



Multi-function User Group
MONTHLY NEWSLETTER-PUBLIC DOMAIN LIBRARY
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ISSUE # 16 MAY, 1986
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\$24.00 US 1ST CLASS; \$24.00 CANADA

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Hope this month finds all of you well,
happy and blessed.

Continuing our study of Ephesians Chapter 4 -

17 Now this I affirm and testify in the Lord, that you
must no longer live as the Gentiles do, in the futility of
their minds; 18 they are darkened in their
understanding, alienated from the life of God because of
the ignorance that is in them, due to their hardness of
heart; 19 they have become callous and have given
themselves up to licentiousness, greedy to practice every
kind of uncleanness. 20 You did not so learn Christ!
--21 assuming that you have heard about him and were
taught in him, as the truth is in Jesus. 22 Put off
your old nature which belongs to your former manner of lif
and is corrupt through deceitful lusts, 23 and be
renewed in the spirit of your minds, 24 and put on the
new nature, created after the likeness of God in true
righteousness and holiness.

To put this in perspective, we must realize that the
Ephesian church was located in a very pagan city. These
new Christians were facing some very difficult trials with
their unsaved neighbors, and the Disciple Paul is writing
to encourage them in the midst of these struggles. When
one accepts Jesus as his personal Lord and Savior a change
takes place on the INSIDE, the Spirit of God comes in us
and we are "born again", that is, our spirit that was dead
as a result of sin is brought back to life due to our
reconciliation to God through our belief in his Son Jesus.
However, our old habits and circumstances do not
immediately change. We embark on a process (sanctification,
per the Bible) in which we are changed on the OUTSIDE, to
match our new inside nature. This is what Paul is writing
about in these verses. There is a tremendous many new
Christians go through - their friends, family and
circumstances tempt them to act and behave as before, while
their reborn Spirit will be drawing them towards God. In
verse 22 Paul says "Put off your old nature which belongs
to your former manner of life..." - he is speaking of our
old habits. Many people try to do this through their own
will power by acting religious. This approach will fail, we
can not force ourselves to be different, we must go through
the process of letting our new INSIDE nature manifest

itself in our behavior. Paul tells us how this outside
change can be accomplished in verse 23 "...be renewed in
the spirit of your minds...". Man is made up of spirit,
mind(will, intellect, emotions) and body. Our spirit is
changed when we are born again. Paul is saying that our
mind must be renewed as our spirit has been so that our
mind will direct our thoughts and behavior to reflect our
new spirit. This is the process of sanctification. The
primary source for renewing our minds is the Word of God,
the Bible. Jesus said that God's Word is spiritual food
that we need to consume daily to build us up. God's Word
will change our thinking and orientation to life. God gave
us this Word to use for this purpose. I urge you to first
pray and ask God to help you understand and then to read
the Bible - it will renew your mind and reveal to you the
wisdom and plan of God for mankind.
I can attest to the fact that our human nature is changed
over the course of time, after our inner man is reborn.
After I confessed my sins, which was a tough battle in
itself because our pride does not want to admit our
sinfulness, there was not an immediate change in by
behavior. However, a slow process of change was initiated.
As I read the Bible and started to understand God's love
and grace, I then began to change and have been changing
ever since (my wife says Amen). Some very bad habits,
including a problem with alcohol were gone after a year. If
anyone would of told me that I would be going to church
every Sunday and writing monthly Bible studies I would have
laughed in their face. This just goes to show the power of
God when he is allowed to work in someone's life.
God Bless you all.

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NIAD NEWS

soon as stock arrives. See our software specials.

CHANGES TO NOTE

- We are having a problem with several people submitting the same ADAM programs printed in Family Computing each month. We have started to return these programs since they duplicate programs already received. In order to be fair we will not accept any programs for the Software Exchange from Family Computing.

- Please note that 3rd class, bulk mail is not forwarded by the US Post Office if you move (First Class mail is forwarded if you instruct the PD to do so). Hence, you MUST inform of us any address changes to insure that you continue to get your newsletters. Any issues not received because you did not inform us of an address change can be purchased for \$1.50 each.

. Thanks to Bob Lennes who has been our Basic Public Domain librarian for the past several months. He has done a great job in testing and organizing the Basic PD library which is a BIG job as our new librarian John Lahman will find out! Note that John's address for sending in Basic programs for the PD library is 17835 Commercial Ave, Lansing, IL 60438

. Data Doctor has some problem, his phone has been disconnected and there has been no response to several letters sent. I am investigating, but would recommend you not order any products directly from Data Doctor until I figure out what has happened.

. Our interview with Hank Szretter of Eve Electronics is in this issue. I think you will find it informative and give you some insight into computer hardware development.

. Marathon Press has informed us that several of you have ordered their products and requested the 30% User's Group discount. As stated last month, this 30% discount ONLY applies to the software products developed by Marathon - Codevisor, Spanish Vocabulary and Investment Analyst, NOT to any other products.

. We have added several new ADAMCalc spreadsheet models to our PD volume ANDV1 and have added a second volume with some business oriented spreadsheets - see the ADAMCalc workshop for details. Wayne is working on the second volume of Basic Utilities UNDV2, which should be done soon. Thanks to James Young who submitted some super utility programs to the PD library.

. Hardware/ Software - We have not received our shipment of disk drives yet but should have them shortly. Modems are impossible to find. We did get some reconditioned ones that we will sell for \$65.00. I have several orders for the Super Action Controller sets that are being held awaiting a shipment, we will fill them as

. Chicago Area Local Meetings are held the first Thursday of each month at the Glenside Library located at 25 East Fullerton, Glendale Hts at 7:00 PM. Next meeting is set for June 4th. There will be no July meeting due to the holiday.

. Reviews in this issue include Spanish Vocabulary, Rocky Super Action Boxing, Number Bumper, MultiWrite and the PIA2 Parallel printer interface.

. Custom Printer software is available for most dot matrix printers which will allow you to use the special features of your dot matrix printer DIRECTLY from SmartWriter. This software (\$20.00 on product list) is compatible with both the Eve parallel interface and the Orphanware PIA2 interface. With this software you can insert control codes in your SmartWriter documents that will "tell" your dot matrix printer to underline, switchtype styles, print bold, print superscript or print subscript or print expanded.

This is what I use for the newsletter. This software is only available on disk.

. Paintmaster and Signshop are very popular programs but only come on data pack. If you want to copy them to disk for your own backup use you need to change the following lines after you make your copy on a diskette: In Paintmaster load the program "paint" and change line 9000 to read as follows - Print CHR\$(4); "run PM.DBJ,d5" In Signshop load the program "signshop" and change line 9000 to read as follows - PRINT CHR\$(4); run SS.DBJ,d5"

. Renewals - Get your renewals in early to insure you don't miss any issues. If "0586" are the first 4 letters of your member number as printed on your mailing label, this is your last issue.

NIAD Product Information - SPECIALS

- . ADAM Resource Directory \$9.95
- . Six Ribbons for \$25.95
- . Right directory tapes for copying Super games \$2.50
- . Two game hand controllers \$10.00
- . Reconditioned data drives \$19.95
- . Reconditioned ADAMLink modems \$65.00

New Products

- . New Infocom games for CP/M 2.2
- . Media Aid utilities package
- . MultiWrite word processor
- . Electronic Games Pack.
- . PIA2 Parallel printer interface
- . Number Bumper math arcade game
- . Quickcopy backup program
- . Paintmaster hi res drawing program

. Signshop

- . Super Sub Roc PD game
- . 80 column video / expansion board

NIAD Services

- . Disk conversions of Supergames - Buck Rogers, Super Zaxxon, Dragon's Lair, 2010: Text Adventure, Donkey Kong and DK Jr, Recipe Filer, Smart Letters & Forms, Family Feud - send in the card label from your game tape \$4.00 each.
- . Replacement SmartBasic tapes - \$7.00
- . Fix SMARTFiler tapes (send them in) to provide the most recent version and provide ability to print mailing labels by correcting the spacing problem \$4.00

UPDATES

. Eve is continuing research on a disk controller for the ADAM. They are now considering two different controllers - one as a direct replacement for the Coleco drive, but offering double sided capability and the other as a more comprehensive controller for CP/M that will allow the use of many different types of disk drives.

. Bulletin Boards - There is a Chicago BBS that has an ADAM section and that allows messages to be sent/received from other bulletin boards via a facility known as ECHO. This board is linked to a Detroit and Canadian board per Sharon McFarlane. The number is (312) 338-8827.

Bob Wright has a new board up which supports Xmodem protocol and CRC checking. Daily hours are 11:00 PM to 7:00 AM Eastern time. Program libraries are available as follows - Monday thru Thursday, CP/M. Friday and Saturday, Basic, Logo, ADAMCalc. Sunday, Pascal. (200) 929-8286.

