

ISSUE #2 FEBRUARY 1988

FOR THE RECORD

by Ed Bittner
Recording Secretary

(081)
3/802

The year of the Tiger, 1988, started off as a roaring success at the January meeting of the West Penn 99er's. It got off to a great start (albeit a late start 7:20 pm.) because of a late arriving crowd, a record setting crowd in number. Pres. Scott Coleman opened the meeting with comments on the availability of data cases and diskettes and referred people to our ever growing Cartridge Library. The treasurers report was all good news in that most members have now paid their 1988 dues, but if you haven't, well.....

Eric Zeno's library report was applauded. It is now or should be obvious to everyone that we have both a functioning library and librarian. Eric did refer to a disk handed out at the Nov. meeting which contains a catalog and discription of the programs in the library. If you have trouble accessing this disk, please contact Eric or another club officer. Joe Ekl, the membership committee, announced that he has placed communications in three newspapers to let people that we exist.

Under new business Scott asked for and received permission by the membership to buy a color monitor for \$100 as part of a package deal with Norm K. Bob Strong donated a Gemini printer and interface to the club to be used for a raffle prize next time. (John W. was elated as to the type of interface; don't you wonder about him sometime?). It was felt by some members that we the officers should keep a list of current hardware owned by the club. All agreed. The subject of bulk postage smoltered again to help save the club money (but short of loosing the GREATEST SHOW ON EARTH), was quickly stamped out. Speaking of J. Willforth, the demo on MENU (public domain, J. Johnson) went semi-smoothly (you know the kind). Raffle prizes of a CRT/Teletype and a popular game in addition to a Data Case were well received. Classes in Adventure (Schmidt), C by committee, Hardware, (Willforth), Prototype something, (Coleman) and Basic, (Kepps) immediately followed the main meeting.

Timely submitted,
Scoops Bittner

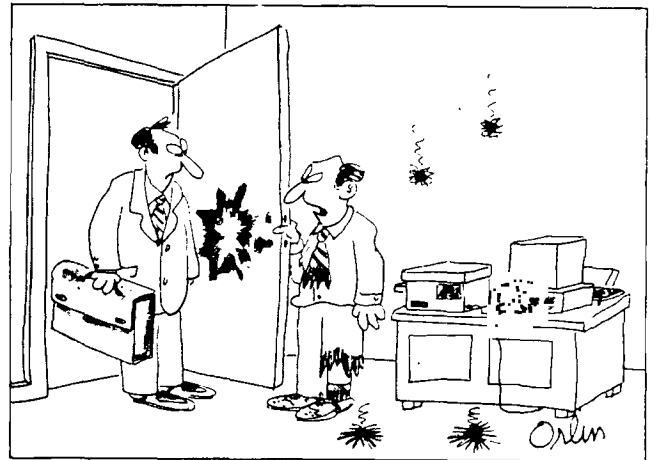
PS: Be aware that at the Feb. meeting, the raffle prize will be that Gemini printer with interface. It is indeed worth your effort to make it. Also the club makes available to its members diskettes, labels sleeves, library diskettes, misc cartridges, micropendiums, all at reasonable (CHEAP) prices. Use your club!! Up to date info and more !!
BE THERE !!!

GETTING THE MOST FROM YOUR CASSETTE SYSTEM
BY MICKEY SCHMITT
NUMBER 18
UNDERSTANDING - CREATING - AND USING - CASSETTE FILES
PART VII

THIS MONTH I AM CONTINUING WITH THE TOPIC OF UNDERSTANDING - CREATING - AND USING - CASSETTE FILES. MORE SPECIFICALLY, I WILL BE CONCENTRATING ON USING CASSETTE FILES... AS WE ARE NOW READY TO MOVE ON INTO AN AREA OF THE CASSETTE THAT I'M SURE WE'VE ALL BEEN WAITING FOR. FINALLY... YOU WILL BE ABLE TO SEE "FIRST-HAND" JUST HOW A CASSETTE FILE OPERATES.

