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Continuing with our study of John chapter 13...

Now before the feast of the Passover, when Jesus knew that his hour had come to depart out of this world to the Father, having loved his own who were in the world, he loved them to the end. ² And during supper, when the devil had already put it into the heart of Judas Iscariot, Simon's son, to betray him, ³ Jesus, knowing that the Father had given all things into his hands, and that he had come from God and was going to God, ⁴ rose from supper, laid aside his garments, and girded himself with a towel. ⁵ Then he poured water into a basin, and began to wash the disciples' feet, and to wipe them with the towel with which he was girded. ⁶ He came to Simon Peter; and Peter said to him, "Lord, do you wash my feet?" ⁷ Jesus answered him, "What I am doing you do not know now, but afterward you will understand." ⁸ Peter said to him, "You shall never wash my feet." Jesus answered him, "If I do not wash you, you have no part in me." ⁹ Simon Peter said to him, "Lord, not my feet only but also my hands and my head!" ¹⁰ Jesus said to him, "He who has bathed does not need to wash, except for his feet, but he is clean all over; and you are clean, but not all of you." ¹¹ For he knew who was to betray him; that was why he said, "You are not all clean."

¹² When he had washed their feet, and taken his garments, and resumed his place, he said to them, "Do you know what I have done to you? ¹³ You call me Teacher and Lord; and you are right, for so I am. ¹⁴ If I then, your Lord and Teacher, have washed your feet, you also ought to wash one another's feet. ¹⁵ For I have given you an example, that you also should do as I have done to you. ¹⁶ Truly, truly, I say to you, a servant is not greater than his master; nor is he who is sent greater than he who sent him. ¹⁷ If you know these things, blessed are you if you do them. ¹⁸ I am not speaking of you all; I know whom I have chosen; it is that the scripture may be fulfilled, 'He who ate my bread has lifted his heel against me.' ¹⁹ I tell you this now, before it takes place, that when it does take place you may believe that I am he. ²⁰ Truly, truly, I say to you, he who receives any one whom I send receives me; and he who receives me receives him who sent me."

²¹ When Jesus has thus spoken, he was troubled in spirit, and testified, "Truly, truly, I say to you, one of you will betray me." ²² The disciples looked at one another, uncertain of whom he spoke. ²³ One of his disciples, whom Jesus loved, was lying close to the breast of Jesus; ²⁴ so Simon Peter beckoned to him and said, "Tell us who it is of whom he speaks." ²⁵ So lying thus, close to the breast of Jesus, he said to him, "Lord, who is it?" ²⁶ Jesus answered, "It is he whom I shall give this morsel when I have dipped it." So when he had dipped the morsel, he gave it to Judas, the son of Simon Iscariot. ²⁷ Then after the morsel, Satan entered into him. Jesus said to him, "What you are going to do, do quickly." ²⁸ Now no one at the table knew why he said this to him. ²⁹ Some thought that, because Judas had the money box, Jesus was telling him, "Buy what we need for the feast"; or, that he should give something to the poor. ³⁰ So, after receiving the morsel, he immediately went out; and it was night.

This section of the Gospel of John describes events immediately before Jesus' arrest, conviction and crucifixion. Hence, they should be understood closely because they are some of Jesus' final teachings and

represent principles he thought were VERY important.

The act of Jesus washing his disciples feet at first appears very strange. However, it was a Jewish custom to wash ones feet when coming into a home, before dinner, etc. since they usually were barefoot. Evidently, servants would perform this duty for the members of the house or guests. When Jesus began to do this for the disciples they must have been astonished to say the least that their teacher and master would perform such a lowly task. **Jesus, however, had a very important lesson to teach them - humbleness.** Unfortunately, man's (and woman's) nature is to be prideful. **We all, to varying degrees, are prideful.** We don't like being taken advantage of, we want to be top dog and definitely don't want to be on the bottom of the list in anything. You can even see this in children, they will argue and try to top each other (my Dad is bigger then your Dad!)

Our pride is very powerful and can lead to major problems, dividing families and friends.

Jesus was teaching us here that a leader, teacher, parent, etc. should not be above serving those they are over. In other words, don't let pride make you think you are above others and that they have their "place".

Jesus was the Son of God, a spiritual being so far above mankind that comparisons are not even understandable. Yet Jesus had a humble, servants attitude which was real, not put on.

Jesus was a living example of the principle of **"loving others more than yourself"** which is one of the key principles of God's Kingdom which Jesus came to teach. In Jesus' last days with his disciples he was teaching them a principle that is at the heart of Christian living - loving others and putting down our pride. Jesus had many teachings but this principle was central to all of them.

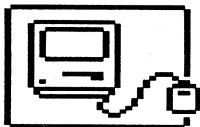
In fact, Jesus was the ultimate example of his own teaching on this subject. Jesus laid aside his place beside God the Father in heaven to come to earth in the "lowly" form of a human with all the limitations of a physical being. Jesus lived among his own creation for 33 years and then was wrongly convicted and sentenced to the most degrading and dehumanizing death imaginable. Do you remember Jesus' reaction to his accusers - silence. Jesus did not assert his place as the Son of God, but humbled himself in obedience to the plan of God. Jesus displayed his love for all of mankind through his suffering and death on the cross.

He bore the punishment for our sins and thus enabled us to have the benefits of eternal life in Heaven. WHAT A GIFT ! Jesus truly was the living example of his teachings of loving others more than loving oneself - the opposite of pride. Won't you accept this gift of from God this Easter, which is the celebration of the death and resurrection of our Saviour. Jesus died and rose again to give us salvation and forgiveness of our sins. Go to church this Easter, confess your sins and accept Jesus' sacrifice for you.

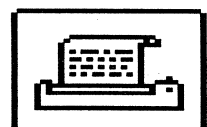
God bless you all.

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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 February issue of N.I.A.D. is the 85TH issue published by N.I.A.D., there are 84 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 insure that issues are not missed.

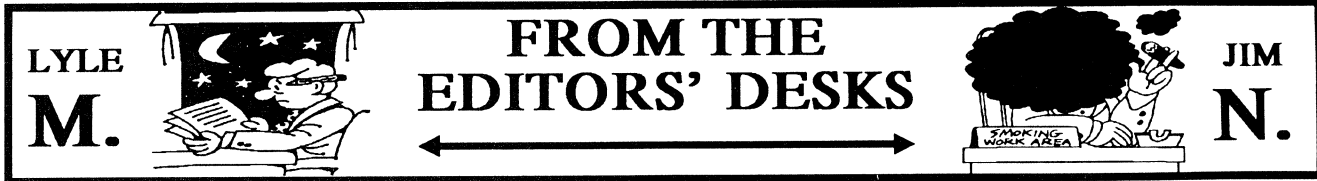
⇒ N.I.A.D. will not be held liable for any issues missed due to an address change which we are not informed of. Please send this information to us as soon as possible so as not to cause any type of difficulties. Also, include your member ID number any time that you send us any kind of letter, package or order.

⇒ N.I.A.D. accepts advertising for ADAM related products and services. Cost is \$35 for a half page ad and \$60 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 or services which may be offered.

⇒ If **0292** are the first four digits in your member number, this is the last issue you will receive in your current membership, 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.

⇒ **We have exercised due care in the preparation of this newsletter. 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.**



Hello to all of you and I wish you a *Happy Easter* (since you probably won't receive the next newsletter until after Easter).

Easter is a special time of year because it represents newness, renewal, a rebirth from the long winter. Our spirits are picked up because of the warmer weather, blooming flowers and buds on the trees.

We all look forward to those wonderful Spring days when the sun is out when we get up in the morning and come home at night. The air seems fresher and the warm breeze feels so good.

Easter is my favorite Christian holiday because it celebrates the **greatest miracle of all time - the resurrection from the dead of Jesus Christ, the Son of God.**

Christianity is unique in that Jesus was God coming to earth to establish a personal relationship with his creation. The God of Christianity is not a wooden idol or a long lost mystic, but a spiritual being who took on the form of his creation and came to dwell with them. Additionally, our God did the unbelievable when His one and only Son took the punishment for the sins of mankind so we all could be redeemed and have eternal life. Jesus suffered and died for our sins and then was raised from the dead to show the power of God and be an example of how we all can be "born again", forgiven for our sins and accepted into God's kingdom.

I hope you all find the real meaning of Easter - it will change your life for eternity.

Obviously, Jim & I are late with this issue again.

We have found that it is really hard to catch up once you get behind, but we are still working on it. Please be patient since we WILL NOT sacrifice the quality of the monthly N.I.A.D. issues just to make a deadline.

We feel (and think you agree) that having a quality newsletter filled with timely and informative material is the highest priority.

There seems to be more squabbling going on in the ADAM community than usual and I would like to encourage all to make up and get back to supporting each other and all ADAMites. We are like a big family living in different parts of the country and like all families we occasionally have "disagreements".

Our family is hampered more than most because we don't have good communication channels (mail and BBS' are not the best) which can exaggerate our differences. This is a major problem and leads to misunderstandings that face to face communications would alleviate. We need to recognize this fact and give the other party the benefit of the doubt instead of always thinking the worst or questioning their motives.

However, we all have a common goal - our beloved ADAMs and if we try hard to keep that common goal in sight, our other differences will not seem so large.

I understand there is a rumor going around that N.I.A.D. is going out of business! I want to state that this is not true. Apparently some people misinterpreted the fact that we are planning to move out of our retail storefront. We will be moving out of our store due to the high price of rent and utilities, but N.I.A.D. will continue - both the mail order as well as the newsletter so rest assured.

It never fails! Once you fall behind, it always seems like an uphill battle against a mud slide to climb back out of the hole and get yourself back on schedule when it comes to editing a newsletter. We are officially one month behind with our newsletter now with no immediate relief in sight until the combined May / June issue rolls around in June (please remember that since last year we are printing a combined May / June issue instead of a combined December / January). But enough said about that, let's get rolling with the important news.

As you all should be aware by now, ADAMCON 04 is approaching rather quickly (July 23-26). Already many software and hardware developers as well as newsletter editors and vendors have committed to attending including myself. I attended ADAMCON 01 in Orlando, but was unable to attend ADAMCON 02 and 03, and can't imagine putting myself through the torture of missing this one. The convention was a fabulous time, as Lyle can attest to after attending ADAMCON 03. The best way I can explain the experience is like that of getting a battery recharged even though the opposite should hold true because of the very late nights you spend talking to all the other ADAMites who attend and the early wake up calls which signal it is time to start all over again for another day.

Not only do you get to meet all these fabulous people at the conventions who for so many years have only been a voice at the other end of the phone, but also you get to see hundreds of fabulous products demonstrated first hand! This has been one of the drawbacks over the years for ADAMites since they can't walk into any old computer store and see a product in operation as they can with other computer systems. Everything is basically word of mouth unless you are fortunate enough to live close to our retail store or your live close to a group that holds monthly meetings. At ADAMCON, you will have countless opportunities to actually talk with the developers and vendors and see first hand demonstrations from which a judgement can be made as to whether to purchase the product or not. You can also drill the many knowledgeable attendees with all those questions which have been building up on how to use certain programs and facets of ADAM usage.

The ADAMCON is basically like one big rush of adrenaline that lasts for four straight days and after it is over that rush which you have experienced lasts for another couple weeks. But unless you have attended one or attend the fourth convention in Cleveland, you will never really know. So much more is accomplished at the conventions than what I have explained previously and believe it or not, it is not an event that is held for the experts (so to speak) only, it is an event for everyone who attends. If there is any way for you to attend the upcoming convention in Cleveland, do whatever you can to make it.

I know many of you won't be able to attend due to financial restraints or physical reasons and that's where N.I.A.D. and other groups come in. After the convention there will be countless articles written that detail the events and I'll be bringing along a video camera (this time with a tri-pod!) so that others may experience the events which unfold. I hope to see many of you there and let's help make this the best AC yet!

N.I.A.D. PUBLIC DOMAIN SPECIAL

EFFECTIVE MARCH 31st, ALL N.I.A.D. PUBLIC DOMAIN DISK AND DIGITAL DATA PACK SPECIAL PRICES WILL BE RENEWED AS FOLLOWS. NOTE: THESE PRICES ARE NOT PERMANENT SO TAKE ADVANTAGE OF THEM WHILE YOU CAN!

\$2.00 @ ON DISKETTE
\$4.00 @ ON DIGITAL DATA PACK



N.I.A.D. NEWS & UPDATES



⇒ **ADAM'S DESK TOP** has been released by Jim Walters of Walters Software Co. as an Eprom Chip that mounts on to the Micro Innovations Parallel Printer Interface. ADAM's Desk Top (reviewed in issue #75, April 1991) installs a vastly enhanced operating system in memory called SmartDSK that allows for the use of ramdisks, parallel printers and much more. As is supplied, the M.I. Parallel Printer Interface requires a socket to be soldered onto it in order to plug in the A.D.T. Eprom. Once the eprom is installed, the ADAM will automatically boot to the A.D.T. program from which the user may choose from one of it's many options or escape to another program. The A.D.T. Eprom is available through Walters Software Co. for \$29.95, the M.I. Parallel Printer Interface is available through many retailers for \$34.95 and the modification of the M.I. board can be performed by Walters Software, Micro Innovations or ADAM's House. For pricing on the modification to the board contact one of these companies.

