'? <sup>35</sup> If he called them gods to whom the world of God came (and scripture cannot be broken), <sup>36</sup> do you say of him whom the Father consecrated and sent into the world, 'You are blaspheming,' because I said, 'I am the Son of God'? <sup>37</sup> If I am not doing the works of my Father, then do not believe me; <sup>38</sup> but if I do them, even though you do not believe me, believe the works, that you may know and understand that the Father is in me and I am in the Father." <sup>39</sup> Again they tried to arrest him, but he escaped from their hands.

<sup>40</sup> He went away again across the Jordan to the place where John at first baptized, and there he remained. <sup>41</sup> And many came to him; and they said, "John did no sign, but everything that John said about this man was true." <sup>42</sup> And many believed in him there.

Chapter 11: Now a certain man was ill, Lazarus of Bethany, the village of Mary and her sister Martha. <sup>2</sup> It was Mary who anointed the Lord with ointment and wiped his feet with her hair, whose brother Lazarus was ill. <sup>3</sup> So the sisters sent to him, saying, "Lord, he whom you love is ill." <sup>4</sup> But when Jesus heard it he said, "This illness is not unto death; it is for the glory of God, so that the Son of God may be glorified by means of it."

<sup>5</sup> Now Jesus loved Martha and her sister and Lazarus. <sup>6</sup> So when he heard that he was ill, he stayed two days longer in the place where he was. <sup>7</sup> Then after this he said to the disciples, "Let us go into Judea again." <sup>8</sup> The disciples said to him, "Rabbi, the Jews were but now seeking to stone you, and are you going there again?" <sup>9</sup> Jesus answered, "Are there not twelve hours in the day? If any one walks in the day, he does not stumble, because he sees the light of this world. <sup>10</sup> But if any one walks in the the night, he stumbles, because the light is not in him." <sup>11</sup> Thus he spoke, and then he said to them, "Our friend Lazarus has fallen asleep, but I go to awake him out of sleep." <sup>12</sup> The disciples said to him, "Lord, if he has fallen asleep, he will recover." <sup>13</sup> Now Jesus had spoke of his death, but they thought that he meant taking rest in sleep. <sup>14</sup> Then Jesus told them plainly, "Lazarus is dead; <sup>15</sup> and for your sake I am glad that I was not there, so that you may believe. But let us go to him." <sup>16</sup> Thomas, called the twin, said to his fellow disciples, "Let us also go, that we may die with him."

<sup>17</sup> Now when Jesus came, he found that Lazarus had already been in the tomb four days. <sup>18</sup> Bethany was near Jerusalem, about two miles off, <sup>19</sup> and many of the Jews had come to Martha and Mary to console them concerning their brother. <sup>20</sup> When Martha heard that Jesus was coming, she went and met him, while Mary sat in the house. <sup>21</sup> Martha said to Jesus, "Lord, if you had been here, my brother would not have died. <sup>22</sup> And even now I know that whatever you ask from God, God will give you." <sup>23</sup> Jesus said to her, "Your brother will rise again." <sup>24</sup> Martha said to him, "I know that he will rise again in the resurrection at the last day." <sup>25</sup> Jesus said to her, "I am the resurrection and the life; he who believes in me, though he die, yet shall he live, <sup>26</sup> and whoever

lives and believes in me shall never die. Do you believe this?" <sup>27</sup> She said to him, "Yes, Lord; I believe that you are the Christ, the Son of God, he who is coming into the world."

<sup>38</sup> Then Jesus, deeply moved again, came to the tomb; it was a cave, and a stone lay upon it. <sup>39</sup> Jesus said, "Take away the stone." Martha, the sister of the dead man, said to him, "Lord, by this time there will be an odor, for he has been dead four days." <sup>40</sup> Jesus said to her, "Did I not tell you that if you would believe you would see the glory of God?" <sup>41</sup> So they took away the stone. And Jesus lifted up his eyes and said, "Father, I thank thee that thou has heard me. <sup>42</sup> I knew that thou hearest me always, but I have said this on account of the people standing by, that they may believe that thou didst send me." <sup>43</sup> When he had said this, he cried with a loud voice, "Lazarus, come out." <sup>44</sup> The dead man came out, his hands and feet bound with bandages, and his face wrapped with a cloth. Jesus said to them, "Unbind him, and let him go."

The first part of this passage recounts the major area of conflict Jesus had with the religious Jews and the stated reason that he was crucified - his statement that He was the "Son of God".

Try to put yourself in the place of the Jews of that time. Here was a common, actually a poor man, who walked around preaching about the kingdom of heaven, love, forgiveness, meekness, etc. He looked like anything but a heavenly sent messenger and did not act as everyone thought the "son of God" would act. So, when he claimed that he was the Son of God peoples reaction was usually negative, especially if they were the religious leaders. They accused him of blasphemy, which was a Jewish crime punishable by death.

In this passage, Jesus was threatened with stoning due to his statements and his response was interesting. He stated that if they did not believe his statements about his diety they should base their beliefs on his miracles, or works. In other words, he wanted to let his actions be judged as the basis for whether his claims of being the Son of God were true or not. **Hence, if the people believed that his miracles could only be done by God, then this should be proof of his relationship to God.**

Jesus' statements here are a perfect backdrop for his greatest miracle - raising a man from the dead.

The story of Lazarus' death and the famous words spoken by Jesus - "Lazarus, come forth." are well known and you can read the specific passages above.

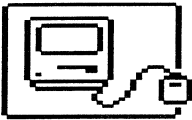
However, **this miracle like all of Jesus' miracles had a specific message in addition to the results of the miracle itself.** Each of Jesus' miracles was designed to teach a specific aspect of God's plan and show his love for mankind. The resurrection from the dead is the ultimate expression of God's plan of salvation for all of us. Jesus said it in verse 25-26 of Chapter 11 - "... he who believes in me, though he die, yet shall he live, and whoever lives and believes in me shall never die." Jesus raised people from the dead in the physical realm to illustrate that through God's plan of salvation, all men could have spiritual life after their bodies physically die IF THEY BELIEVED IN HIM. Jesus is the resurrection and the life and ONLY through him can you live spiritually forever.

(Continued on page 2 . . . )

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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 Illinois 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 October issue of N.I.A.D. is the 81st issue published by N.I.A.D., there are 80 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 First Class** and **\$26.00 Canadian 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 **1091** 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):

**NOVEMBER 19, 1991**

Subject: New Releases & Product Demos

**DECEMBER 17, 1991**

Subject: Open

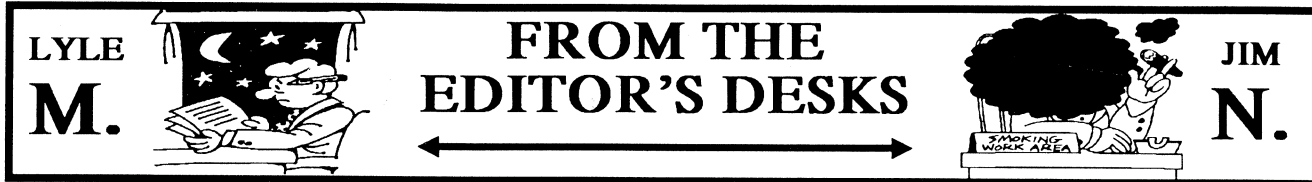
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**We have exercised due care in the preparation of this newsletter (that doesn't mean we're perfect!). No warranty, expressed or implied with regard to the information contained herein is given, either by interpretation, use or misuse. The opinions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



Our physical bodies will die one day, but we all have a spirit that is at the center of our being. Our spirits are what makes each one of us unique, it is our personality and our sense of right and wrong. Each of us can "feel" our spirit if we let ourselves - it is "us". Our bodies are referred to as "tents" in the Bible because they are just a physical holding place for our spirits. In fact, physical death is the result of our spirits leaving our physical bodies - our physical bodies would have no "life" without our spirits. Picture a coat on a person - it moves and appears to have "life" because it is over a person. However, once the coat is taken off the person it will fall limp and lifeless to the floor because there is no inherent "life" in the coat itself, only what it derived from the person who wore it.

After our spirit leaves our body it can continue living if we have established a right relationship with God through His Son Jesus or it can "die" by suffering eternal separation from God. This is what Jesus was trying to illustrate by performing the miracle of raising Lazarus from the dead.

If you believe in Jesus, you can have the eternal life he promises here. Won't you accept Jesus as who he said he was - the Son of God and believe that he will give you eternal life? Jesus can forgive the darkest of sins and bring your spirit "back to life" for eternity.

### God bless you all.

Hello to all of you. Hope this finds you happy, well and using your ADAMs to the fullest!

This is what its all about - using your ADAM to the fullest. NIAD's sole purpose is to help you as members get the most benefit out of your ADAM. We have found that almost every person we deal with does not know how to use their system to the fullest. This is what user groups and support organizations are all about and hopefully the ADAM community is fulfilling your needs in this area.

The issue of providing good support is a two-way street. First it takes a willing recipient, that is a person who wants to learn and take advantage of the services offered by the user group. This is your part - you have to read, research and study, not alot but some, enough so you absorb the information you need to use your ADAM.

Second, it takes a good network of support groups that are dedicated to the task of helping their members. Help comes in all flavors and the groups need to provide information geared to the beginner, the novice who doesn't know how to perform the basic functions of operating the system and using the software. We also need to provide support for the intermediate and advanced member who used to be a beginner but now is expanding their use of the ADAM and needs a different type of support. So, if you see articles covering the very simple to the very complex subjects, that is by design because user groups have a wide range of members.

I mentioned that a good "network" of support groups is required. One group or organization can't be all things to all people. Multiple groups are needed because each one complements the other and the result is a comprehensive support organization that benefits the members of each group. This was the basic principle behind the forming of the ADAM News Network (A.N.N.) and N.I.A.D. fully supports this concept

**The excellent ADAM Survival Guide is a result of this concept in action.**

Hence, we need your input as to what additional or different services we can provide for you. If your needs are not being met by NIAD let us know so we can address your suggestions which will help all members.

Hello once again to all ADAMites out there. Seems like only yesterday that I had completed the September issue and mailed it off to our members. Boy, how time flies! A lot has happened since our last issue and when you read the N.I.A.D. News and Updates article you will see what I mean. Many new software programs have been released over the past couple of months which we just haven't had enough room in the newsletter or time to sit down for a good period and try them out which will all be reviewed in the November issue. This along with the fact that a couple of the more anticipated hardware products (The ADAM Image Maker and 3 1/2" 1.44Mb ADAMnet Floppy Disk Drive) seem to be on the verge of release means that this will be one busy Holiday Season not only for ourselves but also for you.

At this time of year, we always here from people who say that this is the last Christmas for the ADAM, that it has no chance to survive and flourish through yet another calendar year. It is always nice, however, to stick it in the nay sayers faces when the holidays do role around and the support for our Classic computer seems to be always increasing. This is not the case for many other 8-bit computers like the Commodore C=64 and the Apple II line (e, c, +, and gs) which have been all but abandoned by their creators, software and hardware developers, and numerous other companies which produced magazines solely for these systems. In a little over a year, I have seen the support for these units drop to near non-existent, why you may ask, because of the all mighty dollar. These companies and owners have taken for granted what we ADAMites have learned can't be taken for granted for one fleeting second, DEDICATION. What the big boys tend to do when they are hit with hard times is to drop their old products in favor of new and more powerful products which they hope will become the next Cabbage Patch Kids phenom. What they end up with are disgruntled owners of old products who no longer have any further lines of support and will definitely never buy another product from the same company for fear of the same thing happening all over again.

N.I.A.D. has thrived over the years due to the fact that we want to see that every ADAM owner is able to say that the purchase of the ADAM was not a mistake. We, and many others, have taken over the responsibility of supplying ADAM owners with whatever is needed to keep their ADAMs useful, something that Coleco and many others would not do. Are we dedicated? Without a doubt! We have been one of the top users groups / mail order vendors since January of 1985 and will continue on our merry ways to insure that ADAM owners all over the world will continue to get the support that they so rightfully deserve.

I also have to admit that I have an awful lot of fun doing what I have been doing for N.I.A.D. and the ADAM since 1983 even though I don't have as much time anymore to spend working with the system. I guess if it ever becomes like a real job for me and their no longer is that aspect of enjoyment that I get out of the system, then it will be time to hang up the keyboard and move onto something else. Basically, this is the message which I have been passing along over the years. If the ADAM still provides for all the needs which you require from a computer and it is still fun and interesting for you then stick with it, stick with us and also any other users groups which you may belong to. The ADAM community is a very close nit group which can't be said for many other computers and to continue this we have to show our support and willingness to endure the hard times as well as enjoy the good times if we are to flourish on into the future.

In this issue you will find quite a variety of material on different aspects of using the ADAM (Machine Language programming, SmartBASIC programming, CP/M and TDOS and much more), we would like to thank each of the authors for spending the time to put together such terrific material and sharing it with the entire ADAM community!



# N.I.A.D. NEWS & UPDATES

⇒ N.I.A.D. CHRISTMAS SPECIALS are off to an early start this year with the reduction of Annual and Renewal Membership prices across the board. The specials are as follows and are valid through the end of January: U.S. THIRD CLASS will not be offered over the next three months for renewal or annual membership; U.S. FIRST CLASS is now set at \$22.00 for a full year / ten issues of the newsletter; and CANADIAN FIRST CLASS is now set at \$26.00 for a full year / ten issues of the newsletter. Foreign Membership is still set at \$40.00 for a full year / ten issues of the newsletter. The Membership Specials are valid from November 15th through January 30th, 1992.

⇒ O.B.S. SERIAL BOARDS are once again available due to the recent acquisition of all product rights by Herman Mason and George Koczwara of the Orphanware Business Systems and CL Digital product line. The Serial Board provides one standard serial port which can be used with such programs as CP/M, TDOS, ADAMLINK III+ and SmartBASIC V1.x amongst many others. The only difference in these boards of the facts that they plug directly into the right hand Expansion Bus where as previously the boards were enclosed in their own plastic housing and an extension cable connected the Serial Board with the ADAM Memory Console. N.I.A.D. now has these OBS Serial Boards available for purchase at \$59.95. Also, a Serial Cable is required if not already owned, price on the cable is \$14.95.