ALTHOUGH THIS PROGRAM WILL WORK AS WRITTEN - YOU ARE ENCOURAGED TO MAKE ANY CHANGES THAT YOU MAY WANT - IN ORDER TO MEET YOUR OWN SPECIFIC PERSONAL NEEDS. DON'T BE AFRAID TO DO A LITTLE EXPERIMENTING. IT CAN'T HURT AND YOU JUST MAY LEARN A THING OR TWO IN THE PROCESS.

```
100 CALL CLEAR
110 PRINT "CASSETTE: DATA FILE PROGRAM":.....:
120 PRINT TAB(4);"1  CREATE A DATA FILE":..:
130 PRINT TAB(4);"2  LOAD A DATA FILE":..:
140 PRINT TAB(4);"3  QUIT THE PROGRAM":.....:
150 INPUT "YOUR CHOICE? ":CHOICE
160 ON CHOICE GOTO 170,330,550
170 FOR FILE=1 TO 5
180 CALL CLEAR
190 INPUT "NAME      ":NAME$(FILE)
200 INPUT "ADDRESS  ":ADDRESS$(FILE)
210 INPUT "CITY     ":CITY$(FILE)
220 INPUT "STATE   ":STATE$(FILE)
230 INPUT "ZIP      ":ZIP$(FILE)
240 INPUT "PHONE   ":PHONE$(FILE)
250 NEXT FILE
260 CALL CLEAR
270 OPEN #1:"CS1",INTERNAL,FIXED,OUTPUT
280 FOR FILE=1 TO 5
290 PRINT #1:NAME$(FILE),ADDRESS$(FILE),CITY$(FILE),STATE$(FILE),ZIP$(FILE),PHON
E$(FILE)
300 NEXT FILE
310 CLOSE #1
320 GOTO 100
330 CALL CLEAR
340 OPEN #1:"CS1",INTERNAL,FIXED,INPUT
350 FOR FILE=1 TO 5
360 INPUT #1:NAME$(FILE),ADDRESS$(FILE),CITY$(FILE),STATE$(FILE),ZIP$(FILE),PHON
E$(FILE)
370 NEXT FILE
380 CLOSE #1
390 FOR FILE=1 TO 5
400 CALL CLEAR
410 PRINT NAME$(FILE)
420 PRINT ADDRESS$(FILE)
430 PRINT CITY$(FILE)
440 PRINT STATE$(FILE)
450 PRINT ZIP$(FILE)
460 PRINT PHONE$(FILE)
470 PRINT :.....:
480 PRINT " PRESS: ANY KEY TO CONTINUE "
490 CALL KEY(0,K,S)
500 IF S=0 THEN 490
510 IF FILE<5 THEN 520 ELSE 540
520 NEXT FILE
530 GOTO 410
540 GOTO 100
550 CALL CLEAR
560 END
```



"Thank goodness you're here! I'm having trouble adjusting the laser printer."

THIS CONCLUDES MY SERIES ON "GETTING THE MOST FROM YOUR CASSETTE SYSTEM." HOWEVER... IF YOU NEED ANY HELP OR HAVE ANY QUESTIONS CONCERNING YOUR CASSETTE SYSTEM - JUST GIVE ME A CALL (412-335-0163) AND I'LL TRY TO HELP.

"Dad, you have to do something about this old typewriter!", my teenage daughter screeched one day. I had used the old Sears portable typewriter when I went to school and I must admit it was on its last legs. So I began to check the stores for a new one. Gee, typewriters can do a lot more than they could do when my old one was new. Some can automatically erase a whole line of goofs at a time and replace it with a nice neat and correct line in just a few seconds. Wow!!

What happened next I owe to an energetic salesman who said, "What you really need is this little baby right here!", as he pointed to the latest, biggest, fastest (most expensive!) typewriter in the store. "It can do everything", he said. "Why, it's almost as good as a wordprocessor." CLICK - On went a light in my brain.

Maybe I could get a wordprocessor for my TI. A quick check of a handy computer catalog showed me that TI Writer was only about thirty dollars and did a lot more "good stuff" than that expensive typewriter. I would, of course, need to get a printer and interface. Then I noticed a little note at the bottom of the catalog page, -(DISK SYSTEM REQUIRED)-, but I am still using a cassette recorder and I don't even have a PE box. So I turned the page and there it was, Wordwriter II by DataBioTics, Inc., another wordprocessor cartridge that did most of the great things that TI Writer could do. It worked with a cassette system so I wouldn't need to buy a disk drive or PE box. The price was only about ten dollars more than TI Writer.

To make a long story shorter - I bought the Wordwriter II cartridge and an inexpensive dot matrix printer and a Axiom Parallax parallel interface.

It is just great! My daughter can turn out some swell looking book reports with it, and I have found it very usefull too. I can write and re-write, edit and re-edit, format and re-format, move and remove words, sentences, paragraphs and pages. I can control the printer to output six different sizes of type, underline and control the paper feed for more or less space between lines. I can set margins, tabs and automatic indent at the start of a new paragraph. Word wrap is another neat feature. I can search the text for a word, phrase or sentence and replace it with new in just a few keystrokes. And everything can be saved to and re-loaded from my cassette tape recorder.