. Codevisor is a new program from Marathon Computer press - we will review next month.

. \$99 ADAM Kit is available from American Design Components in New Jersey. This kit comes with "bare" boards that you can use to make an ADAM, minus the printer. There is one modification which needs to be done in order to get it to run correctly. Write to John F Busby II, 6634 SW 41st St, Davie FL 33314 for this information.

. Zayres department stores are now selling the complete ADAM for \$199.95 ! Boy, I sure wish they would get some Modems and Disk Drives !

. NIAD will be starting to do some conversions of Apple Basic programs to the ADAM. We will also be converting some CP/M Basic programs to run under Nevada Basic for the ADAM.

. Eve's 80 column video board can now be purchased with an additional option - VT100 emulation for a price of only \$15 additional. VT100 is the standard for telecommunications emulation.

PUBLIC DOMAIN WORKSHOP

ERRATTA

I goofed in the March issue when printing the FINANCE program from Basic PD volume #BNDV6. The custom printer software I use interprets the "up carat" as a control character and does not print it ! The Finance program uses exponential powers which are indicated by the "up carat" in SMARTBasic - hence any of these characters were not printed!

Here are the line numbers that have to be changed for the program to run:

```
1100 er=((fv/pv)^(py/np)-1)*100
2110 pf=fv/(1+ir)^n
2130 pe=ep(x)/(1+ir)^x
3150 t=(1+i)^(py*y): t=t-1: t=t/i: fv=rd*t
4100 t=(1+i)^(py*y): t=t-1:IF t=0 THEN t=1E-07
5150 t=(i+1)^y: n=i*t: d=t-1:IF d=0
```

```
1090 nr=(py*((fv/pv)^(1/np))-py)*100
1100 er=((fv/pv)^(py/np)-1)*100
2110 pf=fv/(1+ir)^n
2130 pe=ep(x)/(1+ir)^x
3150 t=(1+i)^(py*y): t=t-1: t=t/i: fv=rd*t
4100 t=(1+i)^(py*y): t=t-1:IF t=0 THEN t=1E-07
5150 t=(i+1)^y: n=i*t: d=t-1:IF d=0
```

. There is a super text/ graphics adventure game on Basic Volume # BNDV8 called TRAVELER. There are actually 4 programs on the volume - TRAVBOOT, 1TRAVELER, 2TRAVELER, 3TRAVELER. These are not separate games. You should run TRAVBOOT and it will load 1, which in turn loads 2 which loads 3 for a LONG, but fun game. However, you need to make the following changes to get the 3 programs to run from each other:

In 1TRAVELER change line 9995 to the following:
9995 PRINT d\$; "RUN 2TRAVELER "

In 2TRAVELER change line 8210 to the following:
8210 PRINT d\$; "RUN 3TRAVELER "

Just found a problem with 3TRAVELER, there are a number of lines missing at the end of the program. Please send in your PD tape or disk and \$1.00 for postage and we will supply the correct program.

. There is a program missing from Basic Volume # BNDV7 that is needed by the LHOUSE.ASM text adventure game in order for it to run properly. Send in your disk or tape and \$1.00 and we will add it to your volume.

.Just a short note about MUSICMAKER on volume # BNDV4. I have run it and fine it works well, especially with the following changes:

3040 for music = music% to max

4455 gosub 5000

4460 ms% = music% - row% + 2:gosub 4600: REM DISPLAY NOTES

I also found that the program allows 1000 notes, which is more then enough for most songs. It takes too long to load and save a song because the program goes through all the spaces even when there are no notes in them. You can change to a smaller number of maximum notes by doing the following:

290 max = 100: REM set max to any amount: max% = max

5260 for ms = 1 to max

5360 for ms = 1 to max

Just change the value of max in line 290 to whatever maximum you want.

H. Morse

- Thanks alot Harold for your contributions to the NIAD PD.

Here is a printout of the the README file from Basic PD volume #10. Bob Lennes says he thinks this is the best PD volume so far.

NIAD PUBLIC DOMAIN

PROGRAM DESCRIPTIONS #BNDV10

by Bob Lennes, Librarian

*YOUR AGE- Gives your age in months,days,hours,etc.

*mileage- Calculates your car's mileage

*CHOMP- Two or more players eat the dots, trying to avoid the poison dot in the corner

*BUZZARD- Tries to describe your personality in words by the pattern of three numbers you choose

*BOMBER- You determine the odds as you fly in combat against the enemy

*DEFUSE- Find and defuse the bomb in a building before it's too late

*BACCARAT- A card game; the program has instructions

*CUBE- Move on a 3X3X3 cube, and travel from 1,1,1 to 3,3,3 by moving one space horizontally or vertically without running into randomly placed mines. ADAM asks you to bet on whether you will make it or not

*FOOTBALL- A text version of the great American game. Uses numbers to choose plays. Is self-documented.

*LTRaces- choose the letters for the race of the century- ADAM uses random numbers as the letters 'race' to the edge of the screen

*ACEYDUCEY- Another card game. Is also self-documented

*AMAZING- This program creates a text maze of any size

*ANIMAL- This 'artificial intelligence' program will learn and guesses animals.

*GONOKU- This is an ancient game of the Orient in which you try to get five 'markers' or astericks in a row- either horizontally,vertically, or diagonally

*Haunting- An interesting graphic and audio display

*Jitterbug- Watch the 'jitterbug' do a dance

*FUTUREAge- This program will calculate what your age will be on any date you specify

*phonest- Tells you cost for a phone call, when a certain time limit is up, etc.

*radrhyme- Creates a poem out of names,etc. that you supply

*ADAMCHAT- This is a simple telecommunication program for use with your ADAMlink modem

*SOUNDEX- This storage/retrieval program stores names and phone numbers by using the Soundex code

*JOY.ASM- See the 'JOY.DOC' file on how to use this program. It plays the tune Joy to The World.

*Curch1.ASM- This is also a song- see JOY.DOC

*CRUNCHER- This machine language program is used to create a fast loading version of your program in memory. See the instructions below.

*Scramble- Guess the scrambled word

*mm- This is NOT A PROGRAM. It contains data for the program Scramble

*MOTHERLODE- This is a great text adventure. You must search for the gold treasure. MTHR1.ASM and MTHR2.ASM are the two parts of the game. Type RUN MOTHERLODE and this program will branch to part 1 and then part one will go to part two.

*mthrhgh- This data file contains the high scores for MOTHERLODE

* Instructions for CRUNCHER *

-either type in or load the program you want to save

-type 'BRUN CRUNCHER'

-disregard the OS Error

-move the cursor up to the BSAVE and move it across to the 'P' in Program.MA

-type the filename you want

-then move the cursor across the A????,L???? and put the drive to be saved-

Example- BSAVE NIAD.BAS,A34567,L12345,D5

-insert the tape or disk you want it on

-press RETURN and it's saved as an 'H'-file

-to run it, type BRUN <filename>

-again disregard the OS Error and type 'RUN'

. We have added a comprehensive Bowling score management program that is self booting as Basic volume #13.

INTERVIEWS

The following is an interview with Hank Szretter, owner of Eve Electronics which was the first company to develop hardware peripherals for the ADAM.

NIAD: Hank, what is your background and how did Eve Electronics get started ?

As for my background, I hold degrees in Electronic Engineering, and have completed dozens of courses in various aspects of electronics, computer hardware and software, and business management. I have served as an electronics instructor in both the military and civilian communities, and have presented many seminars on Business Computer Systems, Advanced Electronic Technology, Advanced Communications Systems, Industrial Control and Automated Testing, Electronic Security Systems, and Robotics Control Systems. I have participated in many users groups for various types of computer systems and belong to several professional organizations. I have been an Electronic Systems Consultant for many years in the fields of Computers and Electronic Communications, and have designed many sophisticated systems for both large and small companies and individuals. I work in association with several other engineers with expertise in the areas of Electronics, Mechanical, and Industrial design, as well as Computer Software. In addition, we have a staff of technicians and assemblers who assure that the Eve products will be available and of the highest quality. And of course I can't forget the most valuable person we have, for without Darlene managing our office, the vast amount of paper work, phone calls for customer support and orders would bury us for sure.

Eve Electronic Systems was created early in 1985 as a result of many requests for interface units and enhancement products for the ADAM computer system. We had much experience designing and developing special products for other computers, and decided to evaluate the potential for ADAM add-on products. Our initial surveys showed the need for such devices as an RS-232C unit and parallel printer interface to allow the use of high speed printers and external modems. The SP-1 was the first EVE product to fill this need. Further studies showed the demand for an alternate 64 K memory expansion card, the ME-64, a speech synthesizer and clock calendar unit, the SS-CC, and an 80 Column Video Display system, the Eve VD-MB and MON-80.