⇒ **M.I. 1Mb and 2Mb MEMORY EXPANDERS** have been completed and released by Mark Gordon of Micro Innovations. The 1Mb Memory Expander is priced at \$149.95 and is capable of being upgraded by Micro Innovations only to a 2Mb Memory Expander. The 2Mb Memory Expander is priced at \$249.95. Each of these memory expanders require an addressor hookup, like all the other memory expanders larger than 64K in size, which can be accomplished via a Parallel Interface or an Addressor Card. These memory expanders are also compatible with all current software. A further note on the Micro Innovations line of memory expanders which has not been mentioned previously is the fact that their 64K board can be upgraded to 256K by Micro Innovations only. Contact Micro Innovations for further details and pricing.

⇒ **M.I. SERIAL INTERFACE**, by Mark Gordon of Micro Innovations, is a new RS-232 Serial Interface card that will be released in the near future. Early reports on this new serial interface card indicate that it will be fully compatible with the EVE / Orphanware standard and plug into Slot #1 in the Memory Console. No further details have been released as to whether it will provide for either one or two serial ports. Suggested retail price is \$34.95 for the interface and \$14.95 for the serial cable.

⇒ **M.I. PowerMATE and ADAMnet LC HARD DRIVES** are still in the testing phase due to a new hard drive controller board design which was recently implemented out of the necessity to insure the proper operation of the hard drive. Keep watching this article for further news on when these hard drives will become available and the final retail price.

⇒ **ADAMOUSE**, by Thomas Mackie of Thomas Electronics, is reported to be fully functional with PowerPAINT and all other Digital Express Inc. programs which allow for the input of choices and cursor control through a joystick plugged into port #1. We have not yet confirmed this ourselves but if it is true we may once again carry this mouse product since it will prove invaluable for the graphics designers amongst the ADAM community.

⇒ **ADAMLINK OF UTAH**, operated by Alan Neeley, has received permission from Solomon Swift to reproduce all Digital Express Inc. software, which will therefore continue to be available from most ADAM dealers. Sol has also authorized all the profits from sales of his software to be channelled back into the ADAM community via donations to ADAM conventions and other such projects. Sol has also authorized Pat Herrington to continue to produce Phoenix 2000 software with similar provisions. Alan Neeley and Pat Herrington will be in charge of the non-profit fund. Everyone in the ADAM community will see some benefit from Sol's donation of future profits from D.E.I. and Phoenix 2000 software to non-profit community ventures. This, in no way means that

D.E.I. or Phoenix 2000 software is to be considered public domain, now or in the future.

⇒ **THE METRO ORLANDO A.U.G. and 463 A.U.G.** have recently started a joint editorship of their respective newsletters due to ever decreasing time to continue publishing their own newsletters on a monthly basis and to avoid the need to move to a bi-monthly publication of their respective newsletters. This is a fairly unique approach which has been attempted by Pat Herrington and Dean Roades and they have to be complemented for their desire to insure that their members receive the best possible support. Two other groups which publish a newsletter, A.W.A.U.G. and the new S.F.A.U.G., have also recently joined forces to maintain their newsletter publications. Can all this be leading to one Global Newsletter in the near future which will maintain the identities of the individual groups who publish a newsletter as well as be available to all of the members of these groups?

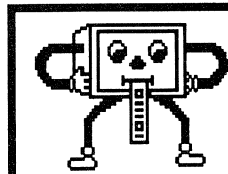
⇒ **PEEKS, CALLS AND POKES** has been released by Tony Patterson of Digital Adventures. This is a 28 page coil bound collection of all the addresses in the ADAM Z80 central processing unit which should be valuable to all ADAM hackers. A review copy and pricing has not been received yet but we will keep you posted as soon as we receive further details. A number of other products have been rumored to be near completion by Digital Adventures including a Pictorial Graphics Library book that lists all public domain graphics volumes (PaintMATES, PaintFORMS, N&B PIX) as well as the long awaited follow up to Temple of the Snow Dragon, called Pit of Reshus.

⇒ **A.D.A.M. SERVICES** is a new Canadian mail-order retailer recently started by Rich Clee (the president and editor of M.T.A.G.) to serve Canadian owners of the ADAM. We have yet to receive a catalog from this new mail-order retailer but have been in contact a number of times and they are accumulating quite an array of products. For further details contact Rich Clee at: A.D.A.M. Services - 21 Rondale Blvd. - Toronto, ONT., CAN. M6A-1H6 or phone (416) 783-0316.

⇒ **THE ADAM EXPERT PANEL** is a new service established by the ADAM News Network and consists of Tony Morehen, Guy Cousineau, Terry Cairns, Mel Ostler and Ron Mitchell. The purpose of the A.E.P. is to aid any ADAMites who are experiencing problems in using the ADAM and answer questions users might have about using the ADAM. In the rare instance that help or answers can't be supplied by the A.E.P., they will find someone who may be of help. Anyone in need of assistance can reach the panel care of Ron Mitchell at: Apt. 1107, 210 Gloucester St. - Ottawa, ONT., CAN. K2P-2K4 or phone (613) 230-9511.

⇒ **BONAFIDE SYSTEMS**, creator of the Midi-Mite Interface, has updated Mini-Recorder and VT-Player. Mini-Recorder 1.3 no longer resets the front panel information every time one records and VT-Player 1.1 can now save VideoTunes files as standard MIDI format 0 files for use with Mini-Recorder or Sequel. If you would like to receive these updates please send Bonafide Systems your original data pack and they will send you the free update (the version number you currently have is displayed on the screen after booting the program). Chris Braymen has also compiled a number of new public domain packages for use with his MIDI hardware and software programs.

⇒ No further details have been received concerning the ADAM Image Maker, Linked Stack Development Kit, File Manager V3.1, and E.O.S. Directory Sorter amongst other products in development but we hope to be able to pass word along in the coming months. We also haven't received any further details on the developments of ADAMCON 04 but hope to have further information available for your perusal in next months issue. Remember, only 4 1/2 more month to go.



ACCESSING THE 64K MEMORY EXPANDER

by Bruce L. Walters of Hexace Software

In the last article that I wrote, I demonstrated how to use the lower half of the memory expander to store and retrieve information. This time I will show you how to access the lower and the upper half of the 64K memory expander. You will be able to use all of the memory expander except for 512 bytes (256 bytes will be used as a temporary buffer or storage area, and the other 256 bytes will be used as an area for control code and unused space). All the storage areas will be 256 bytes long. I designed the program this way for simplicity. This still gives you 254 areas to store your information. As with my last article, there are three parts for you to learn from. The main article, a disassembly, and a basic program, that works as an example and test. As you read through this article refer to the basic program and the disassembly. If you need more in depth explanation of some of the code and numbers, refer back to my last article.

Basically what happens is, I have set aside two temporary buffers to help get the information into and out of the expansion memory. There is one in the intrinsic or regular memory at 57088 thru 57343. The other temporary buffer is in the expansion memory at 256 thru 511. There will be control code in intrinsic memory at 56320 thru 56442 and in the expansion memory at 0 thru 10. To get information into the expansion memory you first have to put the information in the temporary buffer in the intrinsic memory, use the control code in intrinsic memory to transfer this information to the temporary buffer in the expansion memory, then use the control code in the expansion memory to move the information to the permanent storage area in the expansion memory. To get the information out of the expansion memory, you just do the reverse of putting the information into the expansion memory. You use the control code in the expansion memory to move the information from the permanent storage in expansion memory to the temporary buffer in the expansion memory, then you use the control code in intrinsic memory to get the information from the temporary buffer in the expansion memory into the temporary buffer in the intrinsic memory. While the information is in the temporary buffer in intrinsic memory, you can use this information or you can modify the information and restore it back into the memory expander. By going in steps, you can open a file on a disk or tape and load the expansion memory with information or you can save this information to a disk or tape. To do this you PEEK the information from the buffer and PRINT the information to the file on the disk or tape. The same is true for getting the information into the memory expander. Just GET the information from a file and POKE it into the buffer in intrinsic memory. Then all you have to do is select an area in the expander, and use the control code to store it there.

My basic program gives you an example of what you have to do. Lines 1 thru 24 have all the control code and the for-next loop to place it into an unused area of RAM (read write memory). Lines 25 and 26 are used to get the control code into the expansion memory. Lines 30 thru 33 put some test information into the buffer in intrinsic memory, so it can be put in the memory expander. I have decided to use all 2's, 256 of them, so when we check later in the program we can see if everything is working. Lines 40 thru 42 select the first permanent storage area to save all these 2's. This area is indicated by a 2, stored in intrinsic memory at address 56321. A 1 would leave the information in the temporary buffer in the expansion memory. You might want to do this some time, and it is a good thing to know. NEVER USE A 0, this will destroy the control code in the expansion memory. You can do a test in your basic program to prevent this, if you want to. The highest storage area is 255, this is also the largest number that can be stored in any memory location. Lines 43 thru 44 store the information into the expansion memory. Lines 50 thru 53 put different test information into the temporary buffer in the intrinsic memory. I chose all 200's as the test information this time, because that is the area in the expander that I

want to store this information. Lines 60 thru 62 select the area in the expansion memory, that I want to store the information. Lines 63 thru 64 store the information into the expansion memory. Now that we have some test information in the expansion memory, we can look to see if the program worked. Lines 70 thru 72 select the first area where we stored all the 2's. Lines 73 thru 74 move the information into our intrinsic memory buffer. Lines 80 thru 84 will print all the 2's on the screen for us to see. Next, lines 90 thru 92 select area 200, where we stored all the 200's. Lines 93 and 94 move the information from the expansion memory into our buffer in the intrinsic memory. Lines 95 thru 99 let us see if the 200's, that we stored in the expansion memory, will come back to us. Line 100 is the end. Thank you. This concludes this article, the next one will show you how to access a memory expander larger than 64K. Hope you and your's have a very safe and happy new year and if you have any problems drop me a line.

64K M.E. ACCESS DISASSEMBLY

Control buffer

```
56320:      ....      0 0 0 0
```

This routine is used to turn the interrupts off, and to switch the lower half of the memory to the memory expander.

```
56324:      .      243      DI
56325:      :b.    58 98 253  LD A<(64866)
56328:      ..    203 175  RES 5 A
56330:      O      79      LD C<A
56331:      ..     6 1      LD B< 1
56333:      ..    205 32 253 CALL 64800
56336:      >.    62 2      LD A< 2
56338:      ..    211 127  OUT A>(127)
56340:      .      201      RET
```

This routine is used to switch the lower half of memory to the intrinsic memory, and to turn the interrupts back on.

```
56341:      >.    62 1      LD A< 1
56343:      ..    211 127  OUT A>(127)
56345:      :b.    58 98 253 LD A<(64866)
56348:      ..    203 239  SET 5 A
56350:      O      79      LD C<A
56351:      ..     6 1      LD B< 1
56353:      ..    205 32 253 CALL 64800
56356:      .      251      EI
56357:      .      201      RET
```

This routine will be stored in the expansion memory. It will be used to move the information from the temporary buffer in the memory expander to the permanent areas of the memory expander and to move the information from the permanent areas of the memory expander to the temporary buffer in the memory expander.

```
56358:      >.    62 10     LD A< 10
56360:      ..    211 127  OUT A>(127)
56362:      ..    237 176  LDIR
56364:      >.    62 2      LD A< 2
56366:      ..    211 127  OUT A>(127)
56368:      .      201      RET
```

This routine will be used to move the control routine on lines 56358 thru 56368 into the memory expander.

```
56369: ... 205 4 220 CALL 56324
56372: !&. 33 38 220 LD HL<56358
56375: ... 17 0 0 LD DE< 0
56378: ... 1 11 0 LD BC< 11
56381: .. 237 176 LDIR
56383: ... 195 21 220 JP 56341
```

```
56407: .. 6 1 LD B< 1
56409: .. 237 176 LDIR
56411: ... 195 21 220 JP 56341
```

This routine will be used to move the information from the intrinsic memory to the expansion memory.