Most of the commands are similar to those in TI Writer and can be accomplished by pressing the control or function key and one other key, or through use of a prompt line.

Here are some of the commands:

(C) means with CONTROL key and (F) means with FUNCTION key
PROMPT LINE (HELP!)= (F)9 ; UNDO LAST COMMAND (OOPS!)= (C)1 ; CHANGE COLOR OF MONITOR SCREEN= (C)3 ; TURN LINE NUMBERS ON OR OFF= (F)0 (zero) ; TURN WORD WRAP ON OR OFF= (C)Q (zero) ; MARGIN AND TAB SET= (C)T ; TAB ADVANCE= (C)I ; WORD TAB (CURSOR TO FIRST LETTER OF NEXT WORD)= (C)7 ; CURSOR LEFT= (C)S ; CURSOR RIGHT= (F)D ; CURSOR UP= (F)E ; CURSOR DOWN= (F)X ; WINDOW LEFT= (C)S ; WINDOW RIGHT= (C)D ; WINDOW UP= (C)E ; WINDOW DOWN= (C)X ; WINDOW TO BOTTOM LINE OF TEXT= (F)B ; WINDOW TO HIGHEST LINE OF TEXT= (F)H ; DELETE CHARACTER= (F)1 ; DELETE COMPLETE LINE YOU ARE ON= (F)3 ; DELETE FROM BEGINNING OF LINE TO CURSOR= (C)J ; DELETE FROM CURSOR TO END OF LINE= (C)K ; INSERT LINE= (F)2 ; COPY THE LINE YOU ARE ON TO THE SPACE DIRECTLY BELOW= (C)5 ; COPY A LINE OR GROUP OF LINES TO A DIFFERENT AREA OF THE TEXT (START LINE NUMBER, END LINE NUMBER, AFTER LINE NUMBER)= (C)C ; MOVE A LINE OR GROUP OF LINES TO A DIFFERENT AREA OF THE TEXT AND ERASE THEIR PRESENT LOCATION= (F)M ; NEW PARAGRAPH (CARRIAGE RETURN AND AUTOMATIC INDENT)= (C)B ; NEW PAGE (CARRIAGE RETURN AND FORM FEED)= (C)9 ; FIND A STRING= (C)F ; REFORMAT MARGIN TO MARGIN (LINE YOU ARE ON TO END OF PARAGRAPH)= (C)2 ; REFORMAT FROM CURSOR TO RIGHT MARGIN (LINE YOU ARE ON TO END OF PARAGRAPH)= (C)R ; SAVE TEXT FILE TO CASSETTE= (C)A ; LOAD OLD TEXT FILE FROM CASSETTE= (F)L ; SEND PRINTER CONTROL CODES TO PRINTER= (C)U ; PRINT ENTIRE TEXT FILE (OR START AND END LINE NUMBERS)= (C)P ; STOP THE PRINTER AND RETURN TO THE EDIT MODE= (F)4

All of the above commands are accomplished with a single keypress but if you forget the codes most are available through the prompt line (F)9.

Some additional features are only available through the prompt line, they are: CURSOR TO A CERTAIN LINE NUMBER= (F)9L(enter)S(enter)(LINE NUMBER)(enter) ; DELETE A CERTAIN LINE OR A GROUP OF LINES= (F)9L(enter)D(enter)(START LINE NUMBER, STOP LINE NUMBER)(enter) ; PURGE= (F)9P(enter)Y ; SEARCH FOR A STRING AND REPLACE WITH A NEW STRING= (F)9SH(enter)RS(enter)/(ORIGINAL STRING)/(NEW STRING)/(enter) you will then see the location of each occurrence of the original string and have the option to replace (Y) or not replace (N) that occurrence or to replace all occurrences of the string (A) with the new string or to stop and return to the edit mode (S).

It is most convenient to type with word wrap on, line numbers on and margins set to 1 and 34. This allows you to see the line numbers and the entire text without worrying about horizontal windowing. When you are finished typing and you are ready to print reset the margins (C)T and reformat (C)R. Wordwriter II doesn't have automatic centering and it doesn't have automatic right justification but these features can be accomplished manually.

Wordwriter II by DataBioTics, Inc. is a great wordprocessor that does not require a disk system. P.S. Documentation is very good too.

SELECTING A PROGRAMMING LANGUAGE MADE EASY

Daniel Solomon & David Rosenblueth

Department of Computer Science, University of Waterloo; Waterloo Ontario

With such a large selection of programming languages it can be difficult to choose one for a particular project. Reading manuals to evaluate the languages is a time consuming process. On the other hand, most people already have a fairly good idea of how various automobiles compare. So in order to assist those trying to choose a language, we have prepared a chart that matches programming languages with comparable automobiles.