NIAD: Is Eve committed to continue support the ADAM ?

As far as our commitment to ADAM support, we at Eve will continue to support the future of ADAM as long as the demand warrants it. As in any other business, we base our production on sales; therefore if sales are good, and we are able to make a reasonable profit, we will continue to

create product. On the other hand, if our surveys and customer contacts show little demand for a product, or if it is determined that the cost will be more than people are willing to pay, we will naturally not produce the unit. In the case where a special device or interface is desired by customers, we have provision to design and produce 'non-production' quantities where the customer must absorb the entire development cost.

NIAD: What has been the response to the long awaited 80 column video board ? How much development went into this product ?

EVE: The response to the latest Eve products, the VD-MB and MON-80 have been excellent. We have actually had more orders than we had originally anticipated, and this is the reason why delivery is as long as it is. We are attempting to increase our production capabilities at present and as time progresses we will be able to decrease the delivery time significantly.

Another reason for the long lead time is that the VD-MB and MON-80 have several options available and require extensive testing before final assembly. Additionally, we are at the mercy of our parts suppliers to obtain the various parts and hardware which go into the actual units. As for what these units required to get to the point where they are now, we went through many months of specification, design and prototyping before we were able to even produce the first batch of field test units. At the same time the hardware was being developed, our software team was busy with the development of the word-processor, ZBASIC and device drivers which are required to allow the ADAM system to use the 80 column display. This software effort again contributed many man-months to the development costs for the product. Again, we decided with these units, as with our other products, to distribute the development costs over a long period of time, in an effort to keep the cost per unit as low as possible. To date, the total development costs on the VD-MB and MON-80 products is well over \$75,000.00. So as you can see, it's not cheap to develop and produce a quality product. The comments we are receiving from those who have received their VD-MB's and MON-80's are that of real enthusiasm.

NIAD: Wow, that is a lot of money !

Speaking of money, here is a tougher question for you. I have received many comments expressing the feeling that your products are overpriced. Would you like to comment on this ?

EVE: In response to your question, I will make several comments. First of all, we at Eve feel that we will only produce 'quality' products which are user friendly. Many products which are available for computers require a degree

in electronics to even install. Our feeling is that the product should require as little user effort as possible to install and use. We have taken great pains to design not only the electronics, but also the packaging, to be 'safe' and easy to use. With the exception of the 64 k memory expansion, we will not provide a 'loose PC board' that will 'hang out' the side, or that requires 'drilling or cutting holes' in you computer. All of our products are designed to be safe for not only the people using them, but to reduce the possibility of even accidental damage to your ADAM. Also, as I have previously stated, it costs thousands of dollars to develop and produce a new product. This development cost is amortized over the life of the product, and amounts to only a few dollars per unit actually sold. Each unit is put through several tests before and after packaging to assure the best performance and reliability. The materials we use are of the highest quality industrial grade, not the factory seconds some companies use. The main problem I see for the price questions people have, is the fact that they bought the ADAM for between \$100 and \$300 dollars, and can't understand why the SP-1, for example, sells for \$139.00. The answer to this is obvious to people in the Electronics industry: The ADAM has been 'dumped' on the market at or below Coleco's cost to produce it. Those of you who paid the original \$799.00 for the ADAM will also understand this. Also, Coleco produced close to a million ADAM's before it was discontinued. That allowed them to buy parts, cases, and hardware in 'huge' quantities, at significantly lower cost. After all, everyone knows that the larger volume you buy, the less you pay per item. At Eve, we buy in quantities as large as is practical, determined again by customer demand and sales. We also have, as with any other business, salaries to pay, and other necessary business expenses. We are a full time business, and are not trying to compete with the 'part time hobbyist'. And of course, all this means that we must sell our products for a reasonable price and make a reasonable profit, and allow our dealers to realize a profit for the effort they put in to getting the products to ADAM owners.

NIAD: OK, what is next for Eve as far as ADAM is concerned?

EVE: As for our next project, we have several in various stages of completion. The next release should be a 'disk controller unit'. I am not sure which unit will be released first, this will depend on the feed-back we get from our customers and dealers. We also have ready to release, an option for the VD-MB and MON-80 to allow the ADAM to emulate a VT-100 (ANSI) terminal as well as the standard H-19. This option will also allow much greater graphics capability. As for what ADAM owners are looking for, we see several sides: There is the customer who wants to enhance the power and capability of his computer by adding high speed printing, external modems, speech

synthesis, 80-column display, etc., for a reasonable price. Then there is the 'novice' user who is not sure yet what to expect. Then there is the category of those ADAM owners who want everything for nothing or less. I'm sure glad there aren't many of this type. Those in the first category are the customers who will help us keep the ADAM 'Alive and Well'. For those in the 'Novice' category, we will continue to provide the support needed to help develop their ADAM into the computer system they want it to be.

NIAD: Thank you, Hank for your comments and most of all for your support of us ADAMites who want to keep our ADAMs "Alive and Well", now and in the future. We only ask that you price your products fairly and not get discouraged by those few people who want something for nothing.

BEGINNER'S BASIC WORKSHOP

BASIC PROGRAM LOCK UP PUZZLE

By D. Zimmerman

Computer languages set aside specific "words" that are reserved and can not be used by the user outside of their defined use. Examples of these words are LOAD, SAVE, GOTO, NEXT, GOSUB, and any of the other command words that are listed in the Adam SmartBasic manual. ADAM is always looking for these words and when it finds one of these reserved words ADAM will do the task that it has been programmed to do when it encounters that word. If ADAM encounters "GOSUB 1500" it will jump to the instructions located at line #1500, execute those instructions, and look for the first RETURN it finds and then return to where it came from. These reserved words are loaded into ADAM's memory when SmartBasic is booted and do nothing but sit there waiting to be called upon. ADAM examines each and every word in a Basic program and compares each word to a "reserved word" list that has been loaded into memory. If ADAM does not find a word in its' list it will give you the "Illegal Command" error message. Lucky for us ADAM owners ADAM will not even accept wrong "words" when we are typing in the program. The Apple II series will allow you to code in some errors of this type and then bomb when you try to RUN it.

If ADAM has the word in its' list it then will execute the specific instructions associated with that word. This is what is meant by an "interpreted" language such as SmartBasic. ADAM literally "interprets" each and every word by having to go to a "reserved word" list to find it and then do what that word "tells" it to do. This is why any "interpreted" Basic language is so slow and disliked by experienced computer users. A "Compiled" language such as C-Basic skips this looking for "reserved" words in order to know what to do. It simply jumps to the routines that the language loaded into memory. The fastest of all is the machine language of zeros and ones that actually turn on and off the electronic chips with no "middleman" to help control the information. Machine language is extremely difficult to code in and even harder to debug. It allows for NO errors ANYWHERE.

What we did last month was to simply change the spelling of three of ADAMs' reserved words that are in its' "reserved word" list. The three words that we "misspelled" were: LIST, CATALOG, and DIRECTORY. When SmartBasic is booted "LIST" is loaded into memory at locations (decimal) 460, 461, 462, and 463. The instruction "PRINT PEEK(460)" will return the decimal value of 76. This corresponds to the ASCII capital letter "L". The next three memory locations will return the ASCII values for "I", "S", and "T" to complete the reserved word "LIST". The first line of last months puzzle poked the decimal value of "79" into memory location 461 which in effect changed the "reserved" word LIST to L_ST. Now ADAM was looking for the word "LOST" and not "LIST" that it normally would look for. This is why "LOST" would LIST the three line program. Note ADAM has a

built in routine that converts lower case reserved words entered by the programmer into upper case so they will match the reserved word EXACTLY.

CATALOG and DIRECTORY are loaded into much higher memory locations because they are of the input/output type (I/O). This means that they must go beyond the information in memory and access the mass storage units of either the tape or disk drives. The ASCII values of the reserved word "CATALOG" are in memory locations 20184, 20185, 20186, 20187, 20188, 20189, and 20190. The instructions PRINT PEEK(20184 - 20190) would return the ASCII values of the capital word "CATALOG". Again we simply changed the ASCII value of the second letter from 65 to 79 with the second program line which in effect changed the reserved word of CATALOG to COTALOG.

Trying to enter the instructions of LIST or CATALOG as you would normally do will return the error message of "Illegal Command" because ADAM does not have "LIST" or "CATALOG" spelled this way in its reserved word list. Entering the instructions of LOST and COTALOG will do exactly what the words LIST and CATALOG words would have if we had made no changes. Note C_TALOG still does not catalog the disk but it now returns a different error message. This is caused by the third poke statement.