This routine will be used to move the information from the expansion memory to the intrinsic memory.

```
56386: ... 205 4 220 CALL 56324
56389: *.. 42 0 220 LD HL<(56320)
56392: ... 17 0 1 LD DE< 256
56395: ... 1 0 1 LD BC< 256
56398: ... 205 0 0 CALL 0
56401: !.. 33 0 1 LD HL< 256
56404: ... 17 0 223 LD DE< 57088
```

```
56414: ... 205 4 220 CALL 56324
56417: ... 17 0 1 LD DE< 256
56420: !.. 33 0 223 LD HL< 57088
56423: ... 1 0 1 LD BC< 256
56426: .. 237 176 LDIR
56428: !.. 33 0 1 LD HL< 256
56431: !.. 237 91 0 220 LD DE<(56320)
56435: .. 6 1 LD B< 1
56437: ... 205 0 0 CALL 0
56440: ... 195 21 220 JP 56341
```

6
4
K
M
E
M
O
R
Y
E
X
P
A
N
D
E
R
A
C
C
E
S
S
P
R
O
G
R
A
M

```
1 REM Program to access the 64K memory expander
2 REM Written by Bruce L. Walters 9 REM machine code
10 DATA ,,,, 243, 58, 98, 253, 203, 175, 79, 6, 1, 205, 32, 253, 62, 2, 211, 127, 201
11 DATA 62, 1, 211, 127, 58, 98, 253, 203, 239, 79, 6, 1, 205, 32, 253, 251, 201
12 DATA 62, 10, 211, 127, 237, 176, 62, 2, 211, 127, 201
13 DATA 205, 4, 220, 33, 38, 220, 17,,, 1, 11,, 237, 176, 195, 21, 220
14 DATA 205, 4, 220, 42,, 220, 17,, 1, 1,, 1, 205,,, 33,, 1, 17,, 223, 6, 1, 237, 176, 195, 21, 220
15 DATA 205, 4, 220, 17,, 1, 33,, 223, 1,, 1, 237, 176, 33,, 1, 237, 91,, 220, 6, 1, 205,,, 195, 21, 220
20 REM load machine code into upper ram
21 FOR a=56320 TO 56442
22 READ b
23 POKE a, b
24 NEXT
25 REM put control code in expansion memory
26 CALL 56369
30 REM prepare intrinsic buffer with test information to be stored in expansion ram
31 FOR a=0 TO 255
32 POKE 57088+a, 2
33 NEXT
40 REM store test information in lower half of expansion ram
41 REM which area in expansion ram
42 POKE 56321, 2
43 REM store it away
44 CALL 56414
50 REM prepare intrinsic buffer with test information to be stored in upper half of expansion ram
51 FOR a=0 TO 255
52 POKE a+57088, 200
53 NEXT
60 REM store test information in upper half of expansion ram
61 REM which area in expansion ram
62 POKE 56321, 200
63 REM store it away
64 CALL 56414
70 REM Now get first test information area back from lower half of expansion ram
71 REM which area in expansion ram
72 POKE 56321, 2
73 REM get it into our intrinsic buffer
74 CALL 56386
80 REM look to see what we got from first area of expansion ram
81 TEXT:? "press any key ":GET t$
82 FOR a=0 TO 255
83 ? PEEK(a+57088); " ";
84 NEXT:? " press any key":GET t$
90 REM get information from second area of expansion ram
91 REM which area in expansion ram
92 POKE 56321, 200
93 REM get it into our intrinsic buffer
94 CALL 56386
95 REM look to see what we got from second area of expansion ram
96 TEXT:? "press any key ":GET t$
97 FOR a=0 TO 255
98 ? PEEK(a+57088); " ";
99 NEXT:? " press any key":GET t$
100 TEXT:END
```



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OH, YES, YOU CAN!!

A POWERPAINT PRIMER

By P. J. HERRINGTON
Part 111 of 10

EDITOR'S NOTE: This is the third of a series of articles written by Pat Herrington (the Editor of the M.O.A.U.G. Newsletter) covering the many functions and capabilities of PowerPAINT by Digital Express Inc. We thank Pat for making this series available for our members.

We have developed a sort of feel for drawing narrow lines, in both DRAW FOREGROUND and DRAW POLYGONS, and we have learned to draw oversized lines with Fonts and Brushes. We are now ready to experiment with drawing pictures.

At this point, it might be best to practice by modifying a picture someone else has already drawn for us. There are literally hundreds of pictures available on public domain volumes, as well as commercial graphics packages. Most people tend to amass huge collections of pre-drawn graphics, and with good reason. Many of the projects we will undertake can be accomplished much more quickly by starting with completed pictures and altering them to suit our purposes. Such shortcuts save valuable time. There's not much point in drawing something from scratch when somebody has already done the work, and all we have to do is alter it a little bit.

For the moment, though, let's assume that we don't have any other graphics volumes handy. No problem. We can practice with one of the full screen "pix" contained on the PowerPAINT medium. There are several different formats of "pix" in the directory, placed there to show that PowerPAINT can handle different picture formats... including RLE, HRP, and others. HRP pictures consist of four separate files, but we can access the entire picture by pointing to any of the four files. In this case, though, let's GET one of the pictures in PowerPAINT format (binary 10K file). Let's get the picture named SAILING1.

No matter what its format, each of the pictures is the size of one PowerPAINT screen. When we load one of those pictures, we will eliminate anything showing on our current screen. If we want to keep our current screen, we can move to a different cell. To change cells, we make sure we are in the Primary Menu, and then press any number from 1 to 4 (of course, if our memory expander is larger than 64K, we have 8 full cells at our disposal, and can press any number from 1 to 8 to move to that cell.) Remember, we can have a different screen in each of those cells.

So, let's load our picture. Press the STORE/GET key, then SmartKey V, "READ MEDIUM". Select SAILING1 with the arrow keys, then press the SmartKey labelled GET FILE. PowerPAINT will now load that picture into whichever cell we happen to have moved to just prior to GETting the file.

The first thing we will notice is that the background and foreground color are different from the colors we have decided to use. So our first step is to go into GLOBAL ART COLOR and change all the background to cyan, and then all the foreground to black. Now we are on familiar ground.

Let's see; what kinds of changes shall we make? There is nothing

wrong with the picture as it stands, but we need the practice, so let's try the following: First, let's change the size and shape of the sails. Let's make them taller. While we're at it, let's eliminate the diagonal lines in the sky, add a flag or pennant to the mast, make the sailboat a little bit longer, and shade the path in the foreground. Let's also erase some of the lines in the clouds so that they appear lighter.

First of all, we have some erasing to do. So let's go into DRAW FOREGROUND and start erasing the diagonal lines and parts of the sails. This gets tedious very quickly. That's where the PATIENCE comes in! There isn't much we can do to speed up the erasure of small details, but there IS a faster way to eliminate large sections of graphics. Ready? Go back to the Primary Menu, and hit the INSERT key. When the message section at the bottom of the screen changes, choose NORMAL TEXT.



We are back to the menu which allows us to add letters to the screen. We have already seen that we can also use this menu with REVERSE FONTS to draw 8-pixel square sections of graphics. Now, we will use the same procedure with regular Fonts to ERASE sections of the same size. If we've already changed the background color to cyan during this session, it hasn't changed. If not, let's do it now.

Once again, we will see the hollow square "cursor" which shows where text would be entered if we hit a character key from the keyboard. Again, we can move the cursor without affecting our screen by using the arrow keys. Wherever we move the square, we can erase anything on our screen by pressing the Space Bar.

When we "erase" in this manner, what we are actually doing is replacing the original graphics with font graphics, in both foreground and background. Since the Space Bar contains no foreground color, the effect is that the entire square becomes background color. As long as the new background color is the same as the original background color, the only change we will see on the screen is that the foreground disappears. If we get too energetic and erase more than we intended, we simply hit the UNDO key and return to the original drawing. (We will be asked if we really want to UNDO our changes. Yes, we do.)

We won't be able to erase everything this way. Some dots (pixels) will fall outside the square. To get rid of those, we need to return to the Primary Menu and go back to DRAW FOREGROUND. Then we will use our pen in ERASE mode and attack those stray dots until we've eliminated everything we don't want on our screen.

Okay. Once we have erased what we don't want, let's add our own details. While still in the DRAW FOREGROUND menu, we toggle our pen back into DRAW mode. Now we will try to draw the sails in a different shape. Let's try picking a starting point for the left-hand sail, and drawing a line angling upwards to the mast by hitting the arrow keys repeatedly in this manner: up twice, right once, up twice, right once, and so on until we reach the top of the mast. To draw the sail on the right side, we will make the angle a little bit steeper by hitting up

three times, left once, and so on until we reach the top. Then let's draw some sort of pennant at the top, freehand. Next we'll hollow out the clouds a little bit, by erasing some of the interior lines. Then we'll add a little bit of width to the sailboat itself.

Last of all, we'll shade in the path or sidewalk. To do this, we change PIXEL INCREMENT to 2, and draw between the left and right boundaries.

Does your finished picture look anything like mine? It really doesn't matter. The point of this exercise is not to copy a picture. The idea is to discover some of the ways in which we can alter an existing picture to suit ourselves.

Now it's time to plunge right in and draw a picture from scratch. Well, fine, but WHAT should we draw? If we don't have any ideas rumbling around in our heads, now is the time to make use of outside sources.

Children's coloring books are an excellent source of "inspiration", because they contain big, clear line drawings, usually very basic in shape, which are just about the right size for one PowerPAINT screen. I wish that, when I was first learning this program, somebody had told ME about coloring books! There are many different ways to transfer a drawing from a book to the screen, and I didn't learn any of them until much later, which is probably why I still don't use them much. Some I developed myself, and some I learned from other people, but they are all great tricks.

For instance, it's easier to transfer a picture if we divide the picture into small squares and copy the contents of each square onto the computer screen. We can divide the coloring book page into squares by simply folding it, or we can draw lines directly on the picture. (The latter technique is a little bit harder because the lines must be more or less square and proportionate, but pencil lines ARE easier to see than folds.) When the picture itself has been divided into squares, it's easy to put squares on the computer screen... in BACKGROUND color, so it doesn't interfere with drawing.

There is a graphics volume called POWERTOOLS (distributed by Reedy Software) that contains prepared grids. Even if we don't have POWERTOOLS handy, we can easily make our own grids of background color by hitting INSERT and Normal Text. Then it's a simple matter to change background colors. After deciding how large we want our squares to be, we hit the SPACE BAR to get an 8-pixel square of whatever new color we chose. We can use as many colors we like, in any combination, to get a grid that consists solely of background color squares. We can then transfer the contents of the printed page to the onscreen squares. When we are through drawing, we can go back to GLOBAL ART COLOR and change the entire background back to one color.

The grid technique is good for another reason. If we are drawing something that we may later want to move around, the grid makes it easy to see what portions of the picture can be moved at the same time.

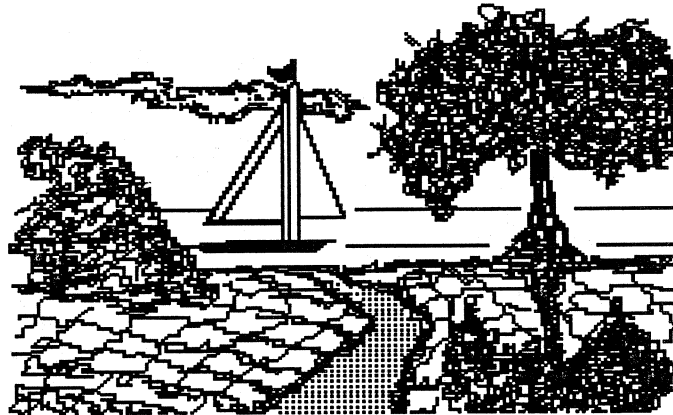
Thanks to Joe Quinn for passing on a technique used by retired commercial artist James Casey. James transfers drawings onto plastic film, using some sort of transparent marker. (I imagine the type of marker used for overhead transparencies would work, as well as the erasable type used for white marker boards.) James then places the plastic sheet over the computer screen, and draws UNDER it. I don't

know what color scheme he uses for this, but it seems likely that he uses the same type of pale background and dark foreground that we've already discussed. The foreground drawing in black should show right through the transparent lines made by the marker.

Tony Patterson liked the idea a lot. He took it a step further. Tony draws DIRECTLY on the monitor screen with erasable marker, eliminating the problem of positioning the plastic. Again, the black lines will show up underneath the marker, making it easy to see where to move the arrow. For those who like to draw their own pictures from scratch, this may be the easiest technique of all. Of course, plastic would be better for those who are reluctant to mark up their monitor screens, even though it's unlikely that erasable marker would do any permanent damage. To each his own, eh?

Another good thing to bear in mind is that silhouettes are sometimes more effective than line drawings. That is, a solid black picture makes a striking printout. The same drawing can be used, by filling in the outline and using ERASE mode to add details. This is especially effective when the shape is simple and requires few extra details.

Before we get too far ahead of ourselves, though, let's try a simple exercise in drawing a picture from our own imagination. Let's try something very basic: A plain line drawing of a coffeepot. Don't try anything fancy just yet. Keep it straightforward. Again, it doesn't matter whether your drawing looks anything like mine. Take it easy and have fun. The point is to prove to yourself that you CAN design your own pictures. Go ahead. Go into the DRAW FOREGROUND menu and draw your coffeepot now. Make it fairly large, but keep it simple. I'll wait.....



.....All done? Good. Because now we are going to look at another way to use Brushes. Let's make

sure we are in the Primary Menu, and, once again, press the SmartKey labelled PAINT GRAPHICS. Again, if we've already changed the Brush color to black during this session, fine; otherwise, we'll do it now. This time, we want to be certain that we'll be moving in increments of 16 pixels. If we aren't sure, we'll press the key labelled PIXEL INCREMENT and check. Then we will press the SmartKey labelled SELECT BRUSH. When our screen changes to display the current Brush, we'll use the arrow keys to cycle through the set of Brushes currently in memory, and make our selection by pressing RETURN. (Choose any Brush pattern you like, but for this exercise, do not choose the solid square shape.) Also, make sure the Brush is in DRAW mode, and that its status is UP.