Assembler	A Formula I race car. Very fast, but difficult to drive and expensive to maintain.
Fortran II	A Model T Ford. Once it was king of the road.
Fortran IV	A Model A Ford.
Fortran 77	A six-cylinder Ford Fairlane with standard transmission and no seat belts.
COBOL	A delivery van. It's bulky and ugly, but it does the work.
BASIC	A second-hand Rambler with a rebuilt engine and patched upholstery. Your dad bought it for you to learn to drive. You'll ditch the car as soon as you can afford a new one.
PL/1	A Cadillac convertible with automatic transmission, a two-toned paint job, white wall tires, chrome exhaust pipes, and fuzzy dice hanging in the windshield.
C	A black Firebird, the all-macho car. Comes with optional seat belts (lint) and an optional fuzz buster (escape to assembler).
ALGOL 60	An Austin mini. Boy, that's a small car!
Pascal	A Volkswagen Beetle. It's small but sturdy. Was once popular with intellectuals.
Modula II	A Volkswagen Rabbit with a trailer hitch.
ALGOL 68	An Aston Martin. An impressive car, but not just anyone can drive it.
LISP	An electric car. It's simple but slow. Seat belts are not available.
PROLOG/ LUCID	Prototype concept cars.
Maple/ MACSYMA	All terrain vehicles.
FORTH	A go-cart.
LOGO	A kiddie's replica of a Rolls Royce. Comes with a real engine and a working horn.
APL	A double-decker bus. It takes rows and columns of passengers to the same place all at the same time. But, it drives only in reverse gear, and is instrumented in Greek.
ADA	An army-green Mercedes-Benz staff car. Power steering, power brakes, and automatic transmission are all standard. No other colors or options are available. If it's good enough for the generals, it's good enough for you. Manufacturing delays due to difficulties in reading the design specifications are starting to clear up.

SUBMITTED BY ROB EKL

TI 32K MEMORY EXPANSION TEST PROGRAM AND LOCATOR BY JOE NUVOLINI AND JOHN WILLFORTH

PROBABLY TWO YEARS OR MORE AGO JOE NUVOLINI WROTE AN EXTENDED BASIC PROGRAM TO USE IN TROUBLESHOOTING MEMORY PROBLEMS WITH YOUR TI MEMORY EXPANSION CARD (IN PEB). THE PROGRAM FUNCTIONED QUITE WELL IN ABOUT 80% OF THE MEMORY FAILURES RELATED TO THE 4116 CHIPS THEMSELVES. BUT WHEN YOU HAD A STUCK "ON" BIT, THE PROGRAM TOLD YOU THAT THE GOOD CHIPS WERE BAD AND THE BAD CHIP WAS OK. WELL I DID NOT CORRECT THAT DEFFICIENCY IN THE PROGRAM, BUT I WILL ISSUE A WARNING TO THE EFFECT THAT ON A PARTICULAR ROW BEING TESTED, IF YOU ARE TOLD THAT ALL ARE BAD BUT ONE, ASSUME THAT THAT ONE IS THE BAD CHIP. IF YOU WOULD LIKE TO KNOW WHY SEND A SASE, AND I WILL TELL YOU WHY THIS TRUE.

```

100 REM WRITTEN BY JOE NUVOLINI (303) 596-6938, MODIFIED BY JOHN WILLFORTH
110 N=0
120 CALL CLEAR
130 CALL SCREEN(13)
140 PRINT " MEMORY EXPANSION CHECKER FOR THE MINI-MEMORY:";:
150 PRINT " SINCE PROGRAMS LOADED FROM DISK IN XB LOAD INTO THE 32K MEMORY, THIS PROGRAM SHOULD BE KEYED IN IF YOU DON'T OWN"
160 PRINT "A MINIMEMORY UNIT"
170 PRINT " TO USE THE INFORMATION PROVIDED BY THIS TEST, ORIENT YOUR MEMORY EXPANSION CARD WITH THE TWO ROWS OF 4116 CHIPS AT THE TOP"
180 PRINT "ENTER :";
190 CALL KEY(0,K,S)
200 IF S=0 THEN 190
210 IF K<49 THEN 190
220 IF K>51 THEN 190
230 R=K-48
240 IF R=1 THEN 700
250 IF R=2 THEN 720
260 IF R=3 THEN 680
270 IF R=1 THEN 300
280 N=27
290 GOTO 310
300 N=35
310 V=N
320 CALL CLEAR
330 IF R=1 THEN 350
340 GOTO 370
350 PRINT "TEST OF TOP ROW OF 4116'S"
360 GOTO 380
370 PRINT "TEST OF BOTTOM ROW OF 4116'S"
380 PRINT "Reading from right to left.:"
390 FOR T=1 TO 2
400 FOR I=0 TO 7
410 IF T=1 THEN 440
420 IN=2^I
430 GOTO 450
440 IN=0
450 CALL LOAD(A,IN)
460 CALL PEEK(A,D)
470 IF IN=D THEN 510
480 PRINT " Chip U";STR$(N);" is BAD"
490 CALL SCREEN(10)
500 GOTO 520
510 PRINT " Chip U";STR$(N);" is OK"
520 N=N-1
530 PRINT "Written = ";IN;" Read = ";D
540 NEXT I
550 GOSUB 740
560 CALL CLEAR
570 IF T=1 THEN 610
580 PRINT " END OF SECOND PASS"
590 GOSUB 740
600 GOTO 640
610 PRINT " END OF FIRST PASS"