The third program line was put in to emphasize the necessity of the exact spelling of EACH and EVERY word we enter into any computer and to help explain why computers are so fussy and frustrating at times. ADAM does not hate us, it is just another dumb machine that can do nothing on its' own and must be told EXACTLY what and how to do its work. Can you imagine hiring someone to work for you if they acted like a computer?

CATALOG (or in our case CO_TALOG) requires I/O information from the external storage device. "CATALOG" tells ADAM to look for the word located at 21444-21452 in memory. The word "DIRECTORY" is at this location. This reserved word "DIRECTORY" is then compared with the actual spelling of the word "DIRECTORY" that is located in block number one of the TAPE or DISK. If the spelling of the word "DIRECTORY" is misspelled either in the reserved word list OR in block one of the disk/tape ADAM will return the error message of "File Not Found". The spelling of DIRECTORY must be the exact same as in its' reserved list as it is on the disk/tape. The reserved word DIRECTORY is stored in memory locations 21444, 21445, 21446, 21447, 21448, 21449, 21450,

21451, and 21452 in ASCII form. We poked the ACSII value of 79 into the second memory location to change the reserved word DIRECTORY to DORECTORY. This is why we could not get a CATALOG even after we entered the "corrected" word of COTALOG. ADAM was comparing our changed word of DORECTORY with the UNCHANGED word DIRECTORY that is on the disk/tape and the spelling must be the SAME in BOTH places. The "corrected" words of LOST and COTALOG would have worked if we had only entered the first two lines of last months' PUZZLE. The only way to get the PUZZLE to operate ADAM with the third line is to either reset the memory to DIRECTORY or change the spelling of the word DIRECTORY in block number one on the disk/tape to match the spelling of

whatever is in memory locations 21444-21452.

SMARTBASIC WORKSHOP

BASIC instruction addresses.

BY W. MOTEL

I've included 2 lists this month to help out any of the hackers, who are interested in learning how BASIC instructions work. I put this information together based on information from a few other sources, but hopefully this will serve as a complete one source list. Briefly, BASIC instructions are also refered to as TOKENS. When you write an instruction in BASIC, it first needs to be interpreted and checked for syntax errors. This is where the PARAMETER addresses come in to play. Since some instructions use the same type of format (syntax), these instructions would be checked for valid format with the same parameter checking. I.E. HTAB, CALL, and VTAB are written as the instruction followed by a number, therefore they are written with the same syntax and checked with the same parm check routine (at 999). However, when it comes time to actually execute the instruction, they all do a different thing, therefore, they each have a different start/end EXEC address range.

The 3 areas of BASIC used to make up this list are TOKEN area at 267 - 816 (these contain the valid TOKEN names and a POINTER to the PARAMETER check routine to use. The format of this area is

TOKEN #	1 byte
PARM addr	2 bytes (points to PARM area)
# of letter	1 byte (indicate letters in name following)
Inst. NAME	1 to 7 bytes

PARM ADDR. area at 938 - 1054 (pointed to by token area. Each area in here gives the actual address(s) to use for checking the syntax of instructions. Format is as follows:

# of addresses	1 byte
address	2 bytes

EXECutable START address for each token is at 6423 - 6554
 These contain the STARTing address for each token. It is in
 TOKEN number order. To get to the actual 2 bytes containing
 the instruction address, use the formula $TOKEN \# * 2 + 6421$
 I.E. Token 1 (let) - $1 * 2 + 6421 = 6423/6424$ These 2 bytes
 contain the Starting address for EXECuting a LET
 instruction.

Following is 2 lists. List 1 shows the token number
 and name, with the Starting and Ending address for
 execution. At the end is the PARM address pointer for
 syntax checking. List 2 shows (in PARM pointer order) how
 many routines and the addresses used in SYNTAX checking.
 Note, any instructions that point to PARM pointer 976 have
 no further syntax checking. Looking thru list 1, some of
 these instructions are NORMAL, TEXT, HGR, all of which have
 no additional information when you code them.

Both lists were done with ADAMCALC. If you like, you
 might want to put list 1 (TOKEN LIST) in an ADAMCALC
 spreadsheet. You can then sort the NAME, START address, and
 PARM columns to get the list done in those 3 sequences.

What good is this. Nothing, unless your interested in
 seeing how BASIC works and seeing what machine language
 routines are actually performed when you do various BASIC
 commands. You will either need a DISASSEMBLER or use
 UTILDUMP (or similar dump routine) and decode the machine
 language yourself. We are trying to put together a second
 UTILITY PD volume, which will include a DISASSEMBLER. One
 note, the END address is missing from the PRINT and READ,
 as I have not yet determined where it actually ends. Also
 the PRINT uses the PARM check at 996, whereas the ? version
 of print, uses a PARM check at 953. One other thing. If you
 do go thru the actual machine language routines, you will
 see many cases of common routines being used and many cases
 of jumps and calls. This is what often makes it hard to
 decipher a machine language program. It is not always a
 simple case of one large routine, but a combination of many
 smaller routines that are inter-related.

#	TOKEN	Start	End	Parm
01	= (let)	6247	6289	938
02	GOSUB	8427	8476	941
03	GOTO	8342	8380	941
04	INPUT	8957	8997	983
05	LET	6247	6289	938
06	NEXT	8811	8816	977
07	PRINT, ?	7854		996, 953
08	READ	9499		980
09	REM	8419	8426	953
10	FOR	8557	8620	959
11	IF	7705	7733	968
12	DATA	8419	8426	956
13	DIM	6942	7065	980
14	ON	8381	8418	986
15	ONERR	8114	8140	991
16	STOP	6378	6386	976
17	RETURN	8477	8492	976
18	END	6047	6111	976
19	DEF	8244	8312	973
20	CLEAR	8141	8243	976
21	RESUME	8313	8341	976
22	NEW	6356	6377	976
23	POP	8493	8512	976

24	RUN	6159	6190	944
25	LIST	7407	7548	950
26	TRACE	6336	6340	976
27	NOTRACE	6341	6345	976
28	DEL	7555	7637	947
29	CALL	10042	10072	999
30	CONT	6387	6416	976
31	CLRERR	8109	8113	976
32	GET	9378	9481	1,002
33	POKE	10104	10125	1,017
34	RESTORE	9482	9498	976
35	HOME	11090	11098	976
36	DRAW	11358	11405	1,024
37	XDRAW	11412	11458	1,024
38	FLASH	11050	11098	976
39	INVERSE	11055	11098	976
40	NORMAL	11060	11098	976
41	TEXT	11065	11098	976
42	GR	11070	11098	976
43	HGR	11075	11098	976
44	HGR2	11080	11098	976
45	HLIN	11170	11218	1,029
46	VLIN	11219	11267	1,029
47	HPLLOT	11487	11618	1,014
48	PLOT	11139	11169	1,017
49	HTAB	11320	11329	999
50	VTAB	11330	11350	999
51	SHLOAD	11085	11098	976
52	RECALL	11764	11785	1,002
53	STORE	11756	11763	1,002
54	WAIT	10126	10163	1,005

PARM # and EXEC. ADDResses

937	0
938	1 15020
941	1 15756
944	1 15232
947	1 15247
950	1 15244
953	1 15817
956	1 15814
959	4 14991, 15963
	14875, 15093
968	2 14947, 15035
973	1 15125
976	0
977	1 15567
980	1 15574
983	1 15543
986	2 14875, 15209
991	2 15991, 15747
996	1 15580
999	1 14875
1002	1 15364
1005	4 14875, 15939
	14875, 14969
1014	1 15102
1017	3 14875, 15939
1024	2 14875, 14976, 14875
1029	5 14875, 15939, 14875
	15977, 14875
1040	2 15926, 14875
1045	2 15950, 14875
1050	2 15911, 14875

ADAMCALC WORKSHOP

ADAMCalc is a great spreadsheet program and we should consider ourselves lucky to have it for the ADAM. It is definitely better than any other I have seen for Apple or Commodore.

We have added a bunch more spreadsheets done by various NIAD members to the PD volume ANDV1 to give a good variety. Here is the current catalog for ANDV1, followed by the documentation for a good small business spreadsheet.

ANDV2 will be primarily business oriented spreadsheets and will also include this small business package. In addition programs for inventory, balance sheets, property analysis and others will be included on volume #2.