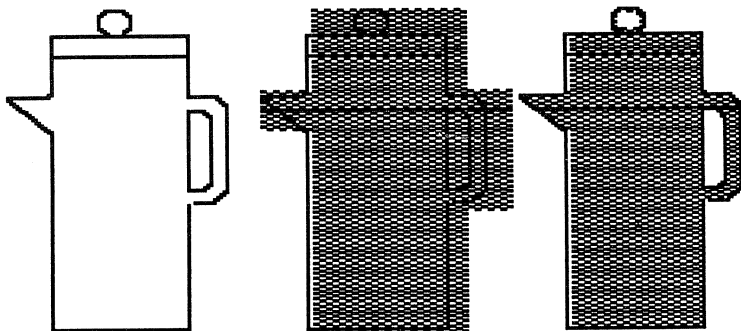
Now, we'll move the white paint brush "cursor" that shows on the screen, until it is next to the edge of our coffeepot drawing. Then we'll change the status of the Brush to DOWN. From now on, wherever we move our Brush, we will leave foreground graphics in the pattern of the Brush we chose. Move the Brush around the drawing until the entire coffeepot is filled with the pattern. We will soon learn that we cannot keep the pattern entirely within the lines. Some of the graphics will spill over into the background surrounding our picture. That's life. As long as the coffeepot is filled, we're okay. We can live with the excess for awhile.

When we've filled the coffeepot, we return to the Primary Menu and go back into DRAW FOREGROUND. We now change our pen to erase mode, and erase all the parts of the pattern which fall outside the outline of the coffeepot. Yes, this is tedious. No, there is no quick way to do it. Again, that's where PATIENCE comes into the picture. But after we've erased all the excess graphics, we have a coffeepot that is

shaded in with whatever pattern we chose.

We've just scratched the surface as far as Brushes are concerned. We could go back and choose a SECOND pattern, and overlay it in certain areas to get a more three-dimensional effect. Or we could change the Brush to ERASE mode, and erase certain areas of the picture. There are a lot of wonderful things that can be done with Brushes.

When you are ready to learn more about Brushes, you'll want to purchase POWERTOOLS, read the docs carefully, and play with the many different sized Brushes contained on the medium. Because they come in so many sizes and shapes, they are far more flexible than the Brushes contained on the PowerPAINT medium. Some of them are QUITE small, and those are the very best ones. Not only can they shade in smaller areas with less spillover, but they can be used from within the Paint Graphics menu to draw calligraphy and all sorts of other unusual effects, simply by changing Pixel Increment to 1. It's also possible to design your very own sets of Brushes by using the PD program Shapemaker, by Guy Cousineau. But for now, you have mastered the basic concepts required to use the built-in PowerPAINT Brushes.



The only real problem with Brushes is that the pattern doesn't appear onscreen until after the Brush passes over the screen segment. Therefore, it can be a little tough to visualize exactly where the graphics will be drawn. It's important to keep in mind that, if we don't like the results, we can always hit UNDO before returning to the Primary Menu, in order to eliminate whatever we just drew. In fact, it's a very good idea to return to the Primary Menu every so often, even if we DO like the results so far. That way, hitting UNDO will erase only what we did most recently (since we returned from the Primary Menu.) That makes it possible for us to experiment, a little at a time, without having to erase things we want to keep. This is good practice when using other menus, too, but it is especially helpful in Paint Graphics.

EDITOR'S NOTE: As many of you are aware Pat Herrington has released a number of tremendous commercial graphics packages for the ADAM under the EYEZOD GRAPHICS company name which can be used with PowerPAINT, CLIPPER, SpritePOWER, FontPOWER, The Print Works, The Label Works, Swift Label PrintSHOP, and Personal Calendar Utility as well as in SmartBASIC V1.0 with the proper loading routine (see the listing below). Not only that but she offers additional graphics packages for purchasers of her commercial products who register their software that are every bit as good as the commercial package. So if you are a graphics nut, here are some commercial packages which will start you off on the right track:



EYEZOD GRAPHICS

- BOLD GLORY - \$16.95
- CHROMANTICS - \$16.95
- POWERTOOLS - \$16.95
- YULE TOOLS - \$16.95

**USING ADAM AND THE EVE
VD-MB 80 COLUMN UNIT TO
ACCESS ADAMLINK III+
by Bob Slopsema**

EDITOR'S NOTE: The EVE VD-MB 80 Column Unit was produced by Eve Electronics in 1986 and was the first 80 column unit made available for use on the ADAM. However, this unit is no longer produced since Eve closed down. Currently, the only way to attain an 80 column display is via the OBS 80 Column Unit (still available through Herman Mason) or via a terminal hooked up to the ADAM via a Serial Interface.

Early this past year, I acquired an EVE 80 Column Video Unit along with a Serial / Parallel interface unit. Both interfaces worked well with the Panasonic printer and serial modem, but the 80 column video unit defied use with ADAMLINK III+. I couldn't access the 80 column screen no matter how I tried or what I changed the option settings to in the program.

Finally admitting defeat, I asked for a little help from the ADAMites on CompuServe. Terry Kayser kindly left a message with the solution to the problem, which hopefully will be of help to anybody else who is stranded with the EVE unit.

The solution to the problem was really quite simple once I realized the direction Terry was pointing me in. Once again the folks at Radio Shack came to the rescue - how would the ADAM community survive without their supply of various small parts?

The parts I needed to complete the project were these:

QUANTITY	PART NAME	PART #	PRICE
1	A/B Switch	15-1249	\$6.95
	(optional)	15-1247	\$4.95
3	video RF adapters	278-255	\$1.29 each
1	twin RCA cable	42-2365	\$1.79

The hookup was a simple matter of plugging in the cables in the proper sequence. First separate the twin RCA cable to get two separate cables. Plug one end of an RCA cable into the monitor RCA connection of the ADAM computer, then plug the opposite end into either outside connection on the A/B switch using one of the RF adapters. Label this side of the A/B switch 32 column. Now plug the other RCA cable into the monitor video connection - replacing the EVE video cable, and also into the center connection of the A/B switch using another adapter. The 80 column EVE video cable (which previously went to the monitor) is plugged through another RF adapter into the other outside connection of the A/B switch. Label this connection 80 column.

Now that the hardware job is complete, you have to check and see if AdamLINK III+ is configured correctly. Boot AdamLINK III+ and select options. Next select terminal, then select terminal type. Finally select both and then save the setting using the main menu option Save / Recall. Boot-up your 80 column version of TDOS (or CP/M) to bring the EVE unit online, then immediately boot AdamLINK III+. You should be able to switch back and forth between the AdamLINK III+ screen and the TDOS (CP/M) screen with the A> prompt just with a flip of the switch.

To use the setup, label the front of the A/B switch 32 column and 80 column on the appropriate sides, mount it in a convenient place, then use the 32 column side of the A/B switch to access the Adamlink III+ screens for dialing, downloading and anything you need the program screens for, then simply flip the A/B switch while online to a BBS to get 80 column text.

I hope that this helps others who have experienced the same frustrations I have on finding a piece of hardware that does not seem to work on ADAM in the way it was intended to work.



EXPLORING SmartBASIC

Part VI: Screen Position Commands

by Guy Cousineau

EDITOR'S NOTE: This is the sixth in a series of articles on SmartBASIC written by Guy Cousineau of the ADAM User Friendly Group. The series was made available for our use by Ron Mitchell, the President of A.U.F.G.

SCREEN POSITION COMMANDS

SmartBASIC has a variety of commands that control the position of the cursor on the screen. Though some may appear similar, each has its own features which makes it different from the rest:

VTAB places the cursor on a specific line without affecting its horizontal position. You can use a formula to determine a VTAB position; the equation does not need to return an integer: "VTAB x/3" is a perfectly valid statement provided it returns a value between 1 and 24 inclusive.

VPOS tells you where the cursor is. This function seems to have limited value but I can think of one possible application in a game-type environment. VPOS and HPOS can be used together to form the equivalent to the SCRN function in GR mode. Say your TARGET is at 10,10. You can check if the cursor is there with:

```
IF VPOS(0)=10 and HPOS(0)=10 THEN END
```

Note that VTAB ranges from 1 to 24 and that VPOS ranges from 0 to 23. This is a silly arrangement which cannot be easily corrected.

HTAB is similar to VTAB but it places the cursor to a specified horizontal position from 1 to 31. In combination with VTAB it can be used to place the cursor anywhere on the screen. It can even be used to write outside the scrolling window. Suppose you have a program that uses the top 2 lines for a title and those 2 lines have been frozen from scrolling (see previous article on screen commands). A HOME command will send the cursor to line 3. A VTAB 1 command will, however, send the cursor to the title line and allow you to update it. If this update sequence is followed by a HOME command, the cursor will be returned to line 3.

The TAB command will SPACE-PAD between the present cursor position and the new position. This function differs from HTAB in 2 essential areas. TAB does not back up; if the cursor is at position 15 and you issue a TAB(10) command, the cursor will stay at position 15. TAB also erases the characters between the present and target positions. The following program illustrates these features:

```
10 TEXT
20 VTAB 10: ?"Hello There you all"
30 VTAB 10: HTAB 5:?" Again";VTAB 11:
40 VTAB 15: ?"My Name is Guy"
50 VTAB 15: ?TAB(16);"What's yours"
```

Line 30 replaces "There" with "Again" without disturbing the rest of the text on the line. Note the VTAB at the end of the statement to remove the cursor from the line... otherwise the "you all" disappears. Try removing the VTAB 11. Alternately, you can VTAB 11, HTAB 1 to reposition the cursor at the beginning of a line. Lines 40 and 50 try unsuccessfully to print 2 messages on the same line... the TAB command on line 50 erases the first 15 characters.

The SPC function will space ahead the specified number of spaces from the current position. Note that it must be followed by a semicolon in order to be effective. SPC differs from TAB in that it always advances and wraps around to the next line if required. It can be handy for right-aligning figures or strings:

```
10 FOR x=1 TO 8
20 READ x$
30 PRINT SPC(30-LEN(x$));x$
40 NEXT x
50 END
60 DATA all, these, words, are, aligned, on, the, right
```

The POS function tells you where the cursor is on the line. Similar to VPOS, it returns a number from 0 to 31 (instead of 1 to 32). It can be used for a variety of checks and, in conjunction with other positioning commands, control the position of the cursor, end-of-line-wrap, and screen scrolling. One example will suffice:

```
10 DIM x$(10)
20 ?"Input 10 long words"
30 FOR x= 1 TO 10:INPUT x$(x)
40 ?"Now to print them with wrapping"
50 FOR x= 1 TO 10
60 IF POS(0)+len(x$(x))>31 then PRINT
70 PRINT x$(x);" ";
80 NEXT x
```

Line 60 checks that the new word will fit on the current line; if not, the PRINT statement effects a Carriage Return. Note that we only need to check the length of the new word and don't need to include the space which follows it (in line 70). If that extra space moves to a new line because of the screen wrap, POS(0) will tell us we are on a new line on the next pass. If this seems unclear... type out the program, try it out, and change some of the values.

The VTAB execution routine is at 11330 (2C42). It gets an equation from the input line and checks that it is between 1 and 24. If the value is OK it jumps to the cursor positioning sequence at 26219 (666B).

HTAB executes at 11320 (2C38). It gets an equation and does NOT check the range. It then jumps to the cursor sequence at 26191 (664F). This is the one that prevents tabbing past 31 in the 40 column mode. It calculates the horizontal position based on modulus 32 (the remainder after dividing by 32) but uses the WHOLE number supplied to increment the vertical line accordingly. Some simple patches include POKing a 63 in address 26198 (6656). This will allow you to HTAB up to column 63 (you need some discipline here). Since this function will also increase the vertical position, you MUST issue a VTAB command after a HTAB in order to correct the count. If you have a 40 column mode, try this:

```
10 VTAB 10: HTAB 35: ?"1";
20 HTAB 35: VTAB 10: ?"2";
30 VTAB 20: HTAB 1:?"Can you see a 1 and a 2?"
```

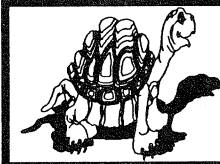
POS executes at 10844 (2A5C). It checks that the 'function syntax' was used, gets the cursor position via 26177 (6641) and returns the value in the floating point accumulator.

VPOS executes at 10857 (2A69). It checks that the 'function syntax' was used, gets the cursor position via 26184 (6648) and returns the value in the floating point accumulator.

Next time, more BASIC commands.



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THE LOGO NOTEBOOK

Part III: Color Commands

by Ron H. Mitchell

EDITOR'S NOTE: This is the third in a series of articles by Ron Mitchell, Editor of The ADAM User Friendly Group newsletter, covering SmartLOGO and the many aspects of programming in SmartLOGO.

Our last article covered LOGO variables, and finished with a short demo program that contained a beginning and an ending but not much in the middle. We're going to work on that as the 'Notebook' unfolds. We may not get to it every time, but if you type in the periodic updates, you'll end up with a bare-bones tutorial on the LOGO language which should be sufficient to refresh your memory from time to time. We're not quite ready yet to make the demo useful, but right now it's serving to illustrate some of the basic concepts that make up this powerful language.