⇒ DELAWARE VALLEY ADAM USERS GROUP has recently been formed in the Philadelphia area. This new AUG was brought to our attention by it's secretary, Rich Cossaboon. To get in contact with this new group write to: D.V.A.U.G. - 10848 Modena Dr. - Philadelphia, PA 19154. They also have a new BBS up and running: (215) 497-2110; 6pm-10pm Mon-Fri, 10am-10pm Sat-Sun and Holidays. The BBS operates at 300 baud with 7-E-1 parameters. Good Luck D.V.A.U.G.!

⇒ S.M. VIDEO has recently introduced five different power supplies for the ADAM ranging from 25 watts up to 285 watts. Each of these power supplies have been custom configured from their IBM setup to be used on the ADAM. Also, the power supplies have an additional power plug which allows different items such as a printer or monitor to be powered by the power supply rather than plugging into a wall outlet. Check out S.M. Video's advertisement in this issue.

⇒ SmartBASIC V1.X has undergone a small update which fixes any known bugs in the usage of Micro Innovation's M.I.B. 2 Interface. The patch program will be printed in the November issue, however if you have registered your copy with Drushel Software, the information will have been sent automatically to you. Word from the author has it that only 2 registrations have been received and therefore he can't follow through on his plans to supply updates directly to owners. The new version is listed on the label as SB1.x.20Y, anything else and the M.I.B. 2 Interface can't be accessed correctly without the new patch. Further exciting news from Rich Drushel has it that he has completed a patch for PowerPAINT by Digital Express Inc., which allows it to work entirely from any of the PowerMATE Hard Drive Systems or CL Digital Minnie-Winnie Hard Drives. This is probably one of the most anticipated patches for Hard Drives owners and we hope to pass along further information on obtaining this patch in the November issue due to the fact that Rich is awaiting permission from Soloman Swift, the author of PowerPAINT, to distribute the patch.

⇒ HOOSIER SOFTWARE has recently completed and released their update to Tax Helper 1990 called appropriately Tax Helper 1991 which will aid in the tedious process of filing 1991 tax returns. As many have found out, Tax Helper is not a once a year program but can easily handle year round tax calculation requirements and 1991's version has been even further enhanced and expanded upon. Tax Helper 1991 is

available for \$17.95 and a full review will be run in the November issue for all those early bird tax filers amongst us. An update is available directly through ADAM's House for owners of the 1990 version for \$10.

⇒ MICRO INNOVATIONS has informed us that the 3 1/2" 1.44Mb ADAMnet Floppy Disk Drive is undergoing final design changes and testing and should see a release in the immediate future. Once the 3 1/2" A.F.D.D. is completed, M.I. has stated that a major push to complete the PowerMATE and ADAMnet 40Mb L/C Hard Disk Drives will begin with the emphasis on the PowerMATE version first. All retail prices have temporarily been put on hold until each of these drives are completed. The PowerMATE version will be 100% compatible with all previous PowerMATE designs, but still will not be compatible with all EOS programs unless a patch is developed for that particular program. The ADAMnet Hard Drive version will be compatible with all ADAM programs (be it CP/M, TDOS or EOS); however, it will operate considerably slower due to the speed limitation of the ADAMnet processors which are built into the ADAM. With a little good fortune, ADAMites should see the availability of all these highly anticipated products anywhere from November thru January. Also on the drawing board are a 1Mb and 4Mb Memory Expanders which would use new chip technology which is more affordable and could possibly be set up with a battery backup. A projected price on the 1Mb Memory Expander would be around \$169.95. Let us know if you are interested!

⇒ HEXACE SOFTWARE has released a new utility program called Edix which we will run a full review of in the November issue, retail price is \$10.00. Hexace has also been busy at work developing many other programs, patches and information booklets (some of which may even end up in the Public Domain) One such patch will create a ramdisk for use in SmartLOGO the size of the Memory Expander that is recognized as Device #2 (replaces the second Digital Data Drive even if one is not installed in the system). The patch is available through Hexace Software for \$12.50 and proof of ownership of SmartLOGO is required. Many other interesting news bits, etc. have been sent to us by Hexace and we should have most if not all of them covered in November.

⇒ GMC SOFTWARE, operated by Guy Cousineau, has recently released Directory Sorter V1.0 which is a professionally designed and feature packed utility on the same line as their previous releases (Disk Doctor and EOS File Indexer). Directory Sorter will alphabetize directories, show file sizes, format and initialize disks and data packs, verify the formats, and create directory sizes from 1 to 8 blocks. Best of all, retail price has been set at \$10.00! Watch for a review soon.

⇒ OASIVE PENSIVE ABDACUTORS has announced that a major modification to the Adam Image Maker Video Enhancement Board has now been completed and this is the cause for further delays in it's release. This new enhancement allows for the use of any Composite Monitor with the A.I.M. to display text in 80 columns. Previously, the only way to attain an 80 column display was to purchase an RGB or VGA Monitor. These monitors can easily run upwards of \$300 to \$400 alone where as Composite Monitors can be found for as low as \$100. The AIM will be supplied with patched versions of TDOS, CP/M and SmartBASIC that have been completely tested and all offer 80 column display capabilities. We hope to see the release of the AIM board soon and will make available further news of it's availability in November.

⇒ Other new (and not so new) products which we could not get reviewed in this issue but will hopefully all make it into the November issue include: The ADAM Home Automation Package, Norman's Railroad, Invoicer III, Pro Picks, Edix, Formax, Appointment Book, Birthdays & Anniversaries, IBM Clip-Art, Chromatics, Basic Programming Tutorial and much, much more!



## SO FAR

Part II & III of VI

An Essay on ADD-ONS for the Coleco ADAM Computer  
by Ron Collins of the AKRON A.U.G.

**EDITOR'S NOTE:** *These are the second and third chapters of the "SO FAR" series written by Ron Collins of N.O.A.H. which originally appeared in the "ADAMLink of UTAH Newsletter"*

### Part Two Coleco Expands

At least in the early days of the ADAM, Coleco was good about providing more useful software and hardware to maintain the competitive edge they were striving for. Programs such as EXPERTYPE and SmartLETTERS & FORMS to get better use from the system in general began to appear on store shelves. Learning and basic educational games and programs came along at the same time. Programs like Electronic Flashcard Maker and Richard Scarry's Best Electronic WordBook come to mind. To help the family or small business users, more sophisticated software such as ADAMCalc and SmartFILER were released. More and more supergames were also released to keep up that end of the market. Still, to take better advantage of the capabilities offered by the ADAM, a combination of hardware and software was still needed.

It was at this time that Coleco made the second Digital Data Drive available as a purchase option. Now you could expand your storage capacity. Just snap in two plugs and install 3 screws to double your storage to 512K (2 separate data packs each capable of storing 256K)! To expand your workspace under SmartWRITER a new type of expansion device was released... the 64K Memory Expander! By plugging this little circuit board into the third expansion slot inside your CPU, SmartWRITER's workspace would be expanded to 144K! Owners of ADAMCalc would have the added advantage of a print spooler. When typing out your spreadsheet on the SmartWRITER printer, the full spreadsheet would be copied into the 64K card and then printed from IT and control of the system would return to you. You could then continue with the same or another spreadsheet while your first spreadsheet was being printed for you in the background. To make more business software of use to ADAM owners, Coleco released it's version of CP/M, a new operating system for use on Z80 based computers. The use of CP/M would open up a wealth of new software written for other computer systems running CP/M. The operating system was written by Digital Research Incorporated and was later copied and modified to create MS-DOS... but that's another story!

Coleco's next hardware add-on was the AUTO-DIALER. This neat device would plug into the side expansion port of the ADAM CPU. Along with this plug-in module came a revision of SmartFILER called ADDRESS BOOK FILER. Between the hardware and the software, owners could press a couple of buttons and have their ADAM make phone calls for them. You were even given the ability of typing a form letter with SmartWRITER and then using a special feature of the ADDRESS BOOK program to merge your addresses with some letter you had written. For the price, it was a very nicely done package. At this same time, the computer world was going head over heels about a newly affordable device... the telephone MODEM. With a modem and a computer, it was finally possible to connect two computers together via the local telephone system network. A connection of this type would give owners the ability to "talk" to other ADAM Computer owners and pass messages and programs back and forth to each other. All that would be needed was an ADAM compatible modem and software.

Coleco engineers first decided on an internal 1200 baud modem... four times the speed of the established Commodore modem! Unfortunately, due to a beginning financial crisis at Coleco, a slower 300 baud modem was finally brought into production. This device would finally pull the

ADAM into the communications age of computers! Coleco at long last began to work on a disk drive add-on for the ADAM. The benefits of a disk drive were a higher speed of operation, better reliability, and less likely-hood of media destruction. Combined with a disk drive, the modem would be more cost effective during file transfers. As less time would be needed to store the files to a disk rather than a data pack, the use of online computer networks such as CompuServe became popular to ADAMites (as we are known to other computerists). In fact, a whole new section came into being on CompuServe that was dedicated to our computer. Today, this area, known as the COMPUTER CLUB contains a VAST amount of software and information free for the taking. Two data library areas, one for EOS and one for CP/M are at your disposal.

As innovative as they were, those data drives could chew up an important tape at the WORST possible time! In keeping with advertised plans of releasing an IBM emulator, Coleco engineers began to work on a 360K double-sided disk drive. The drive design was completed and the software packages planned were being written to take advantage of the extra media. In fact, most software would have provisions for not one but TWO disk drives! Code in Coleco's implementation of Digital Research's CP/M 2.2 package points to a 360K drive size, as does it's BACKUP.COM program.

All of this work was being done prior to the actual release of most of the software packages. It's unfortunate that the same money problems facing Coleco caused them to drop their idea of a double-sided drive and instead market a single-sided 160K drive. Other planned peripherals such as a "GAME WAFER", a CD adapter, an IBM emulator, an RS-232 Serial/Parallel Interface and an 80 Column Video Adapter were prototyped along with the 360K drives and the 1200 baud internal modems, but, alas, were never sold or even manufactured beyond those few prototypes.

To make matters even worse, Coleco decided to drop it's support of the ADAM and thereby any new hardware or software. Marketing the ADAM in toy stores, as a "toy" had finally caught up to Coleco. It was a bad decision, but also the only one the management of Coleco knew HOW to make. They were, after all, a producer of toys. Selling computers and Cabbage Patch dolls side by side was all they knew! When this didn't pay off, management decided to drop the computer and concentrate on the doll. Only those packages already completed and manufactured would be sold... until supplies were exhausted. Where would ADAM owners wishing to upgrade their computer systems go for this long sought after hardware? Enter EVE Electronics Systems, the first in a wave of third party hardware support!

### Part Three Third Party Hardware

In hopes of keeping the ADAM Computer alive and thriving, EVE Electronics Systems, under the direction of Hank Szretter, began to design and market various new hardware peripherals for Coleco's marvelous computer.

Starting with their own imitation of Coleco's 64K Memory Expander, EVE began to carve out a niche for themselves. In a short while, Hank produced ever more innovative hardware for the ADAM community. The advent of inexpensive dot matrix printers, with their ability to print high resolution graphics images and high-speed, 1200 baud external modems, brought on a new flurry of production. These new printers and modems had the ability of being used with virtually ANY computer system as long as that system had the software and the output ports (a Centronics Parallel printer port and an RS-232 Serial port) and the right

software. Enter the EVE SP-1 Serial / Parallel Interface Unit!

Priced at \$139.95, the SP-1 came with software for use with either the popular SmartBASIC or with CP/M. Modem and printer prices were still rather high by today's standards, but there were many an ADAM owner who sprang for the new hardware! EVE later released separate versions of the SP-1 to provide only one or the other ports. This was a great cost saver for ADAM owners on a tight budget. Now was the time to look at some of the "other ideas" Coleco had toyed with but never completed!

Easily the most all around USEFUL device produced by EVE at this time was a new unit to allow 80 column video output on a high resolution 80 column monitor. The VD-MB, released around the middle of October of 1985 provided CP/M users with the ability to finally take advantage of those screen oriented business software titles like dBASE II, WordSTAR, SuperCALC and many others. The unit also provided buyers with three more new expansion slots for future hardware devices. Priced at \$249.95, the VD-MB was to bring many an ADAM into the business office. The VD-MB was released in two versions, one version was contained inside an 80 column monitor. The second was provided with a cable to connect to a buyer provided 80 column monitor.

With the advent of such new hardware and software products, the need of the SmartWRITER printer was reduced to the simple task of merely providing power to run the rest of the system. The printer, when not being used for true letter quality printing, tended to make a rather bulky power supply. Addressing the need for a compact source of power for the ADAM, EVE released it's PS-1 power pack. This device, which sold for \$69.95, was later replaced by many when the internal SmartWRITER power supplies were sold off as surplus at less than \$20 each.

Next off the bench came the EVE SS-CC Speech Synthesizer unit with Clock / Calendar card. This device, originally sold at just under \$90, would prove, until later years, to be next to useless. Software was included for use with SmartBASIC and CP/M, but was good for little more than telling time. Programming was sparsely documented and sales just never seemed to take off.

Thanks to dedicated software authors in later years, most notably Solomon Swift of Digital Express, the SS-CC could finally be used as PART of a program. Dr. Swift gave us many a fine program that allowed messages to be "spoken" by the ADAM if the SS-CC were connected and the WILDCARD key pressed. Programs such as ADAMTalk and MicroTALK were released later by other firms and gave the SS-CC owners more versatility in use of the "talker". Thanks to the software people, this device could finally be taken seriously by the average ADAM owner.

At the end of 1985, EVE Electronics released the most long awaited hardware device of them all, the double-sided disk drive!