Volume: CALC ANDV1

- A 4 Mthly
- A 8 YEAREndEXP
- H 1 YREnd_DOC
- H 1 MTHLY_DOC
- H 3 smalldoc
- A 9 SmallBus
- H 3 PROPDOG
- A 7 8STAXFORM
- A 6 PROPANAL
- A 7 monthbudgt
- A 3 inventory
- A 2 checkbook
- H 3 BASEREAD2
- A 16 BASEBALL2
- A 4 EXPENSES
- H 2 READMEFMFN
- A 2 cislog
- A 11 FAMILYBUGT
- A 11 FAM_FIN
- A 15 Inventory
- A 1 CapDschrg
- A 1 BalSheet

SMALL BUSINESS SHEET

The "Small business sheet" is a helpful guide for the small business owner who needs to keep simple records of his business activities. The sheet is very helpful in showing you where your money is being spent. (and thus how to cut expenses) It also keeps track of income and gives you monthly and yearly totals for income, expenses, and your profit and loss.

HERE'S HOW-

First label the months at the top of the sheet. There are two months on the sheet, but you can store the sheet under other file names to make a full years sheet. The first item

is "expenses". Under "paid to" put who you paid (or what you paid for). Under "how" enter a 2 character reply, either a numeral code (01, 02, etc.) where each number is a method (cash, check, etc.), or CA for cash, CK for check, CC for credit card, etc. Then enter the date of expense and the amount.

The "wages" category is meant as a total wage amount, and does not help to figure for deductions (social security, etc.). Just enter the total amount spent for wages for each employee.

The "income" section is the same as the expenses, except you enter the income from sales, service, etc.

"Misc. Exp." is expenses such as interest on loans. You may wish to keep your overhead expenses (rent, electricity, etc.) in this category.

Lines 116, 117 and 119 give the monthly totals of income, expenses, and the monthly profit or loss.

Lines 122 and 123 require input only in the first month of each two month sheet. For the first month (let's say january) you would insert "0" in each of the lines.

(because there was no previous month to transfer totals from) In the second month (february) the totals will be compiled automatically. When you start your third month (march) you will be using another file with the sheet stored on it. (because an Adam Calc file is only big enough to hold two months) You will have to enter the totals from the previous month on the same lines (line 122 TO line 122 and line 123 TO line 123). You will have to do this every other month.

Hopefully this program will simplify your job at tax time, and give you some insight on ways to increase your profit margin at the same time. GOOD LUCK!

CP/M 2.2 WORKSHOP

NIAD CP/M PD LIBRARY

By C Kolander

This month I will tell about what programs can be found on PD disk # 12. Disk #10 contains everything you need to start a BBS on your Adam, but not an RCP/M. The programs do support up/downloading, but not binary transfers. Adam seems to lose the Bye program when a warm boot is done, therefore Xmodem can't be used with it at this time. The programs are more aimed at Adalink owners and that transfer system. The disk is very well documented. PD disk #11 is a full compiler type Pascal programming system. I will have more about this disk at a later time, it too is very well documented.

GAMESAVE.COM - This program will back up almost all your Colecovision/Adam video game cartridges. If you use it with a 64k memory expander it will copy all cartridges except the ones that are copy protected. I have used it with the expander, and have copied such carts as Tapper, Dambusters and Spy Hunter with no problems. To use simply put your

cart in the slot type gamesave from the prompt and do a Save with the number of pages displayed on the screen. PILOT80.LBR - This library of files contains a version of the Pilot programming language written in Mbasic. It also has a couple of programs written in the Pilot language itself. It's very well documented.

L.COM/DOC - L is a print utility that will allow you to select your output to the printer from a variety of options. The options include, choosing which page to start printing, which page to end, column to use for margin and it will print the name of your file and the date at the top. Real nice program, has good documentation file included.

VF.COM/DOC - VF is a "Video Filer" program. Intended for use with ZCPR2, but it works real well with Adam CP/M 2.2. The program lists out the files on the currently logged in disk, then allows you to manipulate them in a variety of ways. Some of the things the program allows you to do are tag files, batch file transfers and deleting. Good documentation file included.

F83.COM - This program is a PD version of the programming language Forth. It is based on the 83 standard and is a interpreter language. There are a number of other support files on the disk which include F83TOOL.LBR. The program is very powerful and very fast, even though it isn't a full blown version. Forth has a set of standard commands, which can be built upon by the programmer, much in the same way Logo does. But this language isn't for everyone, it's a little hard to follow and learn. A good book to get to use with this version is Starting Forth by Leo Brodie, Prentice-Hall. There is no documentation on the disk so the book is really needed in order to use the program. The following files that are found on this disk are programs written in the Forth language and can be used with the F83 program on the disk.

CONVER.FTH, PHASEB.FTH, FLISP.FTH, LIF.FTH and the F83TOOL.LBR.

Some of the 13 files found in the F83TOOL.LBR are as follows:

Ramdisk.Bqk, Float.Bqk, Ezdir.Bqk, Case.Bqk and Autodial.Bqk. Note these files are NOT squeezed as one might think. Next month we will be covering PD disk #13, which contains alot (27 files) of utilities. I will also hopefully have a nice artical on how to set up and use the Pascal system found on PD disk #11.

SMARTWRITER TIPS

COLUMN #1 BUG By D. Zimmerman

Some ADAMs may have a problem printing out text exactly as the screen shows it if the left hand horizontal margin is set to one. This bug appears in the line following a line that has only a carriage return and IF the text on the following line BOTH starts in column number one AND if the word starting in column one is underlined. All of the following conditions must be present AT THE SAME TIME for this bug to show up: 1) Left hand horizontal margin set to

one. 2) The line PRECEDING the troubled line contains a blank line (only a lone carriage return) with NO text. 3) The text in the line following the blank line BOTH starts in column number one AND is underlined.

When the ADAM printer encounters a lone carriage return it apparently issues the infamous signal for the one and one half line feeds to the printer. If the text in the following line starts in column number one the print head must return to the left until it contacts the switch that tells it that it is now at the left most side of the roller. ADAM seems to have a problem backing up to underline text if the text starts in column number one IF the left margin is set to one. It appears that ADAM needs to back up one space before the underlined text to do the underlining. This problem must have something to do with the one and one half line feeds because if there is ANYTHING on the above line with the carriage return this bug does not show up. The head can not back up from column number one because ADAM uses the contact switch to place the print head at the left most position and this position is where column number one will be printed. I do not know if all ADAMs have this bug but both our ADAMs do it. They both are almost two and one half years old so perhaps the newer ones have been fixed.

FIXES: Any one of these will correct this bug.

1) Dont set the left hand margin to one. Any other setting will not have this bug.

2) If the left hand column is set to one do not start any underlined text following a blank line in column number one. Start the underlined text in column two or greater.

3) If the left hand margin MUST be set to one and underlined text MUST start in column number one following a blank line, THEN use the old "trick" of placing a period in the blank line before entering the carriage return. This period is the smallest character on the print wheel and is not too noticable. It helps if the period and carriage return is placed out at the right hand margin setting. This also could be done to eliminate the extra one half line feeds for blank lines. If the extra carriage returns bother you so much on the ADAM printer simply take a razor blade and trim off one of the seldom used characters on your print wheel and enter this character before the carriage return for a blank line. The cut off character will not print and you have eliminated the extra one half line feed and the column one bug. It seems like a lot of trouble to go through for such minor bugs.

REVIEWS

MultiWrite By L. Marschand

This is the second half of the review I started last month. MultiWrite (MW) is intended to provide enhanced functions over the word processor that came with the ADAM. As stated last month, MW does offer advantages over SMARTWriter in the areas of being able to view an entire line on the screen, setting multiple margins within the same document, doing full right margin justification and automated centering of lines. Lets go over each of the MW functions:

When you first load the MW program from Basic, a main menu is displayed that allows you to create a new document, edit an existing document, print a file or convert a SW file. As mentioned, the characters displayed a very small and some of them are hard to read due to the size, a monochrome monitor (cost about \$90.00) is a must if you plan to do much work with MW. If you will use MW for short periods of time and have a good color monitor you should be able to use it with no problems. Here are the commands available within the document creation or edit modes (Note that all commands are entered by holding down the control key and hitting the key indicated) -

- L - Set the left margin
- R - Set the right margin
- U - Start/stop underline
- V - Set vertical line spacing or insert a page break
- F - Format a paragraph per the current margin and justification settings
- C - Centering
- T - Tab set/delete (displayed on the ruler on top of the screen)
- S - Word search
- N - Next word search
- J - Set either left or right justification (Note: command must be initiated each time you change margins)
- Q - Quit and return to main menu

ADAM KEYS USED-

- HOME - Very quickly moves cursor to top of document
- BACKSPACE - Deletes character to left of cursor
- UNDO - Deletes character above cursor
- WILDCARD - Inserts 1 character above cursor
- MOVE/COPY - Moves block of text within document (very fast).
- SHIFT MOVE/COPY - Copies block of text
- DELETE - Deletes areas of text as highlighted
- INSERT - Insert text
- STORE - Store document on tape/disk

MW contains a "moving window" concept if you set the margin past 64 characters. Automatic wordwrap of words that go past the margin is also provided.