This time we'll be talking about colors, and we'll update the demo to make it into the beginnings of a menu for our tutorial. You still won't be able to do much with it except provide me with suggestions about where to take it from its present state. That would indeed be useful.

COLORS COMMANDS

SmartLOGO Manual, Chapter 5

Last time you probably noted that there were some commands used in the demo that had not been discussed. There were things like SETBG, CHANGE.COLOR and FILL. These are three of the nine commands and operations that control LOGO screen colors. (By the way, do you remember the difference between a command and an operation?)

In LOGO, you can independently control the color of the screen background, the text color, and the foreground color just as you can in SmartBASIC. More easily than in BASIC, you can also control the sprite color and the color with which lines are drawn. We haven't introduced the infamous TURTLE yet, but the turtle is in fact a series of sprites. The turtle can draw a line wherever he goes, because he has a pen for that purpose. You can set the pen up or down, as you would in a BASIC drawing program and you can change the pen's color.

As with SmartBASIC, there are 16 colors in LOGO and the table is exactly the same. The colors are numbered 0 to 15 and listed on page 58 of LOGO's Reference Manual. The big difference between BASIC and LOGO is that with LOGO it's quite easy to put all 16 colors on the screen at once... if you wish to. Now that can also be done in BASIC, but it takes more programming.

So... there's the turtle color, the pen color, the background color and the text color. Here are the commands:

☆ SETBG

SETBG takes an input, a number between 0 and 15. The syntax is:

SETBG 10

which would set the screen to dark yellow. With this command, you change the whole screen to the selected color.

☆ BACKGROUND (short form BG)

BG is an operation. That is, it must be used in conjunction with a command, or another procedure because all it does is to output the current background value. If you were to type simply:

BG

you'd get an error message saying... **YOU DON'T SAY WHAT TO DO**

WITH 10. Remember, something must be done with the output of an operation. In this case, it must be printed. So the correct syntax is:

PR BG

and LOGO will respond: 10

☆ COLOR

Likewise, COLOR is also an operation. You type:

PR COLOR

and LOGO responds with: 15 ; which is the default value for the present turtle color.

☆ SETCOLOR (short form SETC)

You can change that with the command SETCOLOR. SETCOLOR takes an input, like SETBG, a number between 0 and 15 depending on which color you want.

☆ PENCOLOR (short form PC) and SETPC

The first of these two is an operation and will output the current turtle pen color. If the pen is down, wherever the turtle goes, he'll draw a line behind him. The color of the line depends on the PC value. SETPC is the command used to change the pen color.

☆ CHANGE.COLOR

This one is also a command. It affects both graphics and text and will change the color of letters and lines currently on the screen from something to something else. Hence the syntax:

CHANGE.COLOR 15 1

which would change from white to black print, and white to black turtle pen color. It does not affect the background color or the turtle color.

With this arsenal of commands and operations, there's no limit to what you can easily do with screen colors. We're going to amend our demo shortly to give you some idea of what can be done.

Before we do that however, we need to do a little housecleaning which requires us to learn something more about the LOGO workspace.

By workspace, we're talking about the ADAM memory you have at your disposal. When you create a LOGO procedure, it goes into the workspace and can be called by name whenever it's required either directly from the keyboard or from another procedure. It stays in the workspace until it is erased or until ADAM is reset or tuned off. When you're saving a file to tape or disk, as we did last time, you in fact save everything in your workspace at that time. If you typed in the demo, you'll have a file on your media called DEMO.LGO.

Get that back now by typing:

LOAD "DEMO.LGO

don't forget the quotes, they're essential... can you remember why?

Now. In DEMO.LGO there were a number of procedures. Couldn't for the life of me remember what they were, so having read ahead a little, I typed in the following SmartLOGO command to display all the procedures in the program:

POTS

This stands for PRINT OUT TITLES. LOGO responded with:

```
TO TITLE
TO START
TO PROGRAM
TO FINISH
TO SQUARE :COLOR
TO DRAWSQUARES
TO PRTVRBLS
```

and that was our demo.

To carry on from there, we'll make some changes. Type:

ER PRTVRBLS

That will remove the procedure PRTVRBLS from the workspace leaving all the others intact. If you wanted to clear the workspace completely, you would type ERALL. Don't do that, just yet.

Remember that the procedure PRTVRBLS was also contained somewhere else... in the mainline procedure called PROGRAM. So you'll have to edit PROGRAM to remove it, since LOGO no longer knows how to PRTVRBLS. Type:

TO PROGRAM

LOGO places you in the edit mode and lists out the procedure PROGRAM. Move your cursor down to the line PRTVRBLS and use the delete key to remove it. Then press SmartKEY VI. PROGRAM is redefined.

There are some other changes made to the demo. A revised listing follows, and you'll need to compare your version with the new one, editing in the appropriate amendments to the different procedures as described for the change to PROGRAM.

You'll note the use of the FILL command, and that we've not talked about it. We'll do that next time, because it's now become essential to introduce our friend the TURTLE. Can't do much more without him, and he's what makes LOGO special.

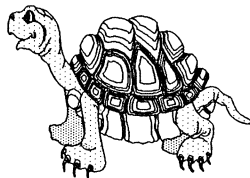
LOGO DEMONSTRATION PROGRAM #2

The Beginnings of a Menu

September 21, 1989 by R.H. Mitchell

```
TO TITLE
  SETCURSOR [3 2] PR [RON MITCHELL'S LOGO DEMO]
  PR []
  SETCURSOR [11 4] PR [PART I]
END
```

```
TO START
  CS
  HOME
  HT
  PU
  SETBG 14
  SETPC 1
  SETPOS [-110 90]
  PD RT 90 FD 220 RT 90 FD 50 RT 90 FD 220 RT 90 FD 50
  PU
END
```

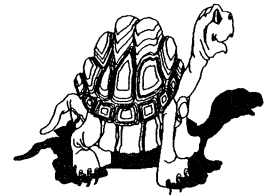


TO PROGRAM

```
START
TITLE
DRAWSQUARES
MENU
FINISH
END

TO DRAWSQUARES
  HOME
  MAKE "COLOR 9
  PU SETPOS [-110 30] SQUARE :COLOR
  HOME
  MAKE "COLOR 8
  PU SETPOS [10 30] SQUARE :COLOR
END
```

```
TO MENU
  MAKE "COL1 12
  PENUP HOME SETPOS [-110 25]
  SUBSQUARE :COL1
  MAKE "COL1 10
  PENUP HOME SETPOS [-110 17]
  SUBSQUARE :COL1
  MAKE "COL1 8
  PENUP HOME SETPOS [-110 9]
  SUBSQUARE :COL1
  MAKE "COL1 9
  PENUP HOME SETPOS [-110 1]
  SUBSQUARE :COL1
  MAKE "COL1 7
  PENUP HOME SETPOS [-110 -7]
  SUBSQUARE :COL1
  MAKE "COL1 2
  PENUP HOME SETPOS [-110 -15] SUBSQUARE :COL1
  MAKE "COL1 5
  PENUP HOME SETPOS [-110 -23] SUBSQUARE :COL1
  MAKE "COL1 11
  PENUP HOME SETPOS [10 25]
  SUBSQUARE :COL1
  MAKE "COL1 4
  PENUP HOME SETPOS [10 17]
  SUBSQUARE :COL1
END
```



```
TO FINISH
  CHANGE.COLOR 15 1
  SETCURSOR [1 23]
  PENUP
  SETPOS [-108 28] PENDOWN SETPC 4 FILL PENUP
  HOME
  SETCURSOR [3 9] PR [CONCEPTS]
  SETCURSOR [3 10] PR [VARIABLES]
  SETCURSOR [3 11] PR [COLORS]
  SETPOS [109 89] PENDOWN SETPC 13 FILL PENUP
  SETCURSOR [1 23]
  PENUP SETPOS [12 28] PENDOWN SETPC 12 FILL PENUP
END
```

```
TO SQUARE :COLOR
  PD RT 90 FD 100 RT 90 FD 100 RT 90 FD 100 RT 90 FD 100
  PU
END
```

```
TO SUBSQUARE :COLR1
  PENUP
  SETPC :COLR1
  RT 90 FD 10 PD
  FD 79 RT 90 FD 8 RT 90 FD 79 RT 90 FD 8
  PENUP
  RT 135 FD 2 PENDOWN FILL
END
```



USING TDOS - ADVANCED

Part I: Getting Started

by Guy Cousineau

EDITOR'S NOTE: This is the first in a series of articles on TDOS which were made available by Guy Cousineau at ADAMCON 3.

Once you have mastered the basics of CP/M or TDOS, you will be looking for ways to make your system run more efficiently. Following in this series are a few hints and suggestions to help improve your enjoyment of the TDOS Operating System. Some of the suggestions we make here may depend on your system configuration; we will try and provide alternatives if your configuration is not ideal. Several public domain utilities will be referred to in this document. If you cannot locate these, please forward a disk and return postage to me along with your request and I will send the programs to you.

SYSTEM CONFIGURATION

As you have probably noticed, CP/M is a disk based system. In one session, you will normally use several command files (programs) which must be loaded into memory each time they are executed. Thus you should pay particular attention to your configuration which may help improve retrieval delays.

The ideal TDOS configuration consists of a HARD DRIVE and at least one disk drive. The disk drive can be used to make backups and to exchange files with other ADAM users. You will have instantaneous access to all your programs and will enjoy the ability to quickly switch between programs without long loading delays. Even with a hard drive, a memory expander is a nice addition. It allows you to perform temporary work or tests without using space on the hard drive.

If you do not have a hard drive, a memory expander is a must; and the larger the better. Prior to acquiring my hard drive, I used a 512K expander which I often filled up. For average users, a 128K or 256K will be sufficient. If you do not currently have a memory expander, we do not recommend a 64K. Choose instead an expandable type on which you can add memory chips as your needs increase or pocketbook permits. See the PROFILE.SUB section in next months discussions to see why 64K is not enough.

Non hard drive systems should also have TWO double-sided disk drives. You will then have access to over 600K of programs and data without having to change disks. Remember that there are some programs which either use overlays or several data files: some of them expect these files to be available at all times.

When you install TDOS on a non hard drive system, consider placing your expansion RAM before your disk drives. This will make your expansion RAM drive A: and help speed up warm boots. Every time a program exits with a warm boot, drive A: is logged in along with the current default drive. PERMANENT MEDIA are recognized by TDOS and the scanning process is much faster for expansion RAM and hard drive partitions. While the disk logging only takes a few seconds, you may appreciate the difference when you have to exit several times in a session. To illustrate the difference, install TDOS with the expansion RAM before the disk drives, log into drive A: and press the CONTROL and C keys (^C) at the same time. The prompt re-appears almost instantly. Log into drive B: and repeat the same procedure. There is one drawback to making expansion RAM drive A:, PROFILE.SUB will not be found on the BOOT disk. Decide which feature is most important to you.

DRIVES AND USERS

CP/M and TDOS usually expect you to log into the drive / user [du:] containing the program to execute prior to running it. For many

programs, however, this is not necessary. If you are in drive A: and wish to execute VDE.COM on drive C:, you just type C:VDE. Once your program is loaded, you will still be logged into the current (default) DU. Some programs have installation overlays or patch instructions which allow the user to specify a home location for overlays and data files. These programs can usually be run from any DU without difficulty. Some of these programs are ZMP, WORDSTAR 4.x, Z80ASM+, SPELLM20 (my version). Although TDOS can handle 32 user areas, some transient programs will not permit user numbers higher than 15. VDE.COM for example can access files in user 16 or greater only if you are logged into that user area before invoking VDE. Experiment with other programs to determine their adaptability to the higher user areas.

FILE NAMES

Since there are no specific rules for naming files other than length and illegal characters, programmers can use their imagination to create colorful file names. These names, however, should be indicative of the file content or use. Names like FIFI, BOZO, NERD, GUPPY, etc. may be amusing but only serve to confuse. Names like BKGMMN, CHESS, TREASURE, LOCATE, etc. are much more descriptive.

File types are for the greatest part loose in structure. There are a few reserved types:

.COM	Executable command
.SUB	Submit or batch file
.HEX	INTEL intermediate file for use with loaders
.BAS	Tokenized BASIC programs
.LST	Assembler print files
.PRN	Assembler print files
.ASM & .Z80	Assembly code files

Programs using some of the file types described above will usually expect their data files to bear the precise file type - they cannot be overridden. There are also unofficial conventions for other file types such as OVL, OVR, INT, SYM, DAT, DOC, TXT, etc. It is wise to respect these file types and use them only for their prescribed use.

If you will be making use of file compression utilities such as CRUNCH or MAINT, be careful when choosing file types for similar file names. SPELL.DIC and SPELL.DOC, for example, will both have the CRUNCHED name of SPELL.DZC. If they are both placed on the same medium, one will destroy the other. In those cases, you should rename one of the source files to something like SPELLM.DOC.