```

```

620 GOSUB 740
630 N=N
640 NEXT T
650 PRINT
660 INPUT "PRESS ENTER TO CONTINUE ":X$
670 GOTO 100
680 CALL CLEAR
690 END
700 A=-12288
710 GOTO 270
720 A=12287
730 GOTO 270
740 FOR DELAY=1 TO 600
750 NEXT DELAY
760 RETURN

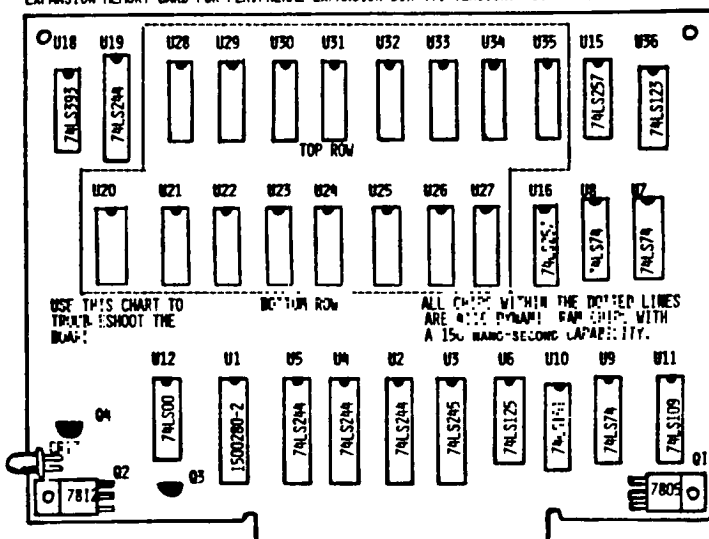
```

PROGRAM FUNCTIONED QUITE WELL IN ABOUT 80% OF THE MEMORY FAILURES RELATED TO THE 4116 CHIPS THEMSELVES. BUT WHEN YOU HAD A STUCK "ON" BIT, THE PROGRAM TOLD YOU THAT THE GOOD CHIPS WERE BAD AND THE BAD CHIP WAS OK. WELL I DID NOT CORRECT THAT DEFFICIENCY IN THE PROGRAM, BUT I WILL ISSUE A WARNING TO THE EFFECT THAT ON A PARTICULAR ROW BEING TESTED, IF YOU ARE TOLD THAT ALL ARE BAD BUT ONE, ASSUME THAT THAT ONE IS THE BAD CHIP. IF YOU WOULD LIKE TO KNOW WHY SEND A SASE, AND I WILL TELL YOU WHY THIS TRUE.

THIS PROGRAM WILL ONLY CHECK FOR THE COLUMN AND ROW TYPE FAILURES IN A CHIP (THE HIGHEST PERCENTAGE OF FAILURES), AND IS VERY RELIABLE IN TELLING YOU THE FAILING CHIP BY "UXX", WHICH CAN BE REFERENCED AGAINST THE CHART BELOW. A MUCH MORE EXTENSIVE PROGRAM WOULD HAVE TO BE WRITTEN TO CHECK EACH "BIT", AND THE SLOWNESS WOULD DISCOURAGE YOU IN USE OF IT. THIS PROGRAM SHOULD SAVE YOU MORE THAN \$30. BY POINTING TO A 75¢ CHIP. YOU WILL ALSO NOTE THAT IT IS NOT IN EXTENDED BASIC ANY LONGER BUT IN BASIC FOR THE MINI-MEMORY. THIS MAKES IT POSSIBLE TO LOAD DIRECTLY FROM CASS. OR DISK AND RUN. IF YOU HAD A DEFECTIVE 32K MEMORY AND HAD THIS PROGRAM ON CASS. OR DISK, YOU WOULD NOT BE ABLE TO LOAD AND RUN IT, BECAUSE IT WOULD HAVE LOADED INTO THE EXPANSION MEMORY (WHICH IS BROKEN). BEING IN BASIC, YOU HAVE TWO OPTIONS. IF YOU WANT TO USE EXTEND BASIC, YOU'LL HAVE TO : "CALL INIT" AND "CALL LOAD(-31868,0,0) TO TURN "OFF" THE EXPANSION MEMORY FIRST, THEN LOAD THE PROGRAM ON THE LEFT INTO YOUR MACHINE FROM CASS. OR DISK. EVEN THOUGH YOU TURNED IT OFF, THE MACHINE CAN TEST IT! NEAT!