Lets PRINT a document - First you STORE it then you run a separate program to PRINT which in turn loads the document you enter for printing. You can set the page length, left, top and bottom margins, page numbering and whether you want to pause after each page. As mentioned, the printing is not as fast as with SW because printing is only in one

direction. You can not print directly from the contents in memory either (you must STORE the document first and run the print program) which is inconvenient.

Well, what did I think of MW? MW is definitely a full function word processor that Strategic Software put a lot of work into. It DOES provide additional functions that SW doesn't and if these are important to you then this package may be what you have been waiting for. All the editing commands work faster than their SW counterparts. I did not like the cursor movement, however because if you hold it down it runs ahead and ends up where you don't want it to be - you have to hit it one stroke at a time. The right justification works fine and it is nice to have an even right margin. The option to convert existing SW files is also nice. There is, however, one item that I feel is a major deficiency. The MW does not use the 64K expander and coupled with the memory needed for basic results in a maximum document size of only 5 pages ! I think this is a serious limitation that is out of synch with the expanded functions provided. The one thing you can do is break a large document into several small ones for creation and editing. When you go to print them you can start the "pieces" after the first one with the correct page number (for example start the 2nd piece with page number 6). You have to make sure that the last page of the previous piece ends at the bottom of a page. This will work, but should not have to be done. Strategic should have added the ability to use the 64K memory expander to complete MW. I did have one problem which I couldn't figure out, part of a document I typed in to MW would not print out. This could of been something I did wrong, but I'm not sure. As us users of ADAM SMARTWriter know some bugs do get out in the final version of complex programs like word processors. In conclusion, I am thankful that we have an alternative product like MW for the ADAM. Many ADAM owners have been frustrated with SW and have longed for another alternative. In one sense it is amazing that a product with the functions provided by MW was developed under SMARTBasic. I just wish they had gone farther. However, for those of you that need these enhanced functions and don't need to create large documents, MW is for you.

RATING - B+

PIA2 Printer Interface By L. Marshand

This is a Centronics parallel printer interface that allows the connection of a variety of dot matrix printers to the ADAM. Please note that most small, home computer printers utilize a parallel interface and hence are compatible with this unit.

This printer interface was developed by Orphanware, a new ADAM hardware and software supplier (see Updates sections

in this and previous issues) that we welcome. Orphanware has been selling a wire wrapped version of this board for a few months, but this is a full fledged PC board with soldered connections and IC's, which is required for long life and quick production. This small board (2" by 3 1/2") plugs inside the ADAM console in slot # 2. You need to buy a parallel cable from Radio Shack (approx. \$15) to plug into the PIA2 board and your printer. The cable from the PIA2 board can come out thru the cover for the console if you cut a small slit in the cover. Hook up takes less then 5 minutes if you follow the instructions.

Software is supplied that allows the PIA2 to run from CP/M, Basic, SMARTfiler and SMARTwriter. You can temporarily patch the ADAM's operating system in memory from either a disk or tape version of the supplied FASTPATCH software which will route all your printing that would normally go to the ADAM printer through the PIA2 and to the attached printer. The PIA2 is completely compatible with the Eve Custom printer software so you can use it to do special printing directly from SMARTwriter.

The PIA2 is a good product and offers the ADAM owner a relatively inexpensive (\$50.00 plus cable) way to interface the ADAM to a high speed printer. Thanks to Orphanware for their support of the ADAM !

RATING - A

ROCKY SUPER ACTION BOXING

By W. Motel

This was the second cartridge COLECO produced for the SUPER ACTION controllers. The first was BASEBALL, which was packaged with the SA controllers. They have a pistol-type grip with 4 action buttons (operated by your 4 fingers). On the top is the keypad (smaller buttons) and a joystick (has a red ball on top for easier handling). There is also a "roller" ball which is a ball-type device that is used in some games (I.E. BASEBALL - use it to move the players on the bases, the faster you spin it, the faster they run). The main advantage of the SA controller is the 4 action buttons, as opposed to just the 2 Left/Right buttons on the regular controller. The use of 4 (and combinations) gives you more possible actions, I.E. BASEBALL, on defense (in the field), the button pushed, determines which fielder you have control of. The controllers can be used with other games (that use the normal controller), however, these work better with some games then with others (I.E. I think the normal controller works better with maze-type games). They do, of course, work fine with the games developed for the SA controllers or that have the option of using the regular or SA controller. Other games developed for use with the SA controller are Super Action FOOTBALL, FRONTLINE, STAR-TREK (Coleco cart).

Back to ROCKY. This pits ROCKY against CLUBBER LANG (Mr.T in the movie). You have the option of being either Rocky or Clubber Lang in a 1 player against the computer game. You can also play head-to-head (2 players). In 1

player, whichever character you choose, you have 4 skill levels. These effect the computer opponent's reaction time as well as the number of rounds (3 thru full 15). As you improve, so does the opponent. The joystick is used for movement. The 4 action buttons control head or body punch, duck or block body punch. Round scoring is based on hitting opponent guard, body, or head. 2 factors that are also affected are fatigue and daze. Monitors always show the 2 characters factors. This will effect your game play and strategy. At the end of a round, the round and current score is flashed across the scoreboard above the ring. During a round, a referee breaks up clinches and also counts the boxer down on a knockdown. Graphics are excellent and the boxers movement is fairly smooth. The opening screen showing ROCKY (Sylvester Stallone) and the theme music are excellent.

Of the 3 sports carts, I rank this as the best. There is nothing wrong with BASEBALL, which is in fact excellent. The edge goes to BOXING only because you can play with 1 player. BASEBALL does not give you an actual game, just practice. BASEBALL, is best with 2 people, who can play and know the use of the controllers.

If you already have the controllers, you won't be disappointed with ROCKY. If you don't have them, you need to get them with the BASEBALL cart. You won't be disappointed with BASEBALL, just know that it is not a true 1 player game.

RATING - A

NUMBER BUMPER By W. Motel

This DDP is a combination arcade-style, math-education game from Sunrise Software. They previously had done carts: Quest for Quintana Roo, Campaign 84, and GustBuster.

The object of the game is to help the character Sidney Shufflefoot travel around a grid attempting to move the numbers into the proper spot of an "equation", which is in the center of the grid.

The grid is made up of octagon cells (8 sides, like a stop sign). You can picture it by thinking of chicken wire used in gardens. Sidney can (for the most part) travel or push numbers in any of the 8 directions (walls). If Sidney knocks down all the walls along an edge (top/bottom/left/right), the entire grid shifts in that direction. I.E., Sidney travels thru all the connecting walls on the right side, the grid shifts one cell TO THE RIGHT.

As the grid shifts, you'll see cells come into view that contain the white numbers needed for the equation. Since you have to get BEHIND the number to push it, you need to shift the grid appropriately. Of course, you also find yourself shifting the grid the WRONG way, making the numbers go off the grid.

Besides shifting the grid, certain cells will be filled. Sidney cannot travel or push numbers thru these, but must go around them. Sidney has a supply of eraser to use. These can be thrown thru walls (instead of traveling thru them) or can be used to throw at numbers (to push them).

Two adversaries that Sidney must deal with are PINCHERS and WHIRLEYS. Pinchers appear and move around the grid. They will kill Sidney if they grab him. Sidney can kill them by shifting them off the grid or hitting them with numbers. Whirleys can also kill Sidney, but also knock down walls and blocked cells. They also make the white numbers (needed for the equation) disappear.

As the full number needed in the equation is found, it goes into the equation and the next portion is worked on. Scoring is based on completing the numbers and problems, knocking down walls, and killing pinchers. There is a pause and instant menu recall options from the controller. Game options let you choose addition or subtraction and whether the solution numbers should be shown or hidden. Play level involves the number of digits, # of pinchers, and whether whirleys are present.

This most closely relates to Coleco's Monkey Academy cartridge. If memory serves me, Monkey Academy also allows you multiplication and division, however, I think the game action of Number Bumper is a little stonger in keeping the attention of a math drill. The math drill portion is geared towards (up to roughly) 2nd - 3rd grade. The game portion will be enjoyed by anyone.

RATING - B+

The Spanish Vocabularian By
L. Marschand

This program by Marathon Computer Press is geared for to aid the Spanish student build their skills through drill practice. The program package comes with 16 files containing 100 english words, the Spanish translation and the word type (noun,adj, etc.) each for a total of 1600 words. You also have the ability to add words of your own to expand the files. As the instructions state, phonetics and sentence structure are not in the scope of this program.