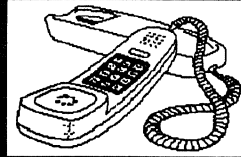
PRINTING FILES

The built-in LIST command is handy for no frills printing of any ASCII file. Word processing programs like VDE and WORDSTAR incorporate fancier features like printer initialization, highlighting, page numbers, etc. Other transient program like TYPELZ are also handy for pagination. BIPRINT, a public domain program from yours truly, makes use of the bi-directional print feature of the ADAM printer to help speed things up.

Next month, profile.sub and other submit files.



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OVER THE PHONE LINES

Part I: Tapps Music / ADAM Central Supersystem

by Terry Cairns

EDITOR'S NOTE: This is the first in a new series of articles written by Terry Cairns covering telecommunications on the ADAM.

Hi, my name is Terry Cairns. I'll be writing a regular column in the Telecommunications Workshop for N.I.A.D. and we'll be covering everything from A to Z that has to do with modems and BBS's. I am the sysop of North America's largest BBS, The TAPPS MUSIC / ADAM CENTRAL SUPERSYSTEM. Now for my first article and the easiest (as any writer would tell you), is to write about what's going on in my homebase. It's just by coincidence that what's going on at my homebase is also the biggest thing happening in the BBS world.

Imagine a users group that is open 24 hours a day, 7 days a week, 365 days a year. What if that users group could supply you with whatever program you needed to get the job done, at any hour of the day? What if that user group allowed you a chance to talk to experts and other ADAMites all over North America? What if that user group could supply any documentation file, for any problem you have, for any public domain EOS, CP/M or TDOS file? What if that users group was a BBS? What if that BBS allowed In-Home Shopping? Hmmmm... makes you think doesn't it? Well, it's now here!!!

As you read this, local callers have already discovered the most comprehensive and informative BBS in the history of the ADAM. The BBS is ADAM CENTRAL and it is a BBS within a BBS called TAPPS MUSIC BBS. Confusing? It isn't really. When a caller calls the TAPPS MUSIC BBS, they go through the log-on process like any other BBS. But when that caller hits the Main Prompt of the TAPPS BBS, a simple typing of "AC" will take the caller to another BBS. The caller is now in the ADAM CENTRAL BBS.

The TAPPS MUSIC / ADAM CENTRAL SUPERSYSTEM has 23 message bases and over 60 Megabytes of program and text files for downloading (another 65 megabytes will be added soon). That's thousands upon thousands of informative text files and ready to run programs. It has the ADAM ECHO base which allows it's users to communicate with other ADAM users all over North America. It currently has 65 on-line games to play, with plans to extend that to over 100 games in the near future. The message bases cover a wide variety of topics like Hardware & Software updates, CP/M & TDOS info, an ADAM BUY & SELL, etc. The text file area carries the latest from A.N.N., catalogs from almost all ADAM dealers, cartridge docs, CP/M docs, Hardware docs, etc. The program download areas (currently over 72 areas) include games like Star Trek, utilities like assemblers and disassemblers, graphic files, etc. You name it and you'll find it on the BBS and if it isn't on the BBS, then it will be within hours (providing what is asked for is PUBLIC DOMAIN and has been released). Users can also take advantage of our MAIL OUT SYSTEM for a nominal fee. Within days of opening, ADAM CENTRAL is already developing the reputation and nickname of ADAM CompuSERVE as the services available, like IN-HOME SHOPPING, match those of CompuSERVE but ADAM CENTRAL is exclusively for ADAM.

All you need is a modem and then you can be a member of ADAM CENTRAL. A BBS that promises to be THE ADAM BBS of the 1990's. If you don't have a modem yet then don't you think it's about time you got one. I mean with any computer you own, everybody will sooner or later need a modem and external modems are interchangeable between computers so it doesn't matter if you intend to upgrade to another computer. People are now banking, shopping, bringing home work from the office, and tuning into the stock market, all from the convenience of their home with their modem. In the future, kids will be taking their school classes at home over their modems (more on this in future issues). So a computer without a modem is like a TV without cable. Very limited operation but never reaching it's full potential. I

highly recommend the buying of Micro Innovations M.I.B.2 interface, if you don't have a serial interface already, as this interface allows for future expansion to your computer. Also as far as modems, I recommend nothing less than 2400 baud, as 300 baud is DEAD (more on this in future issues), and 1200 baud is following suit. Besides when calling long distance, you'll want to get on and do your business and then get off as quick as possible to save money. Take it from me, if you don't have a modem then you are on a raft in the Pacific Ocean with nowhere to go.

In future articles we'll cover the things like: The Quest for Speed, Ruling the world from your home, Term Programs, Top BBS's, and we'll even have some contests like ADAM CENTRAL has. If you are a dealer and would like to post your catalog for all ADAMites to see, then send your catalog on DISK (No graphics please) to the address below. If you have questions, comments, donations for prizes, term software for review, inquires for future articles, or require assistance, then write or call:

The Tapps Music / ADAM Central Supersystem
c/o Terry Cairns
50 John Garland Blvd. #108
Rexdale, Ont., Canada M9V-1N4

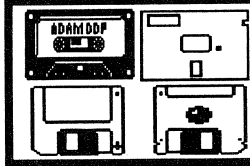
BBS NUMBER: (416) 741-2432
BAUD RATES: 300 / 1200 (soon to be 2400)
PARAMETERS: 7 / E / 1 or 8 / N / 1
TIME: 24 Hours a day, 7 Days a week

All replies require a S.A.S.E.. Until next time, HAPPY MODEMING!!!

ADAM BBS LISTING

BBS NAME	SYSOP	PHONE #
⇨ ADAM STAR BBS	Not Available	(406) 652-6641
⇨ ADAM-X-CHANGE BBS	George Koczwarra	(216) 883-9355
⇨ A.W.A.U.G. BBS	Jeff Jodojn	(202) 561-2475
⇨ CAT'S LAIR BBS	Peter Ames	(802) 295-2550
⇨ CORNUCOPIA BBS	James Young	(407) 645-4929
⇨ GARDEN OF EDEN	Sherman Murdock	(404) 445-0723
⇨ L.V.A.C. BBS	Not Available	(702) 873-8056
⇨ MACH I BBS	Gary Schoenung	(414) 762-0492
⇨ MAINE ADAM LIBRARY BBS	Bob Sebelist	(207) 583-4923
⇨ MICRO INNOVATIONS BBS	Mark Gordon	(703) 264-3908
⇨ NEW JERSEY ADAMLINK BBS	Fred Vicente	(201) 224-5764
⇨ NORTHERN LINK BBS	Gerry St. Peters	(403) 246-4086
⇨ PHOENIX ADAMLINK BBS	Rusty Gillott	(602) 936-3892
⇨ POWER KEG BBS	Not Available	(416) 492-5756
⇨ ROCKY MOUNTAIN BBS	Jesse Thornhill	(719) 783-9046
⇨ S.L.C. ADAMLINK BBS	Alan Neeley	(801) 484-5114
⇨ THE COLECO DEPOT BBS	Darryl Quinn	(718) 848-3066
⇨ THE CONNECTION BBS	Steve Major	(518) 298-4294
⇨ THE I.E.A.U.G. BBS	Thomas Keene	(714) 775-1603
⇨ THE ST. LOUIS AUG BBS	Al Fitzgerald	(314) 383-3617
⇨ THE TRADING POST BBS	Herman Mason	(216) 231-8813
⇨ THOMAS ELECTRONICS BBS	Thomas Mackie	(306) 384-7682
⇨ VOICE OF THE EAGLE BBS	Ricki Gerlach	(615) 431-9833

EDITOR'S NOTE: Please note that the status of these BBS's have not been verified in a number of months. Further listings next month.



CAN'T BET THAT PRICE!!

Public Domain Reviews and Updates

by Jim Notini

SIMPLEPAINTER WITH SIMPLE F/X

Reviewed by Tony Patterson / Digital Adventures

Reprinted from the August 1991 M.O.A.U.G. Newsletter

So you wanta be a graphics artist... Well maybe not for hire, but maybe you "WOULD" like to be able to dress up your personal letters and other important stuff with some fancy graphics. If you have just a smidgeon of talent, a copy of PowerPAINT and some of those great new font ideas from Eyezod Graphics you have everything you need... right? Sure, unless you want to use the color white in any of your creations. Or maybe would like to flip a picture for a mirror image of it. How about the ability to move the graphic left, right, up or down on the screen? I know, PowerPAINT does this with the pull screen options, but how about doing it a few pixels at a time? Sound interesting yet? READ ON! Wouldn't it be nice to be able to convert daVINCI files to SmartPAINT format. What about those graphics that you captured from your Super Games with the Coleco Graphics processor (also called Project name / By Line). How about converting these to SmartPAINT so that you can get them into PowerPAINT and see how they did them, or maybe just use them for yourself! If you wanted to do any of these things you might find yourself reaching for your checkbook. I bet you are wondering to yourself "just what is this handy new program and more importantly, just what is this going to cost me...". Well, it's name is SimplePAINTER with Simple F/X, and, are you ready for this... IT'S FREE!!

Yes this P.D. contribution does all of this and more! Included on the medium are 5 of the most popular PowerPAINT enhancement patches and the P.D. program BootPIC Deluxe. This program allows you to store your creations as a bootscreen for any medium that contains SmartBASIC V1.0. And all of this for the amazing price of ZIP. Now that most of you aspiring artists are sold on this little gem, let's delve into the specifics of what it can do...

The SimplePAINTER with Simple F/X package is a collection of graphics utilities that will allow you to do things that are not available within the PowerPAINT program. Even though some of the interconnected programs are capable of more than one function you will generally find one reason per program for it's inclusion in the package. SimplePAINTER which was donated to the Public Domain by DIGITAL EXPRESS in November of 1988 can do a LOT of things right by itself, unlike Simple F/X which is a collection of utility programs each of which (though connected through a simple menu) are independent programs. With SimplePAINTER you can load in RLE, HGR and SmartPAINT format picture files and can store files in HGR and SmartPAINT format. When loaded you can double the size of any quadrant of the screen. You can change colors with the program but alas, only global foreground or global background color changes. This is not terrible though it is nicer to be able to exchange just one foreground color for another as we can do with one of the options in the F/X part of the package. SimplePAINTER will also print your picture for you in either portrait or landscape format as long as you have a dot matrix printer attached. The enlarge quadrant part of this program is the most useful function that you will find here.

The last option in SimplePAINTER is the "Go To Simple F/X". Selecting this option will load the menu that will allow you to access the remaining 5 utilities. This central menu is a separate little program, as such when you finish with each of the remaining utilities you will be prompted to re-insert the SimplePAINTER medium and press <return> to be able to access the menu again. At times within these programs you will be asked to input colors by number. The MASTER COLOR CODES for ADAM are as follows: 1=black, 2=medium green, 3=light

green, 4=dark blue, 5=medium blue, 6=dark red, 7=aqua, 8=medium red, 9=light red, 10=dark yellow, 11=yellow, 12=dark green, 13=purple, 14=gray and 15=white.

The first utility is a PICTURE FLIPPER PROGRAM that will load either GraphixPAINTER or SmartPAINT picture files. When on screen you can flip the screen vertically (upside down), horizontally (left to right) or fold it from the center (make the right side a mirror image of the left side). The program itself does not have working options to save a file, so after doing the flipping you will be prompted to re-insert the SimplePAINTER medium and the control program will load in the picture manager program (utility number 4) so you can save your flipped creation.

The second utility is a REPLOTTING PROGRAM that will allow you to move the foreground pixels of your picture from 0 to 7 pixels UP, and from 0 to 7 pixels to the right. WHAT?, no options for left and down? Remember that with the MOVE/COPY options in PowerPAINT moving a portion of a screen one pixel to the right is the same as moving it 7 pixels to the left, and the same logic applies to up and down. The program (for some reason) will set the entire background to black and the entire foreground to purple. It will also destroy the outer 16 pixels on the top and right side of the screen so BE SURE THAT THE PART THAT YOU WANT TO MOVE FITS WITHIN THIS FRAME. This utility will load and save in SmartPAINT format only.

The third utility is the daVINCI PICTURE CONVERTER. This program will load in a picture saved with the daVINCI drawing program from France and save the screen in GraphixPAINTER format using the same filename as before with the addition of the .H2c and .H2p to the two filenames. These files can then be loaded directly into PowerPAINT.

The fourth utility is the PICTURE MANAGER PROGRAM from Digital Express. This program will load RLE, HGR and SmartPAINT format picture files plus it will save in both HGR and SmartPAINT file formats. There are options here to enlarge the upper left quadrant of the screen to fill the entire screen (this is very slow, use the SimplePAINTER program to do this) and to change colors. This color change option in background is global (all background to one color), but the foreground color change option lets exchange any one color for another. Unfortunately this process is very slow, but it works. This is the feature that you will use the most in this program.

The fifth utility is the COLECO GRAPHICS PROCESSOR (also called Project Name / By Line) PICTURE CONVERTER. This program will load in graphics that have been grabbed from super games with the cartridge version of that program and convert them to SmartPAINT picture files. The program will display a directory of the available C.G.P. files to load, and will load the one you indicate. After loading, the program will ask you to insert an E.O.S. formatted media and press <return>. It will save the file to the medium and then ask you for a name for the file. Do not remove the medium from the drive until this process is complete.