Actually a single-sided ADAM disk drive upgraded with a new drive EPROM (the chip on the disk drive controller board that tells your drive how to talk to ADAM) and a set of IBM compatible double-sided disk drive mechanics, this new add-on would start an ever growing tide of new versions from other vendors! Costs tended to vary over the next few months as these drive upgrades became more and more popular. At one time, people were sending their own 160K disk drives into EVE and various user's groups along with \$179 to be converted to double-sided drives and then returned to them.

Special software allowed owners of this double-sided drive to store up to 254K on a single disk and to still use their older 160K in the same drive! The only major problem with these drives was in the use of a brand of disk drive mechanics that had a tendency to draw far more power than the original ADAM drives. This power drain would soon cause these drives to over-heat and in some cases, would cause physical damage to the disk drive controller boards themselves. About this time, a new vendor came onto the scene with an original design double-sided drive.



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- ⇨ POWERPRINT by Strategic Software Inc. ....\$5.00
- ⇨ THE BEST OF BRODERBUND by Coleco Electronics .....\$5.00
- ⇨ WORLD CAPITALS by Parallel Systems.....\$5.00

## USED MANUALS & BOOKS

- ⇨ HACKER'S GUIDE TO ADAM VOL. I by Hinkle Publications .....\$5.00
- ⇨ HACKER'S GUIDE TO ADAM VOL. II by Hinkle Publications .....\$5.00
- ⇨ SmartBASIC FOR THE ADAM by Brady Books.....\$5.00
- ⇨ THE COLECO ADAM ENTERTAINER by Osborne McGraw-Hill .\$.50



# KEEP YOUR ADAM RUNNING

## Part II of VI

### by John Burns

**EDITOR'S NOTE:** *The following is the second in a six part series provided by Richard Clee, President of the Metro Toronto ADAM Group (MTAG), through 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.*

## ADAM REPLACEMENT RIBBONS - CHEAP



New, original, Coleco ADAM ribbons run about \$13.00. MTAG can provide ribbons at about \$6.00.

But you can make a very good replacement cheaper, at about \$3.50 and a little work. The secret is to use QUME 1 (#183-3220-0 QUME 1, Black) ribbons by KO-REC-TYPE. (Maker - Barouh Eaton (Canada) Ltd, 6291 Ordan Drive, Mississauga, Ont, L5T 1G9), and insert them into your original ADAM cartridge. As of this writing, (Nov. 88) the normal list for QUME 1 at Grand and Toy is \$4.25. Sale price is \$3.49.

NOTE. IBM and most similar ribbons are 5/16th inch wide and will not work. ADAM must have 1/4 inch ribbons.

### ADVANTAGES:

This replacement requires drilling an extra hole to prepare the original Coleco cartridge, but once done, you can use them for a long time. It also makes rewinding a lot easier since you have a longer stud and do not have to disassemble the Coleco cartridge and use the old pen tip trick to crank the FEED REEL around to rewind. You will also be able to easily drop in ribbon replacements as yours wear out. (You should get anywhere from 3 to 6 rewinds from the QUME replacement) The basic idea is to simply discard the QUME cartridge casing and transfer the 1/4 inch ribbon to your ADAM cartridge. Here are a couple of tricks that might help you.

### TRICK #1, THE HARD WAY:

Yes, you can do a transfer from the QUME 1 FEED REEL to your original ADAM FEED REEL without drilling the hole. The hollow cavity on the base of the QUME ribbon will fit over the stud on the ADAM cassette but the blue shaft, sticking up from the QUME FEED REEL won't let you close the casing. To transfer to ADAM's FEED REEL you have first to run the new ribbon on to ADAM's TAKE-UP REEL, then rewind it back onto the FEED REEL. To do it, open both cartridge casings, discard the old ADAM ribbon and drop the new ribbon into the original, Left Side, ADAM TAKE-UP POSITION. CAREFUL! READ ALL of this and the next section, first, if you haven't opened an ADAM cartridge before. Once the QUME ribbon is in place, string the ribbon as normal up through the horns and down to the ADAM's TAKE-UP REEL which you have positioned on the FEED REEL STUD, on the Right Side of the ADAM cartridge casing. The problem is, the QUME has the adhesive tape on the wrong side of the leader. Cut it off and use fresh tape to attach the ribbon to the ADAM TAKE-UP REEL, with the shiny side of the ribbon facing inside the casing. Watch out for the ribbon when rewinding.

It will frequently twist, get off the winding track or you will tape the wrong side of the leader to the TAKE-UP REEL. (ADAM's goes clockwise, while the QUME goes counter-clockwise.) Once you have the leader taped to ADAM's TAKE-UP REEL, then you start turning. It will take a long time. When you get to the end of the QUME feed, tear

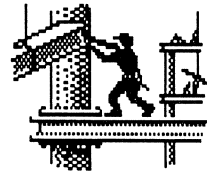
the ribbon loose from the QUME FEED REEL, discard the QUME REEL, and tape the end onto your original ADAM FEED REEL, transfer the ADAM TAKE-UP REEL to it's own side and mount the ADAM FEED REEL on it's own stud. To reel the ribbon back onto the ADAM FEED REEL, you have to turn the reel COUNTER-clockwise. Frankly, this system is a lot of work.

### TRICK #2. THE EASY WAY:

Instead of rewinding the whole ribbon twice, just drill the hole and drop the entire QUME FEED REEL assembly into the ADAM cartridge case.

### HOW TO DO IT: Equipment Needed:

- 1) Drill, power or hand
- 2) 1/4 inch twist drill bit
- 3) Scissors
- 4) Scotch Tape



1. From the ADAM cartridge, remove the Drive Elastic.
2. Remove the cartridge casing upper cover. Use a broad, pointed knife blade and GENTLY! pry up the cover from the casing body. WATCH OUT FOR THOSE FRAGILE PLASTIC PINS!!! Start at the 3 o'clock position and work you way around until all SIX pins and sockets are separated.
3. With the cover removed, lift out the empty FEED REEL (right side). Discard the reel but DO NOT LOSE the pronged keyhole shaped tension spring. It makes a spare if the new QUME one is too tight.
4. Lift out the loaded TAKE-UP REEL, (left side).
5. Strip off the used ribbon. Easiest way is to hold the shaft-top in your fingers, over a waste basket and let the ribbon's own weight strip itself off in a downward spiral. (Takes a couple of minutes).
6. In the main ADAM cartridge body, lift out the white, splined, plastic DRIVE SHAFT. It sits in a hole slightly under the white pronged plastic TENSION TRIGGER. You may have to lift the TENSION TRIGGER slightly to remove the DRIVE SHAFT. Now set the main cartridge body aside, with TENSION TRIGGER in place.
7. Prepare ADAM cartridge cover to use QUME 1 FEED REEL. With 1/4 inch drill bit, (or fractionally larger), drill a hole through the cover, in the centre of the FEED REEL recess. To Do: Lay the cover upside down with the plastic pins facing upwards. You need to drill a hole in the centre of the impressed circles which mark the FEED RECESS. Just establish the centre and drill the hole. It doesn't have to be perfect. Blow out the plastic drillings. CAREFUL OF THE PLASTIC PINS!.
8. Extract the QUME ribbon from the casing. How to: With the same knife you used to open the ADAM cartridge case, attack the upper right seam of the QUME cartridge case, at the point where the ribbon feeds out. The seam looks heat-sealed but is not. Simply pop the cover off. The casing will be discarded.
9. Inside the QUME casing, notice the ribbon has a blue leader and is threaded from the spring loaded FEED REEL (right side) across and around two blue plastic shafts (left side). Separate the ribbon from the TAKE-UP POST end. Discard the shafts and the TENSION TRIGGER.
10. Lift out the loaded FEED REEL and SPRING. (It fits in the groove on the FEED REEL shaft under the ribbon). Transfer the whole assembly (New Ribbon, New FEED REEL and Spring) directly into the ADAM cartridge casing. Notice the hollow in the bottom of the QUME FEED REEL slides directly over the ADAM FEED REEL mounting stud.
11. Make sure the straight end of the FEED REEL TENSION SPRING, goes into the the vertical slot on the extreme right side of the ADAM cartridge casing.
12. Mount the ADAM TAKE-UP REEL in it's hole.
13. Feed the ribbon, up from the FEED REEL, behind the TENSION SPRING, up through the horns and down to the TAKE-UP REEL. Pull

through enough ribbon to ensure you have the shiny side facing in. Dull side is the printing side.

14. The QUME blue leader is too long so it must be cut shorter. Leave about 1 inch of the leader.

15. Cut a small piece of adhesive tape and attach to the leader on the shiny side of the ribbon. Attach the other end to the TAKE-UP REEL so it will retrieve in a clockwise direction. ADAM TAKE-UP REEL retrieves CLOCKWISE whereas QUME retrieves COUNTER-CLOCKWISE. Turn TAKE-UP REEL several times to take up the slack in the ribbon.

16. Now, adjust the ribbon so it runs between the plastic pronged TENSION TRIGGER and the splined DRIVE SHAFT. To do this, lift the TENSION TRIGGER with a knife point so it slides up on it's pin about 1/8th inch. With the ribbon against the TENSION TRIGGER, drop the splined DRIVE SHAFT into it's hole with the lower flange of the splined portion under the TENSION TRIGGER. Press TENSION TRIGGER down to lock the DRIVE SHAFT in place. You should now have the new ribbon trapped between the DRIVE SHAFT and the TENSION TRIGGER, with the shiny side inwards.

17. Carefully replace the cartridge cover into place, ensuring all six pins enter their respective holes. The blue shaft of the new TAKE-UP REEL should stick up through the newly drilled hole in the cover.

18. Replace the drive elastic.

19. Insert the cartridge into your printer and test. You will need to run at least a page of text to determine if the new TENSION SPRING is too strong or too weak. Too strong will result in faint print from the printwheel impacting on one place in the ribbon without advancing. The TENSION SPRING is probably too tight on the FEED REEL HUB. Not enough tension is illustrated by fluttering of the ribbon under the printing impact. This may allow the ribbon to jump out from behind the printwheel and give erratic printing.

20. To cure the TENSION SPRING problems, you will have to remove the cartridge cover once again, and either SLIGHTLY OPEN up the loop on the TENSION SPRING to reduce tension, or SLIGHTLY CRIMP it shut to increase tension. (Careful. This is spring steel wire and will jump out of your fingers and hide itself in the most Godawful places.) If you have real problems getting even ribbon feed (Most usually it is TOO MUCH DRAG with not enough feed), you may wish to replace the QUME spring with your original ADAM one with the little plastic roller on the bent end.

The next time you need to rewind the ribbon, just take your reversing electric drill, snug the chuck down onto the blue finger shaft, hit reversing direction on your drill, medium speed and steady (or it'll jam) and wind up you ribbon for a fresh start. Works great!.



## CLEANLINESS IS NEXT TO GOD OR GREMLINS

When was the last time you gave your ADAM a real house cleaning?. If you haven't done it in the last three months, you are running a real risk of all kinds of little gremlins in your equipment.

## ADAM GOES WEIRD

Just recently I had an experience where my tapes wouldn't record and the screen would suddenly go crazy, with all kinds of queer symbols showing up in the documents. It just about drove me nuts trying to figure it out. The answer?. Static charged dust particles that got into the connectors between the tape drive and the CPU. I have also discovered that dust was blocking the heat vents and dramatically reducing reliability because of overheating. It doesn't take much.



## THE SOLUTION

Take your hose type vacuum cleaner with the narrow wand attached

and really go over the following:

1. Tape drive: Vacuum inside the doors and clean the tape heads with 99% Isopropal alcohol. There are several good kits available with both cleaner and lubricant. Coleco recommends AGAINST using abrasive cassette scrubbers for the tape drive.
2. Inside CPU: Pop the top cover off your CPU and really vacuum inside. Do the tape drive vents. They generate a lot of heat and attract dust. Get right down into the connectors, into the side, bottom and rear vents and the internal slots.
3. Printer: Wipe off the print rails with the silicone cloth. (Don't use oil. It accelerates dust collection.) Vacuum inside the printer, especially the printhead area and the metal heat sinks.
4. Keyboard: turn it over, and shake it out, then vacuum it out. You'll be surprised at the garbage that collects in the keyboard.
5. Disk Drive: Really suck the dust out of the drive area. Take the two side plates off at least twice a year to allow you to clean more thoroughly.



## CAUTION

A word of caution. Don't get over-enthusiastic on the circuit boards. Too powerful a suction could pull something loose.

## COOLING FANS

Clean air flowing will dramatically increase the life of your equipment. Heat kills electronics. I use a pair of FRESHAIRE filter fans by Charlescraft. The advantage is they have a botton-mounted, reusable and replaceable charcoal filter so they actually suck dust in, trap it, and expel clean, cool air. They're sold at Canadian Tire for about \$18.00 each. I got my pair at a yard sale for \$7.00. You can vacuum out the filters several times but replacements are available at Can Tire for about \$4.00. I have one blowing on the back of my CPU, Disk Drive and Power Supply, and the second blowing into the rear of my printer.

Remember to disassemble the fans once a year and clean out the garbage. You'll really find out how dusty your residence is when you do that. The inside of the fans get filthy. FANTASTIC liquid cleaner does a great job.

## COVERS

Keeping your ADAM under a custom plastic cover is very wise. They cost about \$20.00 and are worth it. There are custom covers made by a company by the name of Classic Covers for the ADAM. These consist of the ADAM Memory Console, Keyboard, Printer, Coleco made Disk Drive and also the Expansion Module #3 Memory Console. If you keep your ADAM vacuumed out and clean as a whistle as well as properly covered, you'll add years of reliable life.

Good ADAMing until next time.

**EDITOR'S NOTE:** *As was mentioned 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, we 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.*

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# USING MACHINE LANGUAGE ROUTINES FROM WITHIN SmartBASIC

Part II of III

by Mel Ostler / Roadrunner Publications

**EDITOR'S NOTE:** *This is part 2 of a 3 part series on the usage of Machine Language routines in SmartBASIC by Mel Ostler. Part 1 appeared in the April 1991 #75 N.I.A.D. Newsletter. The final article will be run in the November issue of the N.I.A.D. Newsletter.*

In the last article, which was the first in this series of articles, we arrived at the point in the Basic "Setup Routine" where we were about to make analysis of a DJNZ loop beginning at 16629. Let us continue from that point to clarify just how straight forward the SmartBasic program by Coleco is.