I HOPE THAT THIS IS JUST WHAT YOU WERE LOOKING FOR TO GET YOUR OLD 32K RUNNING WELL AGAIN. THERE ARE COMPONENTS THAT CAN FAIL, MAYBE NEXT MONTH I'LL GIVE A LITTLE MORE INSIGHT ON TROUBLESHOOTING THE OTHER PROBLEMS. JFW

EXPANSION MEMORY CARD FOR PERIPHERAL EXPANSION BOX (TI VERSION) JOHN WILLFORTH



"TIPS FOR BEGINNERS"

-BY FRANK N. ZIC-

Here we go together-No. 12. This month once again, we will cover several items that should re-introduce many of you to an old friend, while the other items are just helpful hints to make your computer more fun.

**--The old friend I was referring to is TI-Runner. Many of you I'm sure have played Runner before and those of you who have not are missing out on one of the nicest games provided for our fine computer. Unlike many games, Runner provides a different mental challenge and usually a unique use of control-stick dexterity to successfully complete each screen. The big gripe I had about the game was that the accepted way of going back to the higher screen numbers that you just completed was to hold down the FCTN/5 keys and wait out the slow numbering progression through all the numbers up to the one you wanted. Now this tedious delay can be avoided with this simple little loading technique.

Suppose you are on screen #23 and want to go directly back to it. Press Shift/3 and hold down through the Black screen that says "Loading Screen No.1". When the picture for Screen No.1 appears let go of Shift/3 and press 23 or any other number screen you wish to play. Try this special loading method and I'm sure you will like the game even more. I would like to mention also that there is available an Editing program that allows you to modify any existing screen or you can develop a totally new screen from scratch. I have worked through screens 1-30 and if you have any questions about any of these, don't hesitate to see me at the meeting. FCTN/P(Pauses), C(Restarts).

**--If your printer is of the friction type and you are having problems with the paper coming loose near the very end of the sheet, try using a single 14" sheet. The extra length gives you holding power to the bottom of your letter and then you can trim off the bottom and /or top to the normal 11" size on the small lever-action cutting board I mentioned in my last article.

**--If you are like me, you don't particularly like to read long reports that are Dis/Var 80 with the TI-Writer Editor because of the wrap around screen. I often get lost as to which line I'm on after the wrap goes to the left side of the writing. I use to get on a blank line and use FCTN/S and FCTN/D to go back and forth. I picked the blank line so that if I hit a wrong key and started to over-write, the text would not be destroyed. Now, I use a simpler method that automatically goes to the next line for you. The trick is to use only the FCTN/D keys and the ENTER key. Should you accidentally overwrite a line, NOT TO WORRY, just hit the CTRL/1 keys(OOPS) and the text will be reinstated. You can continuously hold down the FCTN key and press the D key at the beginning of each line and the ENTER key at the end of each line.

As always, may the good 4's be with you.

PASCAL/p-CODE PART 3
Stan Katzman

This time I would like to discuss some more operations of the Filer. The operations are K(runch, R(em, C(hange, B(ad blks and V(ols.

The p-Code system does not have "fractured" files like the T. I. system. A file is always placed at the end of the existing files. So if we modify a file, when it is rewritten it is placed at the end of the existing files leaving those sectors where it originally was blank. After a while this can leave a series of blank sectors which are wasted. So what has to be done is all of the existing files have to be K(runched together. In order to Krunch a disk go into the Filer and press "K". You will see the prompt "Crunch?", at this point enter "#5", next you will see "From the end of disk, Block 360? (Y/N)" enter "Y" and the disk will be crunched. If you now list the directory under the "E" heading you will see what has happened.

The R(em section removes a file from the disk. In the Filer command mode enter an "R", you will then see "Remove?" at this point type the drive number a ":" and the file name; eg., "#5:Myfile.text", you will then see "Update directory?". If you enter "Y" the file will be removed if you enter "N" the file is not removed. This is a safety feature that might prevent you from accidentally removing a file that you want.