The program is written in Basic and contains good error trapping routines, the ability to get back to the main menu, abort commands at any time and uses color appropriately. It is obvious that the developers put alot of work in this program and have produced a quality product. The instruction manual is also well written and comprehensive.

The main menu screen provides the ability to go to the following sub-programs:

I. CATALOG - allows the displaying of the catalog of files on the monitor. This is needed since you have to specify the file name to load in a word list.

II. TEST - This is a drill - you can choose English to Spanish or vice versa. You must specify the file name

(there are 16 files, organized by the starting letter - A, B, etc.) You are given the word and the type and must give the translation. The number correct and the per centage is displayed as you go.

III. PRINT - You can print the contents of any of the vocabulary files as follows:

1. abandon / abandonar / (vb)

2. abbreviate / abreviar / (vb)

IV. SEARCH - You enter the file name, then either the English or Spanish word. The translation and type is then displayed like a dictionary, if the word is on the file.

V. CREATE FILE - This allows you to create your own vocabulary file using the structure defined above.

There is also a nice utility program provided that allows you to copy your vocabulary files from tape to disk, tape to another tape, etc.. There is also a program called FIXAFILE that provides the ability to change the words on an existing file. You need a print of the file (see III above) to get the number of the word to change.

Overall, I think this is a good package of programs. Not only does it provide the 1600 Spanish/ English words for use in drilling but it provides the capability to make your own vocabulary list and in fact, the CREATE and FIXAFILE programs can be used to create any type of database within the limitations of the structure provided (100 records of 3 fields each).

RATING - A

M.I.T.E. By C. Kolander

M.I.T.E. which stands for Mycroft Intelligent Terminal Emulator, is a professional modem package from Mycroft Labs.

M.I.T.E. runs under CP/M and supports the following file transfer methods: Xmodem, Kermit, Ascii, Clink, Mite and others. As you can see M.I.T.E. is a very versatile modem program, and unlike Ascom it is also very easy to learn and use.

After installing the program for your computer/modem combination, the first thing you see after booting up is a main menu. The program shows at the top of the screen the amount of room you have left in the type buffer and of course the program name and version number. It's a good idea to turn off your smart keys and the trap before entering the program or else the menu gets a little messed up, you can do this by press Control Y and then a carriage return. Some of the choices you have from the main menu include, Go(terminal), Hangup phone, Load or Save Parameters with a list of sub menus listed below. M.I.T.E. has single letter commands (which are listed next to the command) unlike Ascom so after pressing the selection of

your choice it does it. The first thing to do with the program when you start it is to set your parameters. These include baud rate, data bits/parity, answer or originate, duplex and the phone number of the computer you're calling. You can then save the parameter to disk so that all you need do the next time you want to call this system again is load it back into the program instead of having to remember them. Then when your ready to call just press G (for Go) and the program dials the number and connects you up, it's that simple. When you want are anywhere in the program the same command (X) takes you back to the main menu, I find this to be very nice as it's real easy to remember. When your ready to make a file transfer you simply press X, then choose you transfer type, D for text upload or B for binary. If your making a binary transfer you just press C to turn on CRC (Checksum is default) then R for receive and enter the file name and away it goes. When finished you are put back into terminal mode. Again all the commands are shown on the menu and are single keystroke so it really is easy.

The program offers alot of other nice features such as a

character filter and Macro definitions to name a few. With the Macro definition you can set up let's say your user id and password if you were going to call Compuserve, then when you ready to log in you just have to press a couple of keys to do this instead of having type them in each time you called.

The manual that comes with the program is in a nice looking binder and is about 200 pages. It covers everything, and has a beginners section as well as the full blown users guide. It even covers the basics of RS232 interfacing. The book also gives examples sessions of logging into the pay services like Compuserve, The Source and even computer to computer direct conection. All in all a very through manual.

There are 2 versions sold M.I.T.E. as a basic modem program and a copy of the same program with terminal emulation. The later allows you to emulate differnt computer terminals with yours, and of course cost more. The newest version is 4.0, which is called Maxi-Mite. All in all if your looking for a truly powerful modem program (much more so than the PD programs) and are will to spend the money, this is the best program you can find for CP/M modeming.

MEMBER'S COMMENTS QUESTIONS & ANSWERS

. I am writing this short letter, not to complain about a problem or product, but to commend you on the first-rate job you are doing on behalf of ADAM owners everywhere. This is not the first user's group I've belonged to, but I certainly cannot see any need to look any furthur. NIAD offers everything an ADAM owner could hope for in a user's group, and a whole lot more.

My first contact with NIAD was in the form of your monthly newsletter. I was completely overwhelmed by the wealth of information in these newsletters. This is by far the most informative newsletter I've ever seen. It shows also, just how abreast of the subject matter you keep. Again, first rate!

I just received my first order from your PD libraries, and I was again very pleasantly surprised. The Basic programs are very good, as are the CP/M programs. I have had little or know problem with them, with the exception of a bad block in the Market program. But things like this will happen. I am so far completely satisfied in every respect, and I have enclosed another order with this letter. In closing, let me say, keep up the good work, and God Bless You All.

J. D. McReynolds

- Thank you for you your encouraging letter and support. We work very hard to provide all NIAD members quality products and it helps to be recognized for it.

. I have just received this months newsletter, and must say that I like the "New Look" very much. It seems that the quality of the print is much better, and the format of the paper is much better. Although I have never made a purchase from you yet, I was quite upset when I read the letter from H. Kealy. You see, I am also new at this computer business and there are quite a few things that I do not understand yet. However, I have found that you must read the instructions first !! I have run into some of the problems that Mr. Kealy has described, and in 9 out 10 cases, it was my fault, due to the fact that I had not read the instructions!!

J. Mercer

- Thanks for the letter and comments about the new look. I couldn't agree with you more about reading instructions. We all need to read our instructions so we don't get ourselves in trouble.

. As a new member, I would like to congratulate you for your work fo ADAM owners. I would like to know if any ADAM owners would want to start an ADAM sub-users' group in the Joliet-Crest Hill area. If anyone is interested, let me know at the address below. Also, I would like to know how to use sprites in my graphics programs and I would also like to know how to set up a parser so that I can write text games. Could you publish articles on those ? I am urging all ADAM owners in this user's group to write to Family Computing to tell them to upgrade their coverage of the ADAM.

James Goebel, Jr; 2904 Kellogg St; Joliet, IL 60435

- Thanks for your comments. Wayne did an article on Sprites in our July/85 issue. Also, you may want to purchase Fantasy Gamer (on our product list) which has the best documentation on Sprites I have seen. Fantasy Gamer also includes a "gamemaker" program, including a good parser routine for writing your own games WITH Sprites included. There are 2 text/graphics adventure games included as well.

I agree with your idea to send letters to Family Computing - this is the only way for us ADAMites to have our voices heard.

PRODUCT LIST

CP/M 2.2 COMM'L SOFTWARE - RECOMMEND DISK ONLY

REQUIRES ADAM CP/M SOFTWARE # 7832

INFOCOM PRODUCTS:

Planetfall	\$34.95
Zork I	\$34.95
Zork II, III	\$39.95 @
Starcross	\$39.95
Deadline	\$39.95
Seastalker	\$39.95 NEW
HitchHiker Guide	\$34.95 NEW

HARDWARE & ACCESSORIES

ADAM DISK DRIVE 7817 \$199.00

5-1/4" high-capacity disk drive for the Coleco Adam. Provides expanded capability for faster storage and retrieval and increased reliability. Requires standard diskettes.

ADAM LINK MODEM * RECONDITIONED * \$ 65.00

ADAM phone modem which provides capability, with included software, to interface with other ADAM computers or large bulletin board systems such as CompuServe. Includes coupon for receiving advanced communications software for uploading and downloading of programs.

COMPUERVE STARTER KIT \$ 25.95

Includes account number, password and five free hours of connect time to the popular compuserve information system.

EVE 64K MEMORY EXPANDER ME-64 \$ 49.95

Provides additional 64K of memory for SMARTwriter, CPM programs. Provides print buffer spooling for ADAMCalc.

EVE RS232/PARALLEL INTERFACE SP-1 \$139.95

Allows the connection of the ADAM to any popular printer and other devices requiring either serial or parallel interface connections. Includes software for directing print to additional printers directly from SMARTwriter, SMARfiler, BASIC, CPM programs.

Includes EITHER parallel or serial cable - specify which one desired.

EVE SP-1 PARALLEL INTERFACE ONLY \$ 79.95

(Includes parallel cable)

ORPHANWARE PIA2 PARALLEL INTERFACE \$ 50.00

(Parallel cable required)

PARALLEL OR SERIAL CABLE SP-1C \$ 14.95

Second cable required to attach SP-1 interface to parallel or serial printers.