But first let me again attempt to explain why it is that we are taking this particular approach to teaching how to introduce machine language programs into the ADAM via the Basic program.

You see, when one begins to get into the advanced programming mode, as I suggest that most of you are, (else why your interest in this series), it is a great deal easier to have confidence in something you understand.

The Setup Routine disassembly, while interesting in and of itself, also helps one become more familiar with some of the tools which Basic uses in it's operation. These tools consist of storage locations of certain parameters which Basic uses to keep track of things, certain constants which it similarly uses, as well as several tables within resident Basic as well as higher up in Basic RAM.

Some of these tables in Basic RAM, (by Basic RAM I mean that part of RAM available to Basic after it is loaded from the media, but not high enough in RAM to interfere with the EOS), are at the high end working down as they are increased in size, and others start at LOMEM and work upward as they are increased in size.

While the programmer can make good use of some of these parameters, tables, etc.; we will also see that there are some routines in Basic which can be called from a very elementary setup routine of our own, and these routines might well be useful to us at times.

I mentioned in the last article that we wanted to find out about some of the EOS routines which we can CALL with short user setup routines also, but we will herein discover that Basic can be used in the same way. After all, why rewrite good assembly programs, using up more RAM, when sometimes another adequate routine may already be in residence in RAM, in basic or EOS, awaiting our CALL?

And as long as we are discussing other routines that can be CALLED. The reader will easily see how an operating system like the EOS, being initially written to satisfy the needs of programmers, can be improved upon to be even more useful and convenient. But it will be a couple of articles away yet before we get that far. For now, let's get on with the ground work.

In the disassembly of the setup routine, beginning at 16491, where we finished our first article, we found that register B was loaded with 31. Since in a DJNZ loop the B register is used to indicate the number of cycles in the loop, and glancing quickly down through the disassembly to the instruction DJNZ and seeing that B is in fact left intact, we know that the loop will cycle 31 times.

Repeating the first two instructions from where we left off in the last article:

```
⇒ 16491:$406B 06 1F      LD      B, $1F
```

```
⇒ 16493:$406D 11 75 3F  LD      DE, $3F75
```

puts the value of 16245 into the DE register pair. Looking at the dump of the Basic from the media, we see that 16245 is the first entry of a command table, called the Variable Command Table. (We can identify it as such with the assistance of "HACKER'S GUIDE TO ADAM, Volume II, by the Hinkles). in the media dump we find certain 'variables' which are also commands acceptable by Basic.

If one searches his dump of the Basic program from RAM, he will nowhere find this table listed, although we find it listed here on the media dump in what is to become the data table later after the Basic is fully setup. And yet the Basic program has to have this command table somewhere in order to determine whether or not the user command from the keyboard is one from the acceptable set.

Even the initiated could surmise then that this table must be up somewhere in Basic RAM, (not below LOMEM at 27407, or wherever the user may later redefine LOMEM). Another perusal of Hinkle's work evidences that the table does in fact float around RAM, in the lower section of Basic RAM, and is pointed to by an entry in the Data Table. (See pages 5 and 51 of the reference cited. Please note that there is an error on page 5 thereof, inasmuch as there are actually 31 or \$1F variables stored here initially instead of the stated quantity of \$1B. And in fact the last two entries in the table now being pointed to by the DE double register, will not even become part of the variable name table, [for reasons which we will discover as we proceed], and so the number should actually be \$1D, not \$1B as stated).

(Also note that it may be more convenient to the reader to change the words on page 51 of the reference, following \$3EE1, to read "Pointer to start of variable command name table". The number found there is in fact the beginning of the VCNT, being one number larger than the "...end of variable table" as printed).

Thus we get an indication that this loop is going to effect a transfer of these "variable commands" to points beyond 27407. So let's follow along and see how it is done. Continuing then:

```
⇒ 16496:$4070 62          LD      H, D
⇒ 16497:$4071 6B          LD      L, E
⇒ 16498:$4072 13          INC     DE
⇒ 16499:$4073 4E          LD      C, (HL)
⇒ 16500:$4074 23          INC     HL
```

The contents of DE are placed into HL and then the byte located at 16245, [(HL)], is placed into the C register. You can see from the dump of the Basic program from the media that the byte located there is a "03", as mentioned above. You can also see that there are three ASCII values immediately following the "03", and one wonders if the format of this table is such that the ASCIIs are preceded by a number indicating just how many letters are in the variable command.

Looking at other entries, that suspicion is confirmed.

DE and HL are both incremented to point to the next byte, \$3F76, (the first of the ASCII values), and we move on.

```
⇒ 16501:$4075 79          LD      A, C
⇒ 16502:$4076 85          ADD     A, L
```

```

⇒ 16503:$4077 00      LD    L, A
⇒ 16504:$4078 30 01   JR    NC, $407B
⇒ 16506:$407A 24      INC   H
⇒ 16507:$407B 7E      LD    A, (HL)
⇒ 16508:$407C 23      INC   HL
⇒ 16509:$407D E5      PUSH  HL
    
```

The value in C, (03), the number of characters in the variable command, is added to the pointer in HL, \$3F76, via the A register to point it to \$3F79. Now HL points to the first address following the ASCII of the characters of the command.

This is a number which seems to have no place at first in the scheme of things, but upon looking at other entries, we find that this number, the \$88, is incident with several other entries in the table. If we list them on a piece of paper, we note that every set of ASCII using the \$88 value, is also a command whose proper "syntax" requires parentheses immediately following the command, with the argument of the command enclosed therein. (Compare some of the commands listed here in the Basic dump from the media, with those listed in the Basic Handbook for proper syntax).

Now it suddenly becomes obvious to us that all but the last two of the remaining commands have an accompanying \$A8, and further, that each of this group requires the string symbol, \$, as well as parenthesis.

(Please not to worry, the last two entries of the table, the "JF" and the "JL" are not being overlooked. They just don't seem to fit anywhere yet. In fact I'm not certain that we will ever find the reason for their existence in this series. They have a type number of "00").

And so it would seem that the format of this table is: 1. Number of characters in the Command; 2. ASCII of the characters in the command; 3. The variable command type, [\$88, for commands requiring a parenthesized argument, or \$A8 for commands requiring a string symbol, (\$), and a parenthesized argument]; and 4. The address of the Execution Routine, (2 bytes). (The address of the Execution Routine is the only factor missing, and further perusal of Hinkles' work shows that the last two numbers in each entry do in fact point to the execution routines for the respective entries.

Thus, at this point in any particular cycle of this loop, HL points to the \$88 or the \$A8 (the variable command type), as the case may be, which follows each of the ASCII sets in this table.

The A register is now loaded with the \$88, (it is \$88 for this first entry in the variable command table since the first command, [SPC], requires only parenthesis around the argument, and no \$ symbol). Then the HL double register is incremented to point to the first byte of the execution address, and saved aside on the stack.

```

⇒ 16510:$407E 08      EX    AF, AF'
⇒ 16511:$407F 7E      LD    A', (HL)
⇒ 16512:$4080 23      INC   HL
⇒ 16513:$4081 66      LD    H, (HL)
⇒ 16514:$4082 6F      LD    L, A'
⇒ 16515:$4083 08      EX    AF', AF
    
```

The \$88 in A is saved by switching to the alternate set of AF' registers, and the low byte of the execution address is loaded into A', HL is pointed to the high byte and the H register is loaded with the value there. A' is then placed into the L register and A' is switched back in return for the A register containing \$88. The result is that now HL contains the execution address of the SPC command.

Thus we finish this series of operations with A=\$88, and HL=\$1F0C,

the execution address for the entry "SPC".

```

⇒ 16516:$4084 C5      PUSH  BC
⇒ 16517:$4085 CD 8D 37 CALL  $378D
    
```

The BC double register is saved onto the stack, with B=31d and C=03, the number of entries in the variable command name table and the number of ASCII characters in the first table entry respectively.

Then a CALL is made to the Basic program routine "Make Variable", (about 1/5th of the way into that routine), at 14221.

That's all for now. Next time we will continue the discussion from where we left off... But for now read over what has been discussed in this article and make sure you understand it fully.

To make it easier, here is the entire disassembled listing of the routine that has been discussed in this article:

**ADDRESS OP-CODE MNEMONICS**  
**DEC : HEX HEX VALUES**



```

⇒ 16491:$406B 06 1F      LD    B, $1F
⇒ 16493:$406D 11 75 3F    LD    DE, $3F75
⇒ 16496:$4070 62          LD    H, D
⇒ 16497:$4071 6B          LD    L, E
⇒ 16498:$4072 13          INC   DE
⇒ 16499:$4073 4E          LD    C, (HL)
⇒ 16500:$4074 23          INC   HL
⇒ 16501:$4075 79          LD    A, C
⇒ 16502:$4076 85          ADD   A, L
⇒ 16503:$4077 00          LD    L, A
⇒ 16504:$4078 30 01      JR    NC, $407B
⇒ 16506:$407A 24          INC   H
⇒ 16507:$407B 7E          LD    A, (HL)
⇒ 16508:$407C 23          INC   HL
⇒ 16509:$407D E5          PUSH  HL
⇒ 16510:$407E 08          EX    AF, AF'
⇒ 16511:$407F 7E          LD    A', (HL)
⇒ 16512:$4080 23          INC   HL
⇒ 16513:$4081 66          LD    H, (HL)
⇒ 16514:$4082 6F          LD    L, A'
⇒ 16515:$4083 08          EX    AF', AF
⇒ 16516:$4084 C5          PUSH  BC
⇒ 16517:$4085 CD 8D 37    CALL  $378D
    
```

**SPECIAL NOTICE:** If this mini-series has wet your appetite on the subject of Machine Language programming in SmartBASIC, we here at N.I.A.D. strongly recommend the purchase of a number of the author's, Mel Ostler, "Hacker's Helper" manuals listed below which are published under the company name Roadrunner Publications. Also watch for three new manuals in the "Learning to" series to be come available soon: MAKE GAMES, MAKE MUSIC, and TALK.

**FROM BASICS TO BASIC \$19.95**  
**LEARNING TO READ WITH ADAM \$24.95**  
**LEARNING TO WRITE WITH ADAM \$24.95**  
**LEARNING TO DRAW WITH ADAM \$24.95**



# EXPLORING SmartBASIC

## Part II: Decisions and Branching

by Guy Cousineau

Decision making is a very important part of BASIC programs and is often the cause of tedious gymnastics. This article will cover five BASIC statements dealing with decisions and subroutines. The IF statement precedes most definitions. It is followed by a mathematical or logical statement which can be simple or very complex:

```
IF x
IF x = 2
IF x^2 >= 2 * (y+z)
IF x=2 and y=3
```

When BASIC encounters an IF statement it evaluates the expression on the left and compares it to the expression on the right. If the condition is TRUE, the rest of the line is executed. If the expression is FALSE then the rest of the line is ignored. Note in the first example that there is no expression on the right; it is evaluated as an X NOT EQUAL TO 0. The IF statement is followed by THEN and another statement. Let's say I want to make sure that "x" is never bigger than "y":

```
IF x > y then x = y
```

Note that IF...THEN works on the rest of the physical line and not only on the rest of the statement.

```
IF x > y THEN x = y : z = 5
```

In the line above, "z" will be set to 5 ONLY when  $x > y$ . This approach can help simplify programs and reduce the amount of jumping around required. Sometimes the amount of work to be done cannot be expressed on a single line; in other cases a decision may be required to determine which routine to execute next. In those cases, the IF statement is followed by GOTO:

```
100 IF x = 1 GOTO 150
110 IF x = 2 GOTO 200
120 IF x = 3 GOTO 250
130 GOTO 300
150 y = 5
160 GOTO 300
200 y = 22
210 GOTO 300
250 y = 77
300 more program...
```

Note that the three IF statements at the beginning which branch to three different areas based on the values of "x". Note also that THEN is not required. IF...GOTO is sufficient and actually executes faster than IF...THEN GOTO. The example above, however shows how programs can become needlessly complicated. Look at the following version of the same decision routines:

```
100 IF x = 1 THEN y = 5
110 IF x = 2 THEN y = 22
120 IF x = 3 THEN y = 77
300 more program...
```

We have just taken a ten line program and changed it into four lines which look neater and takes up less memory. Let's consider something a bit more complex like MENU decisions. Assume we have five major functions which are selected by entering a number from 1 to 5. Here's where ON...GOTO can come in handy. An ON statement looks up a list of line numbers and decides which one to use based on the DECISION variable:

```
ON x GOTO 100, 250, 375, 465, 555
```

In the example above, the program will jump to line 100 when  $x = 1$ , to 250 when  $x = 2$ , and so on. What happens if "x" is greater than 5? No jump is made and the program falls through to the next instruction. Considering the MENU options selection stated above, the program line following the ON...GOTO could print one of those NASTY messages like "option 1 to 5, silly". Note also that ON works on INTEGER values only and that it starts at a value of 1. The ON statement can be followed by a complex mathematical formula if required:

```
ON INT(x/3) + 1 GOTO 100, 200, 300, 400, 500
```

Note also that ON...GOTO will continue with the next statement (not the next physical line). For experienced programmers, this can be used instead of IF...GOTO to concatenate several lines together even if decisions are required. Consider the following line:

```
ON x = 2 GOTO 500 : y = y + 5 : GOTO 700
```

Here, a jump is made to line 500 whenever  $x = 2$  (just like IF...GOTO). However, when  $x \neq 2$ , the rest of the line is executed (unlike IF). Note that when  $x = 2$  is true, a value of 1 is returned thereby executing the first jump in the list; when the expression is false a "0" is returned and no jump is made.