The C(hange command allows you to change file names or disk names. To change a file name enter "C" from the Filer command line. The prompt then says "Change?", at this point enter the change; for example "#5:Go.Code, System.startup" and the file is changed. To change a disk name, at the prompt "Change?" type the old disk name, a comma, then the new disk name. For example "Mydisk12:,Chemdisk:".

The program B(ad blks searches out bad blocks on a newly formatted disk. Enter a "B" from the Filer command line and you will see the prompt "Bad block scan of?", enter "#5". The Filer then prompts "Scan for 180 blocks? (Y/N)", enter "N" and the Filer prompts "Scan for how many blocks?", enter 360. The disk is scanned and if any bad blocks are found it will be printed out. If bad blocks are found they are isolated with the X(amine command. (I have yet to find any bad blocks.)

The V(ols command lets you examine what "volumes" are on line. What is meant by a Volume is a disk drive, the printer, etc. If you do not have a formatted disk in the drive when the system is turned on that disk drive does not exist (it is not "on line".) So have a disk in all drives when you "boot" the system. If you forget to put a disk in the drive to start with, put one in after the system is booted and then call the V(ols from the Filer, this program will put the drive on line and allow you to use it.

Again everything discussed here is in the Filer documentation so you can read it and get a firsthand account. More next time.

LET'S TALK RAM DISKS PART III

BY JOHN F. WILLFORTH

LAST MONTH I TALKED ABOUT THE HORIZON RAM DISK (HRD), AND IT MAKES SENSE THAT WE CONTINUE THIS MONTH WITH THE MAJOR ENHANCEMENTS OF THIS UNIT, THE 256K (976 SECTOR) VERSION BY EDWARD A. HALLET, AND THE 1-MEG. (4088 SECTORS) VERSION BY MIKE A. BALLMANN AND MARKETED BY BUD MILLS SERVICES AS A KIT IN VARIOUS SIZES. SEE DETAILS BELOW.

THE 256K. ENHANCEMENT DESIGNED BY EDWARD A. HALLET, ADDED 64K. OF 8K STATIC RAM TO THE EXISTING DSSD HRD FROM HORIZON. THIS WAS EQUAL TO 256 SECTORS FOR A 35.5 % ADDITION. AT THE TIME THIS WAS A WELCOME IMPROVEMENT BECAUSE THE FULL BLOWN HRD WAS PRECISELY THE SAME AS THE MAJORITY OF THE DISK CONFIGURATIONS IN PEB UNITS. THIS MEANT THAT YOU COULD STORE AN ENTIRE DSSD (720K.) DISKETTE (THE MAX. FOR THE TI CONTROLLER), ON A SINGLE DSSD HRD. THIS WAS FINE AS LONG AS YOU WERE NOT USING THE HRD AS A MEDIA TO DO MULTIPLE COPIES OF A DSSD DISKETTE, OR WHEN ALL THE UTILITIES AND YOUR "PET" PROGRAMS WERE JUST TOO LARGE FOR THE HRD. THE ADDITIONAL MEMORY WAS NEARLY THE SIZE OF A STANDARD 90K. DRIVE AND THEREFORE WAS A VERY WELCOME ENHANCEMENT. SOME OF THE MORE COMMON PROGRAMS THAT WOULD OCCUPY THIS SPACE, WERE THE MENU, BY JOHN A. JOHNSON, DM-1000, AND MANY MORE, THESE WHEN ON THE HRD ENHANCED, WOULD STILL ALLOW THE SPACE TO MOVE AN ENTIRE DSSD DISKETTE TO AND FROM THE HRD AND NOT DISTURB THESE PROGRAMS.

THE INFORMATION ON THIS UPGRADE IS AVAILABLE FROM EDWARD A. HALLET, 5600 S. COUNTRY-CLUB #64, TUCSON, AZ 85706 [(602) 889-6930], OR AS A KIT W/INSTRUCTIONS FROM BUD MILLS SERVICES, 166 DARTMOUTH DRIVE, TOLEDO, OH 43614 FOR \$30. (UPGRADE ONLY). BE SURE TO SEND EDWARD SOMETHING FOR HIS TROUBLE AND POSTAGE.