The next option (number 6) is to return to SimplePAINTER. The control program will ask you to re-insert the SimplePAINTER medium and press <return>. It will then re-load the SimplePAINTER program for your use. The last option will allow you to escape from the programs to a completely BUG FREE version of SmartBASIC V1.0.

I have been called a graphics artist (among many less flattering things). Though I prefer to consider myself to be somewhat a jack of all trades, I am very well versed in what can be done with our favorite computer and most of the best ways to do it. I mention this only so you will know that I speak from experience. All of the graphics that I have produced on the ADAM have been accomplished with PowerPAINT, these little

utilities, PowerTOOLS and all of the other packages from Eyezod Graphics plus SwiftPRINT (a commercial title by Digital Express). SwiftPRINT will do the flip function as well as the color changes (with the added convenience of being able to exchange colors in the background) and does these things much faster, though it DOES cost money and it DOES take a while to load.

Remember that you must have at least a 64K Memory Expander to run both SimplePAINTER with Simple F/X and PowerPAINT. I recommend at least a 128K Memory Expander for use with PowerPAINT. Also to be able to print any of these creations you will need an Epson compatible dot matrix printer connected through a parallel printer interface.

WOW! That's quite an investment already, but this set of GREAT little Public Domain programs are GUARANTEED not to break your bank (unless maybe yours is like mine). If you do much graphics designing, would like to, or would just like to have what you need in case you decide to... these tools will give you the capability to accomplish the task, not only easily, quickly, cheaply, and beautifully, but with a whole lotta style!

ADAMWARS II

NOTE: This volume originally was commercially released by R.M. Software in 1990 and the review was published in the Nov. 1990 issue. Just when I thought that it was safe to continue on with supporting the ADAM, the second series of ADAMWARS has hot! I'm sure many of you will remember all the bickering that went on a little over 3 years ago (has it been that long?), well, ADAMWARS II is the software program answer to some of the difficulties faced by vendors and developers alike. The whole idea behind the board game ADAMWARS II is to place the gamer into the role of running an ADAM company. The gamer will have to make all types of decisions (decisions which I am faced with in real life everyday) which will affect the prosperity of the ADAM computer. Will you buy hardware / software, borrow money, elect / be elected to certain offices (newsletter editor, librarian, etc.), write software demo products, trade (legally or illegally) products, etc. All this is complicated by the fact that the gamer must attain the status of a dealer by totalling 2000 points before he can sell legally, copyrighted products (you start with 500 points as does your opponent, ADAM). As you prosper and gain points, the ADAM will also prosper and gain points, with your goal being to finish the game with more points than the ADAM in this one player game.

ADAMWARS II is a totally SmartKEY driven program, which when booted will display the main game board that is broken up into 260 squares. Each square represents either an empty space to move over or a special option choice (displayed as a heart). You do not know where these hearts have been placed in the game board since they are hidden, but once you move onto one, the heart will be displayed and the function it represents will flash in the SmartKEY menu. Once you have moved onto a square with a heart, you may not move back onto it and all told there may be between 1 and 100 hearts randomly placed on the game board. Displayed above the game board is the amount of cash on hand (used to buy products), your point total and ADAM's. Beneath the game board is an information display which contains the current column and row which your cursor is on, number of turns left (you start with 50), number of turns used, number of the dice role (determines the number of squares you may move in one turn) and the number of squares moved in your current turn. Also, in this area, the number of hearts remaining in the game board will flash for a second or two when you land on a heart, also the SmartKEY function the heart represents will flash momentarily. At the bottom of the screen is the SmartKEY menu with six options: BUY, SELL, DEAL, LUCK, DICE and QUIT. Additionally, there are BUY, SELL and DEAL screens which display information pertaining to the buying or selling of products or what kind of deal is taking place at the time (in order to deal, you must have landed on a LUCK heart first). Each sub-screen contains a SmartKEY menu which displays further choices which can be made. The last choice the gamer has is to trade money for points or vice versa by pressing the WILD CARD key. This will come in handy when the

game is winding down and ADAM is ahead.

ADAMWARS II is a terrific rendition of what it really is like to run a computer related company, all the decisions and options are there for the user to experience.

P.D. SIGNS VOL. #3

NOTE: This volume originally was commercially released as SnapSHOTS VOL. I & II by Wizard's Lair Software in 1988. This package contains 70 picture files in both SignSHOP and NewsMAKER formats (both programs by Strategic Software Inc.). Use these picture files in your own creations made with either of these two fine products which support graphic printing on the ADAM Printer.

N&B PIX VOL. #30

NOTE: This volume originally was commercially released as PowerPRINTS VOL. I by Wizard's Lair Software in 1988. This package contains 15 full cell PowerPAINT compatible picture files. Place these high quality, high-resolution pictures anywhere in your document or even better yet, use them as backdrops for your own SmartBASIC V1.0 programs! These picture files can only be loaded by PowerPAINT or SimplePAINTER by Digital Express.

PaintMATES VOL. #14

NOTE: This volume originally was commercially released as Clip-ART VOL. I & II by Wizard's Lair Software in 1988. This package contains 96 clip-art files for use with PowerPAINT and Clipper by Digital Express, The Print Works, The LabelWorks and Clip-Art Viewer & Converter by Walters Software, Swift Label Printshop and Personal Calendar Utility by Phoenix 2000 along with many others which can use clip-art. These are some of the finest clips that you will find for the ADAM.

PaintMATES VOL. #15

NOTE: This volume was contributed by Wayne Blackmer and Michael Miller. This package contains 106 clip-art files for use with the programs listed above as well as 7 sprite file sets for use with SpritePOWER and PowerPAINT by Digital Express and SmartBASIC V1.0 or V2.0 (or any modification of either of these SmartBASIC programs).

MIDI SONGS MNDV VOL. #10

NOTE: This volume (CLASSIC III) was contributed by Chris Braymen of Bonafide Systems. This package contains 11 Midi song files for use with Mini-Recorder and SEQuel by Bonafide Systems. Song files include: Air, BuxteFugue, Chimes, ElRelic, Mazurka, Nocturn, PachCanon, Papillom, Prelude, PreludOp and FugueGmaj.

MIDI SONGS MNDV VOL. #11

NOTE: This volume (PICTURES AT AN EXHIBITION - MUSSORGSKY) was contributed by Chris Braymen of Bonafide Systems. This package contains 16 Midi song files for use with Mini-Recorder and SEQuel by Bonafide Systems. Song files include: 01Promenad, 02Gnomus, 03Promenad, 04OldCastle, 05Promenad, 06Tuilerei, 07Sydlo, 08Promenad, 09Ballet, 10Schmuyle, 11Promenad, 12Limoges, 13Catacomb, 14Mortua, 15BabaYaga and 16Kiev.

CLASSIC UNRELEASED CARTS VOL. #2

NOTE: The following unreleased cartridge games were previously available on separate volumes but now have been combined into one collection. A collection of 3 cartridges: Cabbage Patch Kids: Adventures in the Park (enhanced version) by Coleco, Yoke's on You by Fox Games and Math Wiz by Sierra, which were never released.



PRODUCT REVIEWS

ELECTRONIC GAME PACK I By Ape Software

Reviewed by Wayne Motel
Reprinted from the April 1986 #16 N.I.A.D. Newsletter

TYPE
ENTERTAINMENT

RELEASED
MARCH 1986

PRICE
\$17.95

MEDIA
DISK OR DDP

EDITOR'S NOTE: Recently I was looking through my collection of ADAM programs for some unknown reason and I came across this product from Ape Software and couldn't for the love of me remember what was on it. So being of the curious persuasion, I booted up the disk and waited for the main menu to come up. When it finally did, it displayed the names of the games contained on this pack (Backgammon, Battleship, Mastermind, 3-D Tic Tac Toe and Miner) and it all came back to me. This was one of the first purchases I made from N.I.A.D. way back before I started working for Lyle and I used to play these games all night and day, especially Battleship and Miner. So what did I end up doing for the majority of one night? You guessed it, I played my brains out. E.G.P. I, and even E.G.P. II, is one of the best collection of games around that offer very good graphics and animation as well as sound effects and since the majority of new software products seem to be dealing more so with graphics design, utilities and productivity themes I thought it would be the perfect time to remind our members about some of the tremendous entertainment programs which are available. For the price of \$17.95, you are getting an outstanding product and when you think about it, you are paying about \$3.60 for each game! There are a wide array of great games available for the ADAM, some of the best have been released by Reedy Software and Steve Pitman Software, so let's remember every now and then to take a break from all our business uses of the ADAM.

Electronic Game Pack I is an excellent collection of 5 games on a self-booting disk or data pack written by a new Canadian ADAM software company called Ape Software. The games are all done in hi-res graphics, utilizing sprites and game intro music. CONTROL-C will always reload the menu from which you can select any of the five games or instructions. The instructions can be viewed or printed. When viewed on the screen, they've set it up to pause so that it does not just scroll off the screen. The games all load very quickly and are very well done. They all pit you against the ADAM.

BACKGAMMON

This is the classic game where you play against the ADAM. The object is to get your pieces around the board into your home zone and off the board before the ADAM. Dice roll is automatic, but you control your moves. ADAM gives you a fairly good game.

BATTLESHIP

Played on a 10 x 10 grid. You place your fleet of 1 (5 square) battleship, 1 (4 square) cruiser, 2 (3 square) destroyers, and 2 (2 square) submarines on the board. ADAM randomly places it's fleet. Play alternates between you and ADAM picking a square to bomb. The results will either show a white cloud (bomb hit a piece of the ship) or a

blue missed bomb design (water splash). As play alternates, your previous bombed spots always show up when it's your turn, as does ADAM's when it's the computers turn. Since the ships can be placed horizontally or vertically, you must decide what square to go for after a successful bomb. You must also keep in mind that the ships are different lengths. The first side to destroy the opponents fleet (19 squares), wins. At the end of the game, the ADAM fleet will show so you can see how close you came (if you lose). Graphics are EXCELLENT in detail. The placement of the fleet by ADAM seems fairly random in continuous play.

MASTERMIND

The ADAM picks out a secret figure using 4 possible shapes and colors. You must guess the correct code in 10 tries (the game also shows how much time you took). After a guess, ADAM tells you how many shapes are in the correct spot and how many shapes are the correct ones - but not in the correct spot. It does not tell you what spots are correct. This is the same logic game called Mastermind, but using shapes instead of 4 digit numbers.

3-D TIC TAC TOE

You pick one of 3 difficulty levels (ADAM skill). Play is on a 4 level - 4 x 4 square. First to get 4 in a row (up, down, across or diagonal) wins. Excellent graphics. Each levels 4 x 4 square grid is in perspective, with the front squares larger than the back. As you / ADAM place your markers, they are also shown in the same perspective. ADAM plays a very good game in any of the 3 levels.

MINER

Played on a 8 x 8 grid, you and the ADAM travel from square to square collecting ore. Each square contains 1 to 5 ore pieces. The object is to collect the most pieces. Each move, however, is done like the knight in chess, that is, 2 then 1 over (like the shape of an L). Once a square is mined, it cannot be landed on as the last square of a move. What happens is that you can find yourself trapped, unable to move, as ADAM continues moving until it has enough ore to beat you. This game requires planning ahead and not just moving to the highest value square. This is one of the toughest games to beat ADAM at consistently, especially without a planned pattern.

Overall, this is an excellent game pack. Not only are all the game fun and challenging (logic - thinking oriented), but the hi-res and sprite graphics give them a very polished look. If you like any of these type of games, you won't be disappointed. This is one of the better game packs I've seen for the ADAM.

SYSTEM REQUIREMENTS

- MEMORY: BASE ADAM SYSTEM WITH R80 REVISION
- PRINTER: ADAM PRINTER AND OR DOT MATRIX PRINTER
- DRIVES: 1 DISK DRIVE AND OR 1 DIGITAL DATA DRIVE
- OTHERS: JOYSTICK / HAND CONTROLLER
- OPTIONS: NO OPTIONS AVAILABLE

SOFTWARE RATINGS

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

OVERALL

A

TYPE
UTILITY
RELEASED
FEBRUARY 1992

ADAM'S TOOLKIT

By Walters Software Co.

PRICE
\$24.95
MEDIA
DISK OR DDP

Reviewed by Jim Notini

ADAM'S TOOLKIT, by Jim Walters, is a new utility package that offers a wide collection of media and memory editing functions that have been combined into a very professional SmartKEY driven user interface like all Coleco software. The main features which ADAM'S TOOLKIT offers include the ability to Zero, Format and Initialize any size data packs, disks (5 1/4" or 3 1/2") or memory expanders; separate ASCII and Decimal Editors that can be used to edit other programs, files or blocks on any media (the Decimal Editor also includes advanced options to Move, Clear, Copy and Search); and finally a Block Copy option that can be used to copy a range of blocks from one media to another or the entire contents of one media to another. Not only do you receive the above listed options, but also built into the ADAM'S TOOLKIT program is Walters Software Co.'s advanced operating system replacement called SmartDSK. The SmartDSK O.S. implements many enhancements over the standard ADAM O.S. with the main additions being dot matrix printer support and automatic recognition of any size memory expander that is configured as a ramdisk.