SUBROUTINES can help reduce program size by executing repetitive functions from a central location. Say you have a MONEY program that prints Dollars and Cents. You spend considerable time developing a technique for right-aligning your figures, making sure there are always two digits after the decimal, and preceding the value with a dollar sign. This routine will be several lines long and you will want to access it from various areas in the program. What you do is set up the routine at 1000:

```
999 REM print x in dollars and cents.
1000 IF x = 0 GOTO 1100
1010 IF x < 0 GOTO 1200
1020 ....
1399 RETURN
```

The routine ends with RETURN which marks the end of the subroutine. Whenever you want to use the routine, you just place the required value in "x" and GOSUB:

```
150 x = 123.45 160 GOSUB 1000
```

Line 150 sets the value to be decoded, and line 160 instructs your program to execute the subroutine at line 1000. When the RETURN instruction is reached, the program RETURNS where it came from and continues, in this case, with line 170. Note that GOSUB need not be on a line by itself: the RETURN instruction will go back to the NEXT statement in the line:

```
150 x = 123.45 : GOSUB 1000 : x = y/2 : GOSUB 1000
```

The line above will do just what you expect: It will first print \$123.45, then it will print one half of the value of "y". Note also the REM statement BEFORE the start of my subroutine. It is a good idea to remind yourself what a routine does and how it does it. This can be indispensable later on when changing your program.; don't let a failing memory disable your program. Note also that the REM statement is BEFORE the routine and not the first statement in the routine itself. This technique will help make your programs run faster since the REM statement does not need to be read every time the routine is executed.

In some cases, you may want to abort from a subroutine to go elsewhere. Say I am using the routine above to show how much money

you have left in a game. If you ever run out of money, I want the program to exit. Here's where the POP instruction comes into play:

```
999 REM print x in dollars and cents.
1000 IF x <= 0 GOTO 1100
1020 ....
1100 POP
1110 PRINT "No money left"
1120 GOTO 100
```

The POP instruction at line 1100 tells BASIC to discard the RETURN address it had stored. Then, program control is returned to line 100 where you might check scores, ask to play again, etc. It is essential to POP correctly in order to maintain all your pointers for the same reasons that using GOTO in a subroutine will result in RETURN WITHOUT GOSUB error message.

Remember IF and ON above? They also can be used quite effectively with GOSUB as well:

```
IF x = 3 THEN GOSUB 1000 : y = 4 : PRINT "Hello"
ON x GOSUB 1000, 2000, 3000 : PRINT x + y
```

In the first example, the GOSUB instruction will be executed only when  $x = 3$ ; upon RETURN from the subroutine, the rest of the line will be executed. In the second example, the subroutine calls will be made for  $x = 1$ ,  $x = 2$  and  $x = 3$ ; for any value of "x"; however, the  $x + y$  value will always be printed. Note that the RETURN from ON...GOSUB comes immediately after the line number list.

## ROUTINE ADDRESSES:

- ⇒ **IF** executes at 7705 (1E19H): It starts by reading the equation and skips the rest of the line if the equation is false.
- ⇒ **GOTO** executes at 8342 (2096H): It gets the line number, finds the line, sets run mode on, and executes the line (if found). Note that GOTO does not initialize variables as does RUN. It is therefore possible to re-enter a program that has crashed by using GOTO and a strategic line number in the immediate mode. Note that the line number chosen must not be inside a loop or in a subroutine.
- ⇒ **ON** executes at 8381 (20BDH): It does all sorts of gymnastics to determine the entry in the table to be executed. It then branches to GOSUB or GOTO as required to complete the execution.
- ⇒ **GOSUB** executes at 8427 (20EBH): It saves the RETURN address on the stack as well as the stack address in IX. It then branches to GOTO to jump to the required routine.
- ⇒ **RETURN** executes at 8477 (21DDH): It simply reloads the STACK POINTER with the address of the control routine and jumps back to it.
- ⇒ **POP** executes at 8493 (212DH): It checks if a GOSUB was active and re-adjusts the pointers as required. If there was no GOSUB in progress, an appropriate error message is printed. As these routines are all very complex, it is not advisable to mess with them. The only interesting patch is to allow formulas in GOTO or GOSUB.

```
10 FOR x = 0 TO 7
20 READ y
30 POKE 8342 + x, y
40 POKE 8437 + x, y
50 NEXT : END
60 DATA 0, 0, 0, 205, 3, 39, 68, 77
```

Line 30 installs the patch for GOTO and line 40 for GOSUB. What the patch does is replace the routine that gets a NUMBER from the command line with a routine that evaluates an EQUATION from the command line such as:

```
10 GOTO 20 * x
```

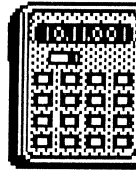
This concludes the coverage of elementary decision making using IF, THEN, ON, GOTO, GOSUB, RETURN and POP.

Next time out, another set of BASIC commands dealing with INPUT.

# P.D. WORKSHOP

## REVIEWS & UPDATES

by Jim Notini



### N.I.A.D. ANDV VOL. #12

- ⇒ **LN1** - Use of LN natural logarithms to the base e. Find an unknown in complex Algebraic and Actuarial Science formulas.
- ⇒ **LOG1** - Same as LN1 except that it uses Common Logarithms to the base 10.
- ⇒ **LN2** - Examples of the use of LN.
- ⇒ **LOG3** - Use of the Richter Scale (jumping on the moon and other planets).
- ⇒ **SALESIMULN** - Find maximum profits if prices are reduced and unit sales increase.
- ⇒ **POTATOES** - How long should a farmer wait before digging up his potatoes and selling them. Price drops as crop increases.
- ⇒ **APPLES** - Farmer stores apples in September price increases. Some apples go bad. Pays monthly storage cost. When should he sell for maximum profit.
- ⇒ **CONSTRUCTN** - Find height, cost and maximum profits before construction of a building.
- ⇒ **PIPELINE** - Two towns want to build a pump house on a river and pipelines to each town. Find the shortest length of pipe and least costs.
- ⇒ **SPRING** - Restaurant wants to pipe in spring water from the bush to a road and then along the road to the restaurant. Find the cheapest route and cost.

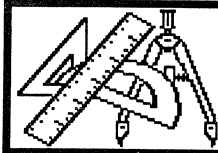


### N.I.A.D. ANDV VOL. #13

- ⇒ **RADIO MANUFACTURER** - Sells  $x$  # of instruments. Given start price, find maximum profitable production and sales.
- ⇒ **FACTORY** - Find maximum plant production and profitability.
- ⇒ **SUBSCRIBER** - Company has subscribers to its equipment and service. 1000 or less the profit is \$15 per subscriber. Over 1000 profit declines .01 on total # of subscribers. Find maximum profits and max number of profitable subscribers.
- ⇒ **BUILDING** - Construct a building where each story costs 2500 more than the previous one. Find optimum height and profit.
- ⇒ **BUILDINGa** - Same as building but uses a different formula that makes the for next schedule universal instead of just 1 step.
- ⇒ **GRAPHmoney** - Compares two years of weekly sales.
- ⇒ **GRAPHING** - Follow up of GRAPHmoney.
- ⇒ **GRAPH SIGN** - Follow up of GRAPHmoney.
- ⇒ **GRAPHstock** - Follow up of GRAPHmoney.
- ⇒ **READ ERROR** - Sometimes a read error shows up after a program is loaded and the program looks terrible. This explains how to correct some of the problems via such options as widening the column widths of the spreadsheet.
- ⇒ **WINDOW QUIZ** - Shows how ADAMCALC can be used for textgame and quizzes. You only see one line in one column at a time.
- ⇒ **WINDOW TUT** - Gives detailed instructions on how to set up windows.
- ⇒ **SMARTWRITER** - An explanation of how to use SmartWRITER to copy ADAMCALC files to another tape or disk vice loading each file up individually in ADAMCALC and then restoring if you do not have a file copy utility. Much faster in SmartWRITER.

### N.I.A.D. ANDV VOL. #14 - #34

Volumes 14 through 34 are ready and available for purchase thanks to the tremendous efforts of Nick Lukach. We will continue to list out the contents of each volume in future issues of the N.I.A.D. Newsletters. Thanks go out to Nick for sharing these volumes with us.



# WHAT IS ADAM-FORTH?

## Part VI of VI

### by Keith Marner

**EDITOR'S NOTE:** *This is the last in a six part series on the FORTH language which has been reprinted from Keith Marner's U.K.A.S. Journal in England. The last article which was printed, #5, appeared in the March '91 N.I.A.D. Newsletter, sorry to leave those interested hanging for the past couple of months waiting for the conclusion.*

Concluding our series on FORTH with a summary and sample programs. This high level language was the product of Charles H. Moore who created it as an example of a fourth generation language where, in the late 60's, the second and third generation languages were Fortran, Cobol, Algo1 and PL/1.

This is a completely extendable language which you can manipulate to make it look like almost any other. The two key concepts in FORTH are the word, which is equivalent to a procedure or function, and the stack, which is the central data structure from which everything else is created. When FORTH encounters a word, it looks it up in the dictionary and, if found, executes the command that constitutes it's definition. You define the words necessary to make FORTH solve your problem.

The central data structure in FORTH is the stack which is last in, first out (LIFO). Each item of data is either 'pushed' into the stack for storage or 'popped' off the stack for retrieval. In FORTH any item that isn't recognized as a word is considered data and is therefore pushed onto the stack.

FORTH's built-in words all operate on the data stored on the stack. For example, the " + " operation pops two items off the stack, adds them together and pushes the result back on the stack. The FORTH program " 3 4 + " will push 3 then 4 onto the stack and the + operator pops the 4 off then the 3 (LIFO), adds them together then pushes the resulting 7 back on the stack. The " . " (dot) operator pulls an item off the stack and prints it on the screen. Consider defining the word SQUARE:

```
:SQUARE
  DUP
  *
  ;
```

This will duplicate the top item on the stack and then the multiplication operator " \* " will multiply the top two items, replacing them by the result. Remembering that if FORTH does not recognize a word or number for that matter, it is placed on the stack, to square the number 7 simply type " 7 SQUARE "

You can also use variables in FORTH by first declaring it with the command VARIABLE. Once declared, any reference to the variable results in it's address being manipulated.

```
VARIABLE A
49 A !
A ?
```

This defines variable " A " as 49 and the address of A is then placed on the stack. The " ! " operator pops the address off the stack and stores the new top of the stack at that location. The final instruction " A ? " stores the address of A on top of the stack and the " ? " pops the address and prints the contents on the variable. Think of this in reverse and you will get a better idea of what is going on. " 49 A ! " means 'store in A the number 49'. " A ? " will be 'print A'. FORTH's control structures also follow this reverse process notation for operators.

### condition IF list THEN

The condition is evaluated and if it is true, the list is executed; if not, it is

skipped and execution continues following the THEN. Notice that the condition comes first, following the reverse process rule. The example " 10 > IF SQUARE THEN " compares the number 10 to the value on top of the stack and calls SQUARE if it is greater.

### condition IF list1 ELSE list2 THEN

List 1 is executed if the condition is true and List 2 if the condition is false.

When it comes to loops, recursion is preferred due to the stack orientation of the language.

```
BEGIN
  list
  condition
  UNTIL
```

This repeats the list until the condition is true. Here is the equivalent of a WHILE loop.

```
BEGIN condition
  WHILE
  list
  REPEAT
```

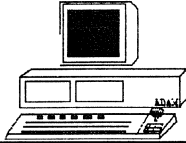
The list is repeated while the condition is true.

```
:ADDUP
  VARIABLE TOTAL
  0 TOTAL !
  . "How many values"
  INPUT
  1
  DO
  . "Data value number"
  1.
  INPUT
  TOTAL @
  +
  TOTAL !
  LOOP
  . "The total is"
  TOTAL ?
  ;
```



Assuming INPUT is defined as a FORTH word allowing the user to type an integer which is stored on the stack, the variable TOTAL is used to hold the running total. The syntax . "string" prints a string without a carriage return. INPUT followed by 1 automatically places the parameters for the DO loop on the stack. The calculation that forms the running total works as follows. INPUT gets the users value on the stack. TOTAL @ pushes the current value in total on the stack. The + operator pulls the top two items off the stack, adds them together and pushes the result back on the stack. Finally, TOTAL ! assigns the values on the top of the stack back into TOTAL.

If anyone wishes to pursue this highly manipulative language, there are numerous books available which have previously been listed in articles I and II which are available at your local bookstore or even library. If you can't find one, check with a college's bookstore. Also in England (and the same should hold true in North America), there is a FORTH Interest Group called 'Forthwrite' who publishes a newsletter. The FORTH Interest Group is run by Douglas Neale - 58 Woodland Way - Morden, Surrey, England SM4 4DS.



# CP/M 2.2 & TDOS WORKSHOP

## Public Domain and Reviews

by Doug Rosenvinge

### An Introduction

One of the questions that comes up frequently is "What can CP/M or TDOS do for me?" When people get either of these operating systems and boot them for the first time they probably have nothing else other than the utilities that were included with the operating system to run. I remember the first time I booted CP/M on my ADAM. I had heard from others how great CP/M was so when the local store finally got some copies in I was right there to purchase a copy. When I got home I put the tape into my ADAM, pulled the reset switch and was faced with CP/M 2.2 title screen and prompt A>. Now what? Having no other CP/M software I put it on the shelf until I purchased a modem and began downloading programs from local bulletin boards. Only then did I discover how powerful CP/M could be.

Perhaps you purchased CP/M or TDOS and found that you didn't have any use for them because you had no software. NIAD has almost 60 disks of games, productivity programs, databases, word processors, utilities and more. Since the catalog only lists disk numbers I will list a description of each disk over the next several months. A second listing will break down our library by types of programs, this month's being games.