THE HRD, HRD ENHANCED, AND HRD+ CONSTITUTE PROBABLY THE LARGEST RANGE OF VARIOUS DISK SIZES IN THE ENTIRE MICRO-COMPUTER INDUSTRY. THERE ARE NOW "EIGHT" DIFFERENT SIZES TO CHOOSE FROM, AND IF YOU COUNT USING THE VER. 4 FROM HORIZON AND THE ROS FROM MIKE BALLMANN AND JOHN JOHNSON, THERE ARE ACTUALLY "ELEVEN" DIFFERENT SIZES. THE SMALLEST IS 90K (360 SECTORS) ALL THE WAY UP TO THE 1-MEG. HRD+, AND NEARLY EVERY USEABLE SIZE BETWEEN (180K, 250K, 360K, 512K, 800K, 800K + BOOT DISK). AS YOU MIGHT EXPECT, A SPECIAL FORMATTER IS NEEDED TO HANDLE ALL THE VARIOUS SIZES AND INITIALIZE THEM RELIABLY, AND THIS IS AVAILABLE IN THE CONFIGURE PROGRAM BY JOHN JOHNSON, WHICH ALLOWS INITIALIZING ALL OR ANY PARTS OF THE ABOVE HRDS. MORE ON THIS AND THE MENU PROGRAM AT ANOTHER TIME AND IN ANOTHER ARTICLE. THESE ARE OFFERED AS PUBLIC DOMAIN PROGRAMS.

ON 1/16/88 BUD MILLS SERVICES COMPLETED THE PURCHASE OF THE HORIZON RAM DISK FROM RON GRIES AND DAVE ROMER. I'M NOT SURE OF THEIR CURRENT ARRANGEMENTS, BUT IT WOULD APPEAR THAT ORDERS FOR THE BARE BOARD AND I RECOMMEND MOST IF NOT ALL THE PARTS, CONTACT BUD MILLS SERVICES AT THE ADDRESS ABOVE. THE 90K DRIVE KIT SELLS FOR \$140. AND THE ONE MEG. KIT SELLS FOR \$435. (INC. S/H). OTHERS ARE PROPORTIONATELY PRICED.

ALL HRD'S ARE CONSTRUCTED ON THE HORIZON RAM DISK BOARD USING 62256LP'S (OR EQUIV.) AS OF THIS DATE. THE 6264'S (8K CHIPS) ARE NO LONGER USED. THE COST PER KILOBYTE OF RAM HAS BEEN REDUCED, AS WELL AS THE PHYSICAL CHIP COUNT AND THUS CAPACITY OF THE BOARD IMPROVED.

THE ROS (OPERATING SYSTEM) ALLOWS A SINGLE RAM DISK AT A CRU ADDRESS (SAY >1000) TO BE DEVIDED INTO TEN LOGICAL DRIVES IF DESIRED, OR INTO AS LITTLE A ONE WITH A SIZE FROM AS LITTLE AS AROUND 30 SECTORS UP TO 4088 SECTORS ON THE 1-MEG. VERSION IF YOU CAN FIND ENOUGH LARGE FILES TO USE IT ALL. TWO OF THESE CAN BE CALLED DSKn.(1-9) AND ANY OF THE REMAINING WILL RESPOND TO DSK(NAME)., THE DISK NUMBER CAN BE CHANGED WITH A CALL FROM BASIC. THE FLEXABILITY IN THIS AREA EXCEEDS THE SPACE I CAN TAKE HERE, BUT BRIEFLY YOU CAN WRITE PROTECT DRIVES, AUTO-ON A CALL AUTOMATICALLY ON POWER-UP, TOGGLE DISKS INTO THE SECOND LOGICAL DRIVES LOCATION, EVEN FROM ANOTHER RAM DISK. YOU CAN FILL UP ANY PEB WITH THE HRD+ AND USE ALL OF THEM. THERE ARE 9 CALLS AND 15 MENU SELECTIONS AVAILABLE IN MENU VER. 7.3, WHICH WILL ADD EVEN A LOT MORE EXPANSION CAPABILITIES IN THESE AREAS.

CONSTRUCTION IS THE HARDEST PART FOR MOST PEOPLE, AFTER ALL NO MATTER WHAT ERRORS ARE MADE (OPERATOR TYPE), SOMEONE WILL BE ABLE TO ASSIST YOU ON THE PHONE, BUT IF YOU DESTROY THE BOARD, OR A COMPONENT, OR HAVE WIRED IT INCORRECTLY, VERY FEW CAN HELP A NOVICE REPAIR IT OVER THE PHONE. THE INSTRUCTIONS HAVE ALL THE INFORMATION THERE TO BUILD THE BOARD, BUT YOU MUST BE BETTER THAN AVERAGE AT FOLLOWING INSTRUCTIONS, AND AT ELECTRONICS KIT CONSTRUCTION, OR YOU BETTER FIND SOMEONE WHO IS ! IT CAN BE DONE, I DID IT