SPEECH SYNTHESIZER/CLK CAL SS-CC \$109.95

Output voice speech and words via Basic and CPM programs.

Includes software to construct words. Real time clock calendar provides continuous date and time accessible from Basic and CPM.

EVE 80-COLUMN VIDEO/MOTHER BOARD VD-MB

With Power Supply \$299.95

W/O Power supply \$279.95

With trade in of PS-1 \$269.95

Provides 80-column video output from the ADAM to a monochrome 80-column monitor. Also includes separate power supply and expansion slots for attaching other EVE products. Light pen port attachment also included. Expands ADAMS

capability for software requiring 80-column display.

** Includes Word Processing and Basic software programs **

EVE MON-80 \$299.95

80 Column video board and monochrome monitor assembly.

Includes cable to attach to inside of ADAM console.

Does NOT include independent power supply or motherboard

** Includes Word Processing and Basic software programs **

EVE POWER SUPPLY FOR ADAM PS-1A \$ 79.95

EVE MULTI-UNIT ADAPTER MA-3 \$ 44.95

Special adapter cable required to attach both the SP-1 and SS-CC to the ADAM. NOTE: Not required for 80-column video board.

CARD EDGE ADAPTER CEA-1 \$ 24.95

For attaching ADAM Autodialer to MA-3 cable.

ADAM PRINTER TRACTOR FEED \$ 72.95

Hooks unto the ADAM printer as originally designed to provide for feeding of pin-fed continuous form paper.

Provides consistent alignment and advancing of paper. All metal design - guaranteed.

PRINTER STAND/ON/OFF SWITCH \$ 15.95

Provides raised legs for the ADAM printer and relocates the on/off switch to the front of the printer for easier access when loading paper.

MONITOR CABLE 7830 \$ 9.95

Required to hook complete ADAM console to a video monitor.

Supports both picture and sound signals.

EXPANSION MOD MONITOR KIT \$ 29.95

Kit to modify colecovision unit to allow it to be connected to a monitor via 7830 cable above. Requires soldering skill - see review in 2/85 issue.

ADAM REPLACEMENT RIBBONS 7806 \$ 4.95

ADAM DUST COVERS

3 pieces for complete ADAM system \$ 18.95

Disk Drive Only Cover \$ 8.95

3 pieces for ADAM Colecovision

Expansion Unit \$ 23.95

PRINTER WHEELS \$ 5.55

Replacement printer wheels for the ADAM printer - Gothic 12 /Script 12 /Elite 12 /Emphasis /Courier 72/Pica. Specify font desired.

TAPE DRIVE HEAD CLEANING KITS \$.50

COLECO/LORAN DATA PKS \$ 4.75 @

10 for \$ 39.95

NIAD/LORAN DATA PKS \$ 4.25 @

10 for \$ 34.95

NIAD UNFORMATTED DISKS - DS/DD 1-9 \$1.50 @

10 or more \$.99 @

PRICES VALID 6/1 to 7/1/86

PRODUCT LIST

OTHER SOFTWARE- SPECIFY DDP

OR DISK

CARTRIDGE SOFTWARE

SOFTWARE (DDP UNLESS NOTED)

SMART LOGO 7600	\$ 29.95 SPECIAL
EXPERTYPE 7602	\$ 19.95 SPECIAL
SMART FILER 7813	\$ 15.95
RECIPE FILE 7814	\$ 15.95
SMART LTRS/FORMS 7805	\$ 15.95
FLASHCARD MAKER 7662	\$ 15.95
FLASHFACTS (TRIVIA 2902, HISTORY 2901, VOCAB 2900)	\$ 11.95e
ADAMCALC 7831	\$ 24.95 SPECIAL
R. SCARRY'S WORDBOOK 7658	\$ 20.95
DRAGONS LAIR 2683	\$ 19.95
WACKY WORD GAME 7834	\$ 15.95
CPM 2.2 & ASSEMBLER DDP or DISK	\$ 29.95 FEW LEFT
SUPER ZAXXON 2623	\$ 19.95
HOME SOFTWARE LIBRARY 7826	\$ 19.95 SPECIAL
2010: TEXT ADVENTURE GAME BY MGM/UA 7849	\$ 20.95
FAMILY FEUD 7710	\$ 20.95

BOUNTY HUNTER VS4048	\$19.95
ADVENTURE PK I VS4011	\$ 9.95 SPECIAL
ADVENTURE PK II VS4015	\$19.95
VIDEOTUNES (DDP ONLY)	\$26.95
FANTASY GAMER (DDP)	\$29.95
BASIC BONANZA	\$29.95
DIABLO	\$19.95
SOFTPACK I	\$18.95
LVAC ARCHIVES I	\$ 9.95 SPECIAL
REEDY SOFTWARE LIB	\$15.95 SPECIAL
QUICKFAX QUEST	\$22.95
PERSONAL ACCOUNTANT	\$19.95
SMARTBEST	\$16.95 NEW
STRATEGY STRAINER I	\$19.95
BUSINESS PACK	\$18.95
PAINTMASTER	\$22.95 NEW
TURBOLOAD	\$26.95 NEW
SIGNSHOP	\$22.95 NEW
SMARTTRIX	\$28.95 NEW
QUICKOPY DISK	\$11.95 NEW
	DDP \$14.95
MULTIWRITE	\$36.95 NEW
MEDIA AID	\$19.95 NEW
ELEC GAME PACK DISK	\$17.95 NEW
	DDP \$19.95
NUMBER BUMPER DDP	\$18.95 NEW

SMURF PAINT AND PLAY 2697	\$18.95
SUESS FIX UP PUZZLE 2699	\$18.95
MONKEY ACADEMY 2694	\$18.95
TELLY TURTLE LOGO GRAPHICS 2698	\$18.95
DUKES OF HAZZARD	\$18.95
ROCKY BOXING	\$18.95
WARGAMES	\$18.95
CABBAGE PATCH PIC SHOW	\$18.95

NIAD USER'S GROUP PRODUCTS:

I. NIAD PUBLIC DOMAIN SOFTWARE

** COST IS \$7.00 FOR EACH VOLUME ON DDP **
 ** COST IS \$5.00 FOR EACH VOLUME ON DISK **
 *** SPECIFY VOLUME # AND DISK OR DDP***

- SMARTBasic Volumes I-13 #BNDVI-13 (13 different volumes)
- SMARTLogo Volume I #LNDVI
- ADAMCalc Volume I #ANDVI
- BASIC Utilities Volume I #UNDVI (INCLUDES BACKUP UTILITY PROGRAM)
- CPM 2.2 Volumes I-18 #CNDVI-18 (18 volumes available)
- JEOPARDY
- PINBALL/ MACK
- TROLLS TALE
- ADAM DIAGNOSTIC (NOTE: Requires 64K Memory Expander)
- SUPER SUB ROC

II. COMMERCIAL SOFTWARE

SMARTGAMES PACK	\$ 9.95 DISK
	\$ 11.95 DDP
ROYAL AMBASSADOR EDUCATION PACK I	\$ 14.95 DISK
	\$ 16.95 DDP
CPM NEVADA BASIC	\$ 39.95 DISK/DDP
SP-1 CUSTOM SOFTWARE FOR SMARTWRITER /FILER (AVAILABLE FOR MOST PRINTERS)	\$ 20.00

****** NIAD SPECIALS ******

EVE SS-CC & ME64K	\$ 144.95
EVE SP-1 & PANASONIC 1080 PRINTER	\$ 369.95
EVE SP-1P (PARALLEL ONLY) AND PANASONIC 1080 PRINTER	\$ 309.95
RECONDITIONED DIGITAL DATA DRIVES	\$ 19.95(instructions /30 day guar)

NEW ADAM HAND CONTROLLERS 2 for \$ 10.00

SIX # 7806 RIBBONS \$ 25.95 DISK

JANE'S RECIPES (REQ'S RECIPE FILER) \$ 7.00 DISK
 9.00 DDP

CONVERSION OF SUPER GAMES TO DISKETTE: \$ 4.00 EACH
 NOTE: YOU MUST SEND IN THE LABEL CARD FROM THE GAME AS PROOF OF PURCHASE EDUCATION PACK II \$ FAMILY FEUD; BEST OF BRODERBUND CAN BE COPIED DIRECTLY BY MOST COPY PROGRAMS

SMARTFILER COPY SERVICE FOR LATEST VERSION WITH MAILING LABEL PRINT FIX (SEND IN YOUR FILER DISK/DDP) \$ 4.00

BACK ISSUES OF NIAD NEWSLETTER FROM 1/85 \$ 3.00 EACH \$ 2.50 EACH (10 +)

RIGHT DIR TAPES FOR COPYING SUPERGAMES \$ 2.50 EACH TO TAPE