### N.I.A.D. CP/M CNDV-#1

NAME	TYPE	DESCRIPTION
⇒ /.*	Utility	Allows typing of a number of commands on one line.
⇒ ADAMFIL.COM	File utility	Filters files brought into CP/M to remove unusable characters.
⇒ ADMBOOT.COM	Telcomm.	Simple telecommunications program for receiving files with a modem.
⇒ CREATE3.*	Editor	Simple & SMALL text editor for quick doc or screen files. Primitive.
⇒ DISPLAY.*	File utility	Allows viewing of ASCII text files. Similar to type but able to scroll in file.
⇒ HALLEY.*	Astronomy	A BASIC program for tracking Halley's Comet. Requires MBASIC to run.
⇒ INVENTY.COM	Business	Inventory control and report program. Up to 150 items tracked per file.
⇒ MARKET.COM	Game	Stock market simulation game. Buy and sell stocks to make a profit.
⇒ MODEM7.*	Telcomm	Telecommunications program. See MADAM7 for ADAM version disk 007.
⇒ MODEM7MM.*	Telcomm	Partially implemented Modem7 for ADAM. Use MADAM7 for complete implementation.
⇒ SD.*	File utility	Super Directory. Gives much more information than CP/M's DIR command.
⇒ SDDU.*	Not avail.	No information on this program.
⇒ SQZ.COM	File utility	Squeezes files to save disk space. Must be unsqueezed to use.
⇒ UNERA19.COM	Disk utility	Restores erased or deleted CP/M files provided they have not been overwritten.
⇒ USQ.COM	File utility	Unsqueezes squeezed files with .?Q? file name.

### N.I.A.D. CP/M CNDV-#2

NAME	TYPE	DESCRIPTION
⇒ ADAMTE.ASM	File utility	The ASM listing for patching NULU for

⇒ BACKUP.COM	Utility	the ADAM. Standard ADAM CP/M backup program.
⇒ BASEBALL.COM	Game	Text simulation of a baseball game. You against ADAM. Select pitches and hitting.
⇒ CATPAGE.COM	Disk utility	Part of master catalog
⇒ COMMON.COM	Disk utility	Allows a program to physically exist in one user area but read by others.
⇒ FIND.COM	File utility	Finds strings in files or groups of files and displays them on screen.
⇒ FMAP.COM	Disk utility	Maps file locations on disk showing blocks extents and size of files.
⇒ IOMAP.COM	System util.	Provides a hex table/map on screen.
⇒ LRUN20.COM	Library util.	Allows .COM files to be run without removal from a library.
⇒ LU300.*	Library util.	Allows the creation of libraries. Includes documentation files.
⇒ M7ADAM-1.ASM	Telcomm	Modem7 installation ASM file for the ADAM computer.
⇒ M7FNK.*	Telcomm	The function key program and it's documentation for Modem7.
⇒ M7LIB.*	Telcomm	The Modem7 internal phone number library program and documentation.
⇒ MDM740.COM	Telcomm	Modem7 telecommunications program. Provides x-modem file transfer.
⇒ SECURE.COM	Disk utility	Apparently a password protection program. No documentation or instructions.
⇒ SPLIT.COM	File utility	Allows the division of a large file into smaller ones to use with ED or others.
⇒ UCAT.COM	Disk utility	Part of master catalog.

### N.I.A.D. CP/M CNDV-#3

NAME	TYPE	DESCRIPTION
⇒ CPMUTIL.COM		No description available
⇒ DDTX3A.COM		No description available
⇒ DIRR.*	Disk utility	Directory program Alphabetized listing in 4 col system files with doc file
⇒ EBASIC.LBR	Language	EBASIC language compiled BASIC <8 files open random & sequential with documentation.
⇒ EDIT.*	File utility	Line editor+ replaces ED PIP STAT and XDIR programs. Includes doc file.
⇒ LASM.LBR	8080 Lang.	Linking assembler for 8080 machine programs. Replacement for ASM.COM. Docs included.
⇒ MAKESUB2.COM		Apparently for making .SUB files.
⇒ MULTCOPY.COM	File utility	Makes multiple copies of files on floppies.
⇒ NSWP.*	Disk utility	Directory manager Copies deletes renames mass copies squeeze usq files.
⇒ NU11LU.COM	Library util.	Library utility for extracting and unsqueezing library files.
⇒ PRINTSQ.*	File utility	Prints squeezed files (.?Q?) to printer or current list device.
⇒ SLOAD.COM	File utility	Loads hex files onto com files at specified offset. For patching files.
⇒ SORT.COM		Sorts directory entries? crashes under TDOS.
⇒ SQ110.*	File utility	Squeezes files to take up less space. Improved speed over previous version.

⇨ USQ120.COM File util Unsqueezes squeezed files.

### N.I.A.D. CP/M CNDV-#4

NAME	TYPE	DESCRIPTION
⇨ CATLBR.LBR	Disk utility	CATLBR makes catalog entries for Master Catalog from files in libraries.
⇨ MCAT-41.LBR	Disk utility	Master Catalog constructs a catalog of the files on your CP/M disks.
⇨ NU11LU.COM	Library util.	Library utility for maintaining/extracting files in libraries.
⇨ ZASM.LBR	Z80 lang.	ZASM is a Z-80 Macro Assembler. Useful for machine language programming on ADAM

### N.I.A.D. CP/M CNDV-#5

NAME	TYPE	DESCRIPTION
⇨ DUU.COM	Disk utility	Disk Utility Universal v. 7.5. For editing disk sectors and file contents.
⇨ SDCPY.COM	Utility	A copy program that allows you to copy files with only one drive.
⇨ VDO25.COM	Editor	A screen oriented text editor. Similar to VDE with less functions.
⇨ XMODEM8.*	Telcomm	A simple modem terminal program for X-modem transfer of a full program from a BBS.
⇨ Z80.LBR	Z80 lang.	The reborn CROWE Z80 Assembler with bugs fixed. 2 pass no macros. Docs incl.

### N.I.A.D. CP/M CNDV-#6

NAME	TYPE	DESCRIPTION
⇨ ADVENTURE	Game	The ADVENTURE text game. Version A02 bugs fixed save feature works. A classic

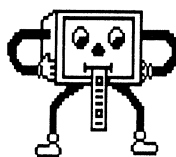
### N.I.A.D. CP/M CNDV-#7

NAME	TYPE	DESCRIPTION
⇨ DELIB.COM	File utility	Simple de-library utility. Extracts individual files from a library file.
⇨ DU-V89.LBR	Disk utility	Powerful disk editing utility. Use with care!
⇨ ELIZA.LBR	Game	Emulates a therapist in session with the computer operator.
⇨ MADAM7.*	Telcomm	MODEM7 set up for the ADAM computer and 300 baud Adalink Modem. File transfers.
⇨ MMERGE.LBR	Text utility	Simple mailmerge program and documentation.
⇨ WID30.*	Screen util.	Changes screen output for 30 characters wide to avoid scrolling left to right.
⇨ XCCP.LBR	System	An extended Console Command Processor for CP/M. Better line edit commands etc.
⇨ XCCPUTL.LBR	System	DIR, REN, ERA for XCCP.
⇨ Z80CHESS.LBR	Game	CP/M Chess game.

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PRICE: \$4.00 @ ON DISK, \$6.00 @ ON DDP



## CP/M & TDOS GAMES AND GAME UTILITIES

NAME	DISK #	DESCRIPTION
⇨ ADVENTURE	006	The ADVENTURE text game. Version A02 bugs are fixed and the save feature works. A classic amongst all CP/M compatible machines.
⇨ ARTILLRY.COM	021	A text war game. Destroy the enemy outpost with your cannon if you can before he destroys yours.
⇨ BARSOOM.*	057	A text adventure game that takes place on the planet Mars. Has save game feature.
⇨ BASEBALL.COM	002	Text simulation of a baseball game. You against ADAM. Select pitches and hitting as well as other options.
⇨ BLKJACK.COM	019	Simple Black Jack game.
⇨ BUGS.COM	018	Try it and be bugged.
⇨ CASTLE.LBR	015	Text adventure with a random feature that makes each game different everytime that you play.
⇨ E-BASIC GAME	032	Ace, Amaze, Animal, B/Friday, Bioprint, BlkJk, Chase, Civil War, Combine, Core, Coretest, Euclid, Fib, Fit, Football, Golf, Gunner, Keno, Lanes, Loan, Lunar1, Plot, Plot2, Poker, S/Trek, Stars. 28 games with SmartKey driven menu.
⇨ ELIZA.LBR	007	Emulates a therapist in session with the computer operator.
⇨ GAMEMENU.COM	030	Provides a menu for cartridge games saved to CP/M.
⇨ GAMESAVE.COM	012	Saves Coleco carts to CP/M file. Capable of copying roughly 90% of the carts made for the Coleco.
⇨ GENHOSP.COM	013	Text adventure in which you are a doctor in a major hospital.
⇨ GUESSIT.COM	019	Simple number guessing game, you against ADAM.
⇨ MARKET.COM	001	Stock market simulation game. Buy and sell stocks to make a profit.
⇨ MUSICFUN.COM	030	Plays music from 20 ADAMcart games. Menu selected.
⇨ OTHELLO.COM	015	The strategy game of Othello for use on ADAM's 30 column screen.
⇨ TRIVIA.LBR	030	Trivia game with several data files and information on how to make your own.
⇨ Z80CHESS.LBR	007	CP/M Chess game.

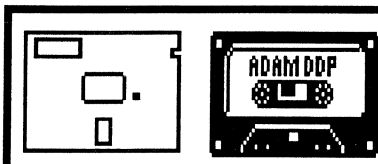
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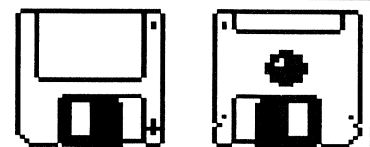
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# PRODUCT REVIEWS



**TYPE**  
UTILITY  
**RELEASED**  
AUGUST 1991

## MEDIA HELPER

By Hoosier Software

**PRICE**  
\$14.95  
**MEDIA**  
DISK OR DDP

Reviewed by Jim Notini

Media Helper is a new set of nine utilities which have been compiled into one package by Gary Hoosier of Tax Helper fame. The utilities which are included in this package mainly deal with filling the gap of what other utility programs, which are already available, do not deal with (ie: File Manager, Backup, Copx, ADAM'S Desk Top). Options are available, such as, the ability to create a reference list of variables that are contained in a SmartBASIC program and also to list out the directories of Multi-Cart Backup or Coleco Game Copy media to the screen or printer which were previously never available and the later option could previously only be accomplished via the use of a block editor and a lot of tedious work searching through the media's directory listing.

To load Media Helper, just insert the disk or data pack into any drive any pull the Computer Reset switch. A titles screen will be displayed while the program loads and then a main menu will be displayed with all the following options available to the user by positioning the cursor next to the option desired and pressing the Return key.

**COPY A DISK/TAPE: BACKUP26+** will copy data packs and 160K disks in 26K chunks. It will copy from one type of media to another, including center and right directory data packs. It will make multiple copies, so it is especially useful for making many copies of media when you are copying 26K or less.

**SORT AN EOS DIRECTORY: DIRECTORY SORTER** will put up to a three-block EOS directory into alphabetical order, or put your alphabetized directory back into sequential order. Use only on a backup copy!

**CREATE A VARIABLE REFERENCE LIST: VARIABLE REFERENCE** will read a SmartBASIC program file from the active drive and produce a text file listing with a filename ending in ".V" which is readable by SmartWRITER of all the variables used in the program, and the line numbers they appear in. I recommend that you have a disk or data pack set up with just the program to be processed on it. A normal 4K or 5K program will take approximately ten minutes. A 25K program with several hundred variables will take close to an hour!

**VIEW/LIST AN EOS DIRECTORY: DIRECTORY LISTER** will read and report detailed information of up to an 8 block EOS directory. One can choose to view the filename, attribute, start block, length, used length, and number of bytes in the last block (last count) on the screen and additionally view the file type and date if the directory information is printed out on a printer.

**OVERWRITE A DISK/TAPE: OVERWRITE** will in essence overwrite the specified blocks on the selected media, completely wiping out what was already there. Use it to clean data off of a disk or data pack. You

can also use it to verify that your home-made data packs are properly formatted by successfully overwriting the entire data pack. Once the overwrite procedure is completed, one must be sure to re-initialize the media if the directory blocks were overwritten.

**COMPARE TWO MEDIA: COMPARE** will compare the contents of two media and report any differences found. If you view the report on screen you will be prompted to continue after each difference found. If you print it out, the program will just continually list the differences. You may compare the same set of blocks or a different set of blocks on one or different drives.

**SEARCH MEDIA FOR TEXT OR DATA: SEARCH** will search a disk or data pack for a specified text string or sequence of numbers. Numbers to search for can be entered in Decimal or Hex. One can also choose to search just for the first occurrence, or all, and whether to view the report on the screen or print it out.

**VIEW/LIST CARTRIDGE BACKUP DIRECTORY: CART LISTER** will display a list of cartridges on a Multi-Cart Backup or Coleco Game Copy (Cartridge Copy) media to the screen or printer. It will show the names, start blocks, and length.

**BUILD A MULTI-CART BACKUP DIRECTORY: CART DIRECTORY BUILDER** is used to build a directory for a Multi-Cart Backup media. Use it when you have built a MCB media by copying cartridge programs from other disks or data packs. You will be prompted to enter the cartridge names and lengths one at a time. A directory will then be created. You can use the cartridge listing program to view the contents of your MCB media, use the copy program to copy them to where you want them on a new media, then use this program to build the directory. You can also choose to view an existing directory or print a reference list of known cartridges.

**SWITCH PRINTERS:** Allows the user to select between sending printed output to either the ADAM Printer or a Dot Matrix Printer attached to the ADAM via a Parallel Interface.

I found Media Helper to be a welcome addition to the vast array of utility programs which are already available. All programs operate flawless, as advertised and rather quickly. One aspect of Media Helper that I found very welcome is the inclusion of an instruction screen for each and every program that is displayed previous to the program actually being loaded. This always serves as a good reminder to the user of the particular utilities functions and also as a time saver if you choose the wrong utility to load since you can escape back to the main menu. As a whole, Media Helper is the perfect utility package for those inexperienced users, who unlike a hacker, do not have the programming skill required to write their own utility programs.