ADAM'S TOOLKIT is available on disk or data pack and is supplied with a 14 page instruction manual. The instructions are easy to follow and detail every possible aspect of the ADAM'S TOOLKIT program including any error codes that may come up. Once the computer reset switch is activated the SmartDSK Operating System is loaded in followed by the ADAM'S TOOLKIT program. The first SmartKEY menu will display the title screen and to continue into the program SmartKEY VI is pressed. The next SmartKEY menu will offer the option to configure the ramdisk if a memory expander is installed in the system. The choices allow for reserving one bank of RAM if a 128K or larger memory expander is found or to use the full size of the memory expander for the ramdisk. Once this selection is made the ADAM'S TOOLKIT main menu will be displayed that consists of six options: About Program, Media Tools, Modify ASCII, Modify Decimal, Load/Save and Previous Menu. The ABOUT PROGRAM option will bring up a window in the workspace area above the SmartKEY menu that displays the program version number, programmer and copyright notice.

The MEDIA TOOLS option will display a new SmartKEY menu with options to Zero Media, Format Disk and Init Media. The Zero Media option will completely zero out any disk, data pack or ramdisk of it's contents. If a disk or data pack is to be zeroed out, it has to have been previously formatted for use on the ADAM. Once the Zero Media option is completed, the Init Media option will have to be used to write a catalog to the media. The Format Disk option is your basic formatting utility which supports 5 1/4" and 3 1/2" disk drive types. The Init Media writes an E.O.S. catalog onto the media chosen. The default ADAM'S TOOLKIT init settings can be used or one can enter in their own volume name and catalog amount (1-9).

The MODIFY ASCII option allows for the viewing and modifying of the ASCII contents of the buffer. One must load the information that is to be viewed or modified into the buffer (a 32K buffer is available) with the LOAD/SAVE option from the main menu. Other setup options allow for the setting of the offset and the starting memory location to be displayed. Once these options are entered, the ASCII display of the contents will be displayed in the upper portion of the screen and a new

SmartKEY menu will be displayed with further options. Redraw Screen will perform a refresh of the screen display with any changes that have been made now displayed. Page Up and Page Down will display the next or previous 256 bytes in the buffer. Modify Buffer allows for the editing of the buffer locations. The location to be edited will have to be entered and once this is done the location will be displayed beneath the buffer screen and the user will be able to type in the ASCII character(s) to replace the current one. While in the modify option, the up and down arrow keys may be used to move around the buffer without modifying any locations. Printing options will print the current buffer screen to either the ADAM Printer or a Dot Matrix Printer.

The MODIFY DECIMAL is almost identical to the Modify ASCII option. Differences include a 128 location screen display and the ability to search, clear, move and copy locations. Search allows for searching the buffer for up to four numbers. If a match is found for the number(s) entered in to search for the location will be displayed at bottom left of the screen and one may then choose to display the location on the buffer screen. Clear allows for the clearing of a block of memory in the buffer. The starting and ending location of the block to be cleared will have to be entered and then the Clear Memory SmartKEY pressed to erase the contents of the block of memory. Move allows for the moving of a block of memory within the buffer. The starting and ending location of the block will have to be entered as well as the new starting location. The Move option has a 3K limit and will clear the original memory locations where the moved data previously resided. The Copy option is identical to the move option with the exception that the original memory locations are not cleared. Printing options are once again available.

The LOAD/SAVE option offers three further functions: Block Copy, Load Buffer and Save Buffer. The Block Copy option allows for the copying of blocks from one media to another, or from one location to another on the same media. This is your basic block copier which requires the start and ending blocks to be entered for the source and the starting block for the destination. Any combination of drives may be used, be it digital data drives, disk drives or ramdisk. Load Buffer will load block(s) from a media into the buffer to be viewed or modified in ASCII or Decimal. Up to 32 blocks can be copied into the buffer. Save Buffer will save the edited buffer to a media. The buffer may be saved back to the original blocks and media from which they were loaded from with the Auto Save option or with the Manual Save the user can designate which drive and location on the media the buffer will be saved onto.

ADAM'S TOOLKIT is a very polished editing program which should be greatly appreciated by the ADAM community. The program works flawless and rather quickly (which has come to be expected from all Walters Software Co. products). The screen displays are very clear and colorful and make using ADAM'S TOOLKIT a breeze. The fact that a number of other editing programs are available should not deter from this products worth since no other editing utilities allow for the editing of up to a 32K buffer at once along with the search, move, copy and clear options in the Decimal Editor. Walters Software Co. has once again found a way to expand upon a program idea which was previously available and create a package that offers much more in the way of functions and options.

SYSTEM REQUIREMENTS

- MEMORY: BASE ADAM SYSTEM WITH R80 REVISION
- PRINTER: ADAM PRINTER AND OR DOT MATRIX PRINTER
- DRIVES: 1 OR MORE DISK DRIVES AND OR DIGITAL DATA DRIVES
- OTHERS: NO OTHER REQUIREMENTS
- OPTIONS: MEMORY EXPANDER

SOFTWARE RATINGS

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

OVERALL

A-

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GRAPHICS VOLUMES

DRLE PIGS VOL. # 1 - 4: 4 different volumes of file picture files which can be viewed in SmartBASIC V1.0 with the included CBpicFAST program or in PowerPAINT. Also contains SmartWRITER documentation. DCREEDY ART GALLERY VOL. # 1 - 2: 2 different volumes of 13 SmartPAINT format picture files to be viewed in SmartBASIC V1.0 with the included loader program DN & B FIX VOL. # 1 - 30: 30 different volumes of 13 SmartPAINT format picture files to be viewed / edited in PowerPAINT, ShowOff, etc. DPAINMATES VOL. # 1 - 15: 15 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. DPAINTFORMS VOL. # 1 - 4: 4 different volumes of assorted letterheads, labels and other miscellaneous graphic files for use with PowerPAINT by Digital Express. DCG.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 cars through the use of the cartridge version of The Coleco Graphics Processor. DPAINT 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.

ENTERTAINMENT VOLUMES

DSUPER 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.

THE BEST OF ELECTRONIC ARTS (Pinball Con. Set / Field Hit Mack): 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. DSUPER SUB-ROO: Coleco supergame pack version of the Sub-Roo 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. DTTROLL'S TALE: Coleco supergame pack originally developed by Silus Software. This is a children's adventure game with good graphics and offers a strong challenge as well as an instruction sheet. DJEOPARDY: 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 option as well as an instruction sheet. DTEMPLE OF APESHAN Revision 2: Epyx supergame pack which was never released. This is a lot of playing adventure with graphics and some arcade sequences. Disk and DDP not compatible. Comes with instruction sheet. DA-CHESS (SARGON): Great graphic chess game which was developed in CPM and modified by Chris Brayman. Comes on an auto-booting media and includes documentation on how to use. DS 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. DCHESS 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. CSUSPER 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? DTHE BEST OF B.C.: A two supergame pack with B.C. SOLEST FOR THES and B.C. II: GROSS REVENGE developed by Coleco of Canada. Help Thor past obstacles to find Cute Chick and to find the Meaning of Life. DMOJANG PHRASE PAK: An additional 300 phrases for use with Phrase Craze by Reedy Software. Compiled by George Drank. Contains SmartWRITER documentation. DTHE ADOMINABLE SNOWMAN: Search the Great White North for the Illusive Adominable Snowman. Be careful in your quest, there are many pitfalls that you will face. Contains SmartWRITER documentation. DCLASSIC UNRELEASED CARTS VOL. #1: A collection of 8 cartridges: Fall Guy, Video Hustler, M.A.S.H., Super Cobra, Memory Manor, Word Feud, Antley Duel and Tomcat the Barbarian which were never released or wouldn't work on the ADAM in their cartridge form. Contains SmartWRITER documentation. DCLASSIC UNRELEASED CARTS VOL. #2: A collection of 3 cartridges: Cabbage Patch Kids: Adventures in the Park Enhanced, Yoke's on You and Wiznath which were never released. Contains SmartWRITER documentation. DADAMWAYS II: A simulation of the real life pitfalls and successes which are experienced by you friendly ADAM retailers. Great graphics and sound effects. Contains SmartWRITER documentation.

UTILITY VOLUMES

DEOS 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. DSPEED 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 Adam Diagnostic and an instruction sheet. DMacADAM: 280 / EOS Assembler written in machine code for the intermediate to advanced machine code programmer. Contains manual in SmartWRITER format. DSTRAATEGIC SOFTWARE PATCHES: SmartBASIC V1.0 programs for patching Strategic Software's SIGHOP, NEWSMAKER, MULTIMITE, MICROWORKS, etc. programs for use with dot matrix printers as well as major enhancements made to the MultiByte Word Processor. Contains SmartWRITER documentation. DCOLECO 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. DSHPAEMAKER: 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. DMEDIA MATE: Three tremendous utility programs for editing data packs and disks in SmartBASIC V1.0. Contains Informative SmartWRITER documentation. DQUICKCOPY V5.0: Excellent machine code copy program (block and file) with additional ramdrive and ramcopy software. Compatible with all memory expanders and disk drive sizes. Contains a 37 page manual in SmartWRITER format. DCOLECO IN-HOUSE PROGRAMS: Six separate programs: three diagnostic

programs along with the Turnip/N.Trolls, ADAM and Music demos.

DMIDI DRIVERS & DEMOS: A collection of MIDI SmartBASIC V1.0 utilities programs along with technical information of the MIDI file setup. Contains SmartWRITER documentation. DSOFTWARE BACKUP V1.0: Allows for the backing-up of loadable programs onto the same media. Up to six self-booting programs can be placed on one Software Backup media. Most program work fine. Contains SmartWRITER documentation. DTR.LD. 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

DADAMLINK 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. DMARKET MONITOR: Coleco of Canada management system program for the personal investor. Not totally bug free. Contains SmartWRITER documentation. DTAJX PLANNER: Coleco of Canada business software which will create a clearer and more complete picture of your tax situation. Contains SmartWRITER docs. DWSI-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. DdAVINCI: 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 graphics/PAINTER files. Contains SmartWRITER documentation. DISK ONLY. DX-10 CONTROL SOFTWARE: Home appliance control / security system software. Requires a Serial Interface, Serial Cable and the X-10 Hardware. Contains SmartWRITER documentation. DCOLECO 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. DTDOS V4.5B: Super enhanced version of CPM 2.2 which operates much like MSDOS. 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. DSmartBASIC 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. DSmartBASIC 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. DFRENCH 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. DSmartBASIC V2.1: Nice modification of SmartBASIC V2.0 that adds macros for string inputs, formatter and backup programs. Contains SmartWRITER documentation. DSmartBASIC V2.0 40 COLUMN: 40 column text version of SmartBASIC V2.0 which works in STDWEM or EXTWEM modes. No longer do you have to bother with a non-standard 31 column screen. Contains SmartWRITER documentation. DAUSTRALIAN 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. DCOLECO PERSONAL CPM: Coleco's In-House version which evolved into CPM 2.2. Made available for collectors and as an easy way to test the ADAM components. Comes with instruction sheet. DJRACKER: 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. DSP-1 CUSTOM PRINTER SOFTWARE: Specialized software patches for use in SmartWRITER. Used to inbed software commands. Available for the following printers: Parasnic: 1080 / 81 / 82 / 83, Star: G10 / 820, Epson FX / RX, Blue Chip, Olympia 880, Brother 2024, Smith Corona Fastest 80 / D2000, OKI 182 / 182. DBASEBALL STATISTICS: Comprehensive stat compiler for pitching, batting and team statistics with full line of edit features, save option, print features for ADAM Printer or dot matrix by Wizard's Lair. Comprehensive instructions in SmartWRITER. DSmartBASIC CONSTRUCTION KIT: Designed to aid the novice programmer better understanding the many commands resident in SmartBASIC V1.0. Fully menu driven and auto-booting. Contains SmartWRITER documentation. DDAWGONE 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. DSimplePAINTER WITH Simple FIX: A tremendous collection of graphics utilities which extend the capability of PowerPAINT along with a number of conversion programs. Contains SmartWRITER documentation.

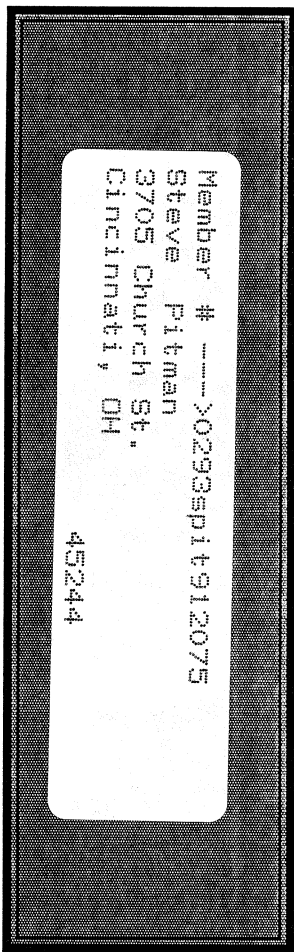


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" For GOD so loved the World that he gave his one and only SON, that whoever believes in him shall not perish, but have eternal life. For GOD did not send his SON to condemn the World, but to save the World through him. "... John 3:16



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