### SYSTEM REQUIREMENTS

- MEMORY:** BASE ADAM SYSTEM
- PRINTER:** ADAM PRINTER OR DOT MATRIX PRINTER
- DRIVES:** 1 DISK DRIVE OR 1 DIGITAL DATA DRIVE
- OTHERS:** R-80 MEMORY CONSOLE
- OPTIONS:** 2<sup>ND</sup> DISK OR DIGITAL DATA DRIVE

### SOFTWARE RATINGS

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

### OVERALL

**B+**



**TYPE**  
UTILITY  
**RELEASED**  
MAY 1991

# COPX

By Hexace Software

Reviewed by Jim Notini

**PRICE**  
\$10.00  
**MEDIA**  
DISK OR DDP

COPX is a new utility package which was released by Hexace Software back in April. Since that time it has gone through a number of revisions and enhancements which provide more flexibility of use within the program. COPX offers the user the ability to make backup copies of files or medium (disk or data pack) on the ADAM. It provides four main functions for backup purposes: A backup utility which will copy the entire source media to the destination media; A backup utility which will only copy the used blocks of the source media to the destination media; A file copier which allows the user to also copy the Boot block from the source to the media automatically as well as the ability to tag files to be copied via a number of different criteria; A block copier which provides facilities to write blocks which are read from the source media to different blocks on the destination media. Also provided in all options except the file copier is a formatting routine which is compatible with all disk drive sizes available to date. Documentation for COPX is provided in a SmartWRITER format file on the media.

The first step that will be required is to print out the SmartWRITER documentation file onto the ADAM Printer or a Dot Matrix Printer. The doc's will take ten pages to print out, however, the author has the right margin set at 40 so only half of the page is being used. This means there are only 5 pages of doc's for those of us who hate to read instructions and would rather sit down and use the program. I would prefer to see margins set at 0 and 80 to cut down on paper in future efforts and also it would make the printout look much better. The instructions provided are fairly straight forward and easy to understand and should allow one to sit down with the program and use all of it's functions after being read.

To boot COPX, just place the disk or data pack into a drive and pull the COMPUTER RESET switch. The first message that will appear is that the System is loaded and COPX is now loading. The system is Hexace Software's enhanced EOS which fixes numerous bugs and shortcomings as well as implementing new features such as ramdisk setup. The next screen display is the title screen with options to continue or end. Choosing continue brings up the COPX main menu.

The main menu consists of four options, the first of which is COPY ALL. Copy All is a simple image backup option that will copy the entire source media from block 0 to the end to the destination media (be it a data pack, disk or ramdisk). Of course, the destination media should be of equal or larger size than the source, if not an error message will be displayed with the option to quit or continue with the copy anyway. One unique option is the ability to copy the ramdisk's contents to any two other drives at the same time. This option works best if both drives are of the same size and type, but if they are not, the only drawback will be a small slowdown in operation. Also, if you are using a disk drive as your destination and the disk isn't formatted, an option will be made available to format it first before proceeding with the backup.

The second option from the main menu is COPY DIRECTORY. This option is basically identical to COPY ALL with the exception that the source media's directory will be checked first to see how many blocks are actually used. Then it will proceed to copy only those block in use instead of copying ever single block on the source, be it used or

unused. This is a great time saver. If you are copying between two different drive sizes, the destination media's blocks remaining will be correctly adjusted (this holds true for the COPY ALL option also).

The third option from the main menu is COPY FILES. This is easily the most advanced section of COPX and should bring a smile to the faces of many ADAMites. The main function Copy Files provides is the ability to copy files from one media to another, but it offers many different tag file options which will define how the files will be copied or what files will be copied. The tag options main menu offers three options, the first of which is to Edit File Tags. Once chosen, the source media's list of files will be displayed and by using the up and down arrow keys you may scroll through the listing. If the left arrow key is pressed, the file which is highlighted will be tagged and given a number. This number which is assigned to the file represents the order in which multiple files will be copied from the source to the destination. If the right arrow key is pressed, the file which is highlighted will be untagged and the order of numbers for a multi-file copy will be recalculated. The second tag option is a Batch Tag which allows for six further options which include the ability to Tag All files for copying, Untag All files, Tag by File Type (ie: A, a, H, h), Tag by Attribute (ie: the number ADAM assigns the file such as "2" for a machine code file), Tag by File Size (ie: the actual number of blocks a file uses), and Tag by First Letter (ie: the first letter in the file name and the program does differentiate between small and capital letters). The third tag option is to Copy Tagged Files, simple enough. Two final notices on the file copier, it allows one to copy the boot block or omit it at the time of the file copy and it does not allow for formatting diskettes before hand so make sure you have a formatted disk on hand.

The fourth and final option from the COPX main menu is OFFCOPY. This option will copy one or more blocks from anywhere on a drive to any location on another drive. For instance, one can copy blocks 5 thru 20 from disk drive #1 to blocks 105 thru 120 on data drive #2 and so on. It is in simple ADAM laymen terms a block copier.

Overall the COPX package offers plenty of backup options and functions for the small retail price. The entire program runs through SmartBASIC, but don't let that turn you off since it is mainly programed in machine language which means it operates rather quickly. For my own personal needs I use File Manager by AJM Software and will continue to use it, but COPX provides a number of functions which File Manager doesn't (ie: ability to tag files via different criteria, create an order in which the files will be copied and correctly adjust the blocks remaining after making a backup between different size drives) and will prove to be a valuable utility program to own. A number of options that I would like to see changed include the way that one chooses the source and destination by entering in a the SmartBASIC drive number, that the ESCAPE/WP key always be active so that one may escape out of any input question, a format disk option be implemented into the Copy File segment AND MOST IMPORTANTLY the ability to use the same drive as the source and destination via swapping the media instead of needing to own two drives (be it disk or data drives). For now the only other things lacking from COPX are a fancy display and user interface, but heck that would only slow things down!

### SYSTEM REQUIREMENTS

- MEMORY: BASE ADAM SYSTEM
- PRINTER: ADAM PRINTER OR DOT MATRIX PRINTER
- DRIVES: ANY COMBINATION OF AT LEAST TWO DRIVES
- OTHERS: R80 MEMORY CONSOLE
- OPTIONS: MEMORY EXPANDER, ADDITIONAL DISK OR DATA DRIVE

### SOFTWARE RATINGS

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

### OVERALL

B+

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- O\* JEOPARDY - Exactly the same as on TV. Contains 27 games
- O\* SUBROC THE SUPERGAME
- O\* BUCK ROGERS THE SUPERGAME - Disk version has one small bug
- O\* DONKEY KONG JUNIOR THE SUPERGAME - Revision 14, 5 screen version
- O\* DAMBUSTERS THE SUPERGAME - Bug free World War II flight simulator
- OFRONTLINE THE SUPERGAME DEMO
- O\* TROLL'S TALE - Bug free version
- OCOLECO VIDEO CATALOG - Only 3 1/2" Disk, 5 1/4" 320K or Digital Data Pack
- O\*\* THE BEST OF ELECTRONIC ARTS - Bug free version
- OPINBALL GAMES - Requires The Best of Electronic Arts
- O\* THE BEST OF B.C. - Contains two bug free supergames
- O\* PERSONAL CP/M - Has a few bugs
- OFORTH - Coleco programming language, very powerful, bug free
- O\*\*\* PROJECT NAME BY LINE - On cartridge - \$24.95, you don't need a memory expander and you get to capture game screens and save them to Disk! If this feature is not worth a extra \$20 and you have a memory expander, then pay \$4.95 for Coleco's EOS Disk or DDP version. This program was used to design all or most of Coleco's software. This program is a programmers dream.
- OPROJECT NAME BY LINE PICTURE FILES - Pictures where captured by P.N.B.L.
- O\* COLECO SPEEDTESTER - Tests the speed of your data drives, latest version.
- OCOLECO GAME COPY - Bug free cartridge copy utility program.
- O\* DISK MANAGER REV. 16.0 with SmartBASIC V1.D - Good EOS utility program
- OFLASH FACTS: MUSIC STUDIES - 8 flashcard files for Electronic Flashcard Maker

**COLECO E.O.S. REV. 6 EPROM - \$9.95**

This 150ns 8K eprom plugs into the first prom socket in the ADAM. Send your ADAM in with \$24.95 and we will install it for you. To see what E.O.S. you are using, type: ? PEEK(64864) after loading Smartbasic V1.D or V1.0. This new E.O.S. speeds up the ADAM and fixes many bugs. Can be setup to use device #'s 3 and 4 with 160K, 320K and 720K Disk Drives. Call for details.

- OCOLECO EOS 6 TECHNICAL REFERENCE MANUAL (over 250 pages on EOS 6) - \$30
- OADAM TECHNICAL REFERENCE MANUAL PRELIMINARY RELEASE - \$2.00
- O\* COLECO RS-232/CENTRONICS PROTOTYPE DRAWING
- O\* COLECO RS-232/CENTRONICS 68701 DATA
- OCOLECO FULL SIZE RS-232/RS-232 PROTOTYPE SCHEMATICS \$10.00
- O\*\* ADAM CONSOLE SCHEMATIC SET
- OADAM CONSOLE SCHEMATICS (FULL SIZE) - \$10.00
- O\* DATA DRIVE SCHEMATICS
- O\* KEYBOARD SCHEMATICS
- O\* POWER SUPPLY SCHEMATICS
- O\* MPI DISK DRIVE SCHEMATICS
- OLEARN TO USE YOUR COMPUTER IN 1 HOUR (audio tape \$4.95, Digital Audio tape \$20)
- OADAMNET MANUAL - \$2.00
- O\*\* DELTA MEMORY MODULE MANUAL
- O\*\* JVC DATA DRIVE TROUBLE SHOOTING GUIDE
- O\*\* U.S. DATA DRIVE TROUBLE SHOOTING GUIDE
- O\*\* ADAM DISK DRIVE TEST PROCEDURE MANUAL
- OTHE COMPLETE ADAM DISK DRIVE MANUAL - \$7.50
- O\*\* GAMMA TROUBLESHOOTING GUIDE
- O\*\* DELTA GAME BOARD REPAIR GUIDE
- O\*\* SMARTWRITER PRINthead ADJUSTMENT GUIDE
- O\*\* PRINTER LOGIC BOARD REPAIR GUIDE
- O\*\* COMPUTER LOGIC BOARD REPAIR GUIDE/GAMMA DEBUG SENDERS GUIDE
- O\*\* COLECOVISION REPAIR GUIDE

# 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** .....\$99.95  
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** .....\$19.95  
New, more reliable power supply transformer for ADAM Disk Drive (5 1/4" or 3 1/2").
- **ADAM KEYBOARD** .....\$19.95  
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.
- **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
- MICRO INNOVATIONS 1024K (1 MEG) MEMORY EXPANDER .....\$CALL

## 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 6K 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 ADAMnet 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 .....\$CALL
- 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 just a listing of the ADAM's EOS, not a study of it, explanation of it's uses 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 & 102** ..... **\$5.95**
- 101 contains 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. 102 contains 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. Both manuals were compiled by Nibbles & Bits.
- **EzREF GUIDE 103** ..... **\$5.95**
- 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) N.I.A.D. Public Domain libraries.
- **SOFTWARE REVIEW MANUAL** ..... **\$19.95**
- A huge collection of product reviews covering ADAM hardware, software, manuals, books and services which have been compiled by ADAM's House from reviews printed in the ADAM International Media Newsletter over the last 6 years. This is the perfect companion book for those who need a reference of literature describing different ADAM products.
- **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 APASHAI MANUAL** ..... **\$2.00**
- A 32 page owner's manual for the Public Domain title Temple of Apsai 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 ADAM SURVIVAL GUIDE** ..... **\$19.95**
- This 233 page manual is what belongs in the hands of every ADAM owner. Not only does it contain listings of software, hardware and supplies which are available for the ADAM, but it also contains lengthy listing of ADAM mail order firms from which to get these products. Others areas of ADAM usage which are covered in detail are listings of ADAM Users Groups and Newsletter publications, introductions to such uses as: SmartBASIC, CP/M 2.2, TDOS, Graphics Design with PowerPAINT, etc. And for those who are new to the ADAM there are sections devoted to what has transpired in the past dating all the way back to the initial production of the ADAM which was written by a former Coleco employee!
- **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.

## MISC. PRODUCTS

- 20# PERFORATED COMPUTER PAPER - 1000 COUNT BOX ..... **\$14.95**
- 3 1/2" DISK DRIVE HEAD CLEANING KIT ..... **\$5.95**
- 3 1/2" DISK STORAGE CASE (HOLDS 80 DISKS) ..... **\$14.95**
- 5 1/4" DISK DRIVE HEAD CLEANING KIT ..... **\$5.95**
- 5 1/4" DISK STORAGE CASE (HOLDS 70 DISKS) ..... **\$12.95**
- ADAM PRINTER RIBBON - BLACK ONLY ..... **\$5.95**
- ADAM PRINT WHEEL ..... **\$6.55**
- Specify font style for ADAM Printer: GOTHIC 12, SCRIPT 12, ELITE 12, EMPHASIS / ORATOR, COURIER 10 or PICA 10
- ADAM DUST COVER: PRINTER ..... **\$8.95**
- ADAM DUST COVER: KEYBOARD ..... **\$8.95**
- ADAM DUST COVER: COMPLETE MEMORY CONSOLE ..... **\$8.95**
- ADAM DUST COVER: EXP. MOD. #3 MEMORY CONSOLE ..... **\$8.95**
- ADAM DUST COVER: 5 1/4" OR 3 1/2" COLECO DISK DRIVE ..... **\$8.95**
- CURTIS UNIVERSAL PRINTER STAND WITH PAPER TRAY ..... **\$24.95**
- PANASONIC KX-P110i RIBBON for KX-P1080 / 1091 ..... **\$9.95**
- PANASONIC KX-P115i RIBBON for KX-P1180 / 1190 ..... **\$12.95**

## DISKS & DATA PACKS

- 256K COLECO ADAM DIGITAL DATA PACK ..... **\$2.00**
- 10 256K COLECO ADAM DIGITAL DATA PACKS ..... **\$19.00**
- 256K RIGHT DIRECTORY ADAM DIGITAL DATA PACK ..... **\$1.00**
- 10 256K RIGHT DIRECTORY ADAM DIGITAL DATA PACKS ..... **\$9.00**
- 50 5 1/4" DS/DD GENERIC DISKS with SLEEVES, TABS ..... **\$16.95**
- 25 3 1/2" DS/DD 720K GENERIC DISKS ..... **\$16.95**
- BONUS 5 1/4" DS / DD DISKS (10 Pack) ..... **\$8.95**
- BONUS 3 1/2" DS / DD DISKS (10 Pack) ..... **\$11.95**
- BONUS 3 1/2" DS / HD DISKS (10 Pack) ..... **\$14.95**

## N.I.A.D. BACKISSUES

- **N.I.A.D. NEWSLETTER BACKISSUES** ..... **\$3.00**
- N.I.A.D. Newsletter Issues # 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 19, 20, 23, 42, 55, 66 / 67, 74 and 75. Not valid towards special pricing.
- **N.I.A.D. NEWSLETTER BACKISSUES** ..... **\$1.00**
- All other issues besides the ones listed above. Valid for specials pricing which are offered from time to time. Check monthly specials section.

**ENTERTAINMENT**

2010: THE TEXT ADVENTURE (DP)	\$24.95
ADAM BOMB (64K)	\$19.95
ADAMWARS II	\$13.95
ADDICTUS	\$19.95
AFL FOOTBALL	\$14.95
BEST OF BRODERBUND (DDP)	\$19.95
BEYOND TREK (64K)	\$15.95
BIBLE JEOPARDY	\$14.95
BILLY SAGA VOL. I	\$15.95
BILLY SAGA VOL. II	\$15.95
BLACK GOLD	\$15.95
BRAINSTORM	\$16.95
CHESS CHAMP (64K)	\$15.95
DIABLO	\$15.95
DINOSAUR DIG (64K)	\$16.95
DRAGON: CHINESE CHALLENGE	\$19.95
DEMONS & DRAGONS I	\$19.95
DEMONS & DRAGONS II	\$19.95
ELECTRONIC GAME PACK I	\$17.95
ELECTRONIC GAME PACK II	\$17.95
FAMILY FEUD (DDP)	\$19.95
FAMILY FEUD QUESTION PACK	\$19.95
G.A.M.E. SET VOL. I	\$12.95
G.A.M.E. SET VOL. II	\$12.95
GHOST ZAPPER (64K)	\$11.95
JEOPARDY QUESTION PACK	\$19.95
KID'S TRIVIAPAK I	\$12.95
L.V.A.C. ARCHIVES I	\$9.95
LAB MOUSE	\$15.95
LAS VEGAS CRAPS	\$16.95
M&M JEOPARDY QUESTION PACK	\$14.95
MAGE QUEST	\$15.95
MIND OVER ADAM	\$11.95
MR. T SEARCH	\$12.95
MR. T SEARCH: GAMEPAK I	\$9.95
MR. T SEARCH: TRIVIA WORD SEARCH	\$7.95
MYSTERY & YACHT	\$14.95
PHRASE CRAZE	\$19.95
PHRASE PAK I for Phrase Craze	\$12.95
PHRASE PAK II for Phrase Craze	\$12.95
PITY	\$18.95
PRO FOOTBALL	\$18.95
PRO GOLF CHAMP	\$14.95
PRO PICKS	\$18.95
REEDY ENTERTAINMENT PACK	\$15.95
REEDY SOFTWARE LIBRARY	\$19.95
ROBOTHIEF	\$19.95
SMARTGAMES PACK	\$9.95
STAGE FRIGHT	\$15.95
STATES RACE	\$15.95
STOCK MARKET GAME	\$15.95
STRATOZAP	\$16.95
SUPER PARROT	\$12.95
SUPER ZAXXON (DDP)	\$9.95
TEMPLE OF THE SNOW DRAGON	\$19.95
TRIVIAPAK I	\$12.95
U-MATCH-EM	\$12.95
VASE OF TURR	\$29.95
WIZARD'S PINBALL ARCADE	\$14.95
ZORAN III	\$13.95

**CONSTRUCT. SETS**

FAMILY FEUD WRITER	\$24.95
JEOPARDY WRITER	\$24.95
LINKBUILDER for Pro Golf Champ	\$24.95

MAGE QUEST CONSTRUCTION SET	\$15.95
PHRASE PAK CONSTRUCTION SET	\$12.95

**EDUCATIONAL**

EASY AS A,B,C, & 1,2,3	\$11.95
EL ESPANOL	\$15.95
EXPERTYPE (DDP)	\$9.95
FRANCAIS POR LES CHIC	\$15.95
MATH MENTOR	\$15.95
RICHARD SCARRY'S BEST ELEC (DDP)	\$24.95
ROYAL AMBASSADOR EDUC. PACK	\$9.95
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ADAM'S DESK TOP (DISK/DDP)	\$29.95
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ADAMLINK II PATCH	\$9.95
AUTOBACKUP (64K)	\$17.95
BACKUP 3.0 (DISK)	\$10.95
BACKUP+ 3.0	\$24.95
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COPYCART+ V2.0 (DISK)	\$19.95
COPX	\$10.00
DISK DOCTOR	\$9.95
FILE MANAGER V2.0	\$17.95
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FORMAX	\$10.00
INTEL-LOAD V1.0	\$12.95
INTEL-LOAD V2.0	\$12.95
KOPYKAT	\$15.95
LIBRARIAN	\$19.95
MEDIA-HELPER	\$14.95
MEGADISK 1.0 (64K)	\$19.95
OPENFILER V3.0 with OPENRECIPE	\$14.95
PrBOOT	\$17.95
RAMBOOT (64K)	\$19.95
SMARTDSK I for SmartWRITER	\$18.95
SMARTDSK II for DEVICE #2 (64K)	\$16.95
SMARTDSK III for SmartBASIC	\$24.95
SMARTMATE CART (PowerMATE)	\$39.95
SMARTWRITER'S HELPER	\$10.00
SWIFTDISK (64K)	\$12.95
TURBODISK 1.0 (64K)	\$18.95
TURBODISK 2.0 (64K)	\$12.95
XRAMPAK I (64K)	\$14.95

**HOME / BUSINESS**

ADAMCALC (DDP)	\$29.95
ADAMLINK III+	\$24.95
ADAMLINK III UPGRADE TO III+	\$5.00
ADAMTALK V1.1 (EVE SS-CC)	\$19.95
ADDRESS BOOK / CALENDAR	\$9.95
ADDRESS BOOK FILER (DDP)	\$29.95
APPOINTMENT BOOK	\$24.95
AUTOAID	\$24.95
AUTOWRITER	\$14.95
B&R HANDYMAN VOL. I	\$12.95
B&R HANDYMAN VOL. II	\$12.95
BASICAID V2.0	\$9.95
BORDERSPLUS for PrintWORKS	\$12.95

BUSINESS PACK I V2.0	\$18.95
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CLIP-ART VIEWER & CONVERTER	\$24.95
CP/M 2.2 & ASSEMBLER (DDP)	\$44.95
EASY COME, EASY GO (DDP)	\$19.95
E.O.S. FILE INDEXER	\$9.95
ELECTR. FLASHCARD MAKER (DDP)	\$9.95
FILE PRINTER	\$14.95
FLASH FACTS: HISTORY (DDP)	\$6.95
FLASH FACTS: VOCABULATOR (DDP)	\$6.95
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BOLD GLORY	\$16.95
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GROOVY GRAPHICS	\$14.95
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NORMAN'S RAILROAD	\$14.95
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POWERPRINTS VOL. I	\$11.95
POWERTOOLS	\$15.95
SHOWOFF I	\$18.95
SMILEY FACE: WHAT AN ATTITUDE!	\$9.95
SNAPSHOTS VOL. I & II	\$10.95
SWIFTPRINT (64K)	\$15.95
YULE TOOLS I	\$16.95

\$4.00 DISK

MISCELLANEOUS VOLUMES

N.I.A.D. PUBLIC DOMAIN SOFTWARE PLEASE NOTE: Specify VOLUME #, TITLE and DISK OR DDP

\$6.00 DDP

**SMARTBASIC BNDV # 1 - 36:** 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 UNDV # 1 - 5:** 5 different volumes containing SmartLOGO entertainment, application, graphics, utilities, patches and other misc. programs. Volumes require the user boot SmartLOGO first, contain SmartWRITER documentation.

**ADAMCALC ANDV # 1 - 34:** 34 different volumes containing ADAMCALC spreadsheet formulas, tutorials and demonstrations. All volumes require the user to boot ADAMCALC first and contain SmartWRITER or ADAMCALC documentation files (6).

**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.

**CP/D SIGNS SMDV # 1 - 2:** 2 different volumes containing SignShop/NewsMaker graphic files for use with these programs by Strategic Software. Volumes require the user boot SignShop/NewsMaker first and contain SmartWRITER documentation.

**PINBALL GAMES PNDV # 1 - 7:** 7 different volumes containing Pinball Construction Set pinball games which were designed with this public domain program by Coleco. Each volume is auto-booting and contains SmartWRITER documentation.

**VIDEOTONES SONGS VNDV # 1 - 3:** 3 different volumes containing many assorted song files each that are for use with Videotones by FutureVision. Each volume requires the user to boot Videotones, then load the song file.

**MDI SONGS MNDV # 1 - 8:** 8 different volumes containing many assorted song files each that are for use with Mini-Recorder by Bonarife Systems for the MIDI-MATE. For use with Mega Quest by Freedy 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.

**NMAD BACKISSUE INDEX:** SmartFILER database detailing the contents of past NMAD newsletters from 1987. Requires that the user boot SmartFILER first.

**DUKKS 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.

**DADAM SUPPORT DIRECTORY:** SmartFILER database containing names, addresses, etc. of ADAM support firms and user groups by Hector Sanchez. Requires the user boot SmartFILER and then follow the SmartFILER instruction manual.

**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

**FILE 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.

**DREDDY ART GALLERY VOL. # 1 - 2:** 2 different volumes of 13 SmartPAINT format picture files to be viewed in SmartBASIC V1.0 with the included leader program **DN & B PIX VOL. # 1 - 29:** 29 different volumes of 13 SmartPAINT format picture files to be viewed / edited in PowerPAINT ShowOff I, 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.

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

**D.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-FLOOR:** Coleco supergame pack version of the Sub-Floor 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.

**HULL'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.

**JLEPARDY:** 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 game (s).

**TEMPLE OF APHAI! 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.

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

**DA-CHESS (SARGON):** Great graphic chess game which was developed in CP/M and modified by Chris Baymen. Comes on an auto-booting media and includes documentation on how to use.

**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: GREG'S REVENGE developed by Coleco of Canada. Help Thor past obstacles to find Eric Chick and to find the Meaning of Life.

**DMOUNG PHRASE PAK:** An additional 300 phrases for use with Phrase Craze by Freedy Software. Compiled by George Drank. Contains SmartWRITER documentation.

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

**CLASSICS UNRELEASED CARTS:** A collection of 8 cartridges: Fall Guy, Video Hustler, M.A.S.H., Super Cobra, Memory Manor, Word Feud, Artilery Duel and Tomato 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.

**DISPED 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.

**DADAM 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 Adm. Diagnostic and an instruction sheet.

**MACADAM:** 280 / 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 as well as 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 rolled into one program. Will copy most of the available cartridges.

**SHAPENAKER:** 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.

**MEALIA MATTE:** Three tremendous utility programs for editing data, packs and disks in SmartBASIC V1.0. Contains Informative SmartWRITER documentation.

**DISKCOPY V5.0:** Excellent machine code copy program (block and file) with additional renrive 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

programs along with the Turnell'n Troils, ADAM and Music demos.

**MDI DIVERS & DEMOS:** A collection of MIDI SmartBASIC V1.0 utilities SmartWRITER documentation 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 file. Contains SmartWRITER documentation.

**H.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.

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 planner. Not totally bug free. Contains SmartWRITER documentation.

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

**DVIS-SPRITE V6.0:** Advanced sprite development package with many powerful built-in features. This is the clipboard 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 GRAPHY/PINTER 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.

**LTDS V4.5B:** 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.

**SmartBASIC V1.0:** Coleco's original SmartBASIC which came with the ADAM. This is available for replacement on DDP / DISK and has been enhanced for disk owners.

**SmartBASIC V2.0:** Coleco's extended / enhanced version of SmartBASIC V1.0 (49K versus 28K) with memory expander access, but is not fully compatible with V1.0. Contains SmartWRITER documentation.

**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 program. Contains SmartWRITER documentation.

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

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

**DADAM 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 and y coordinates and then save them as a file or view the hurricane in action on the high-resolution map of the area. Includes SmartWRITER documentation file.

**ISP-1 CUSTOM PRINTER SOFTWARE:** Specialized software patches for use in SmartWRITER. Used to inbed software commands. Available for the following printers: Panasonic 1080 / 910 / 92 / 89, Star G10 / G20, Epson FX / RX, Blue Chip, Olympia R60, Brother 2024L, Smith Corona Fastest 60 / D2000, OKI 182 / 192.

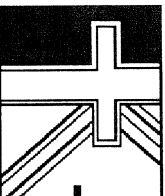
**BASBALL STATISTIGIAN:** Comprehensive stat compiler for pitching, batting and team statistics with full line of edit features, save option, print features for ADAM Printer or dot matrix by Wizards's Lar. Comprehensive instructions in SmartWRITER.

**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.

**DADWONE 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.





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**DISCOUNT BUYING SERVICE FOR HDW & SFTW**

" For GOD so loved the World that he gave his one and only SON, that whoever believes in him shall not perish, but have eternal life. For GOD did not send his SON to condemn the World, but to save the World through him. " . . . John 3:16

N.I.A.D. NEWSLETTER FOR —————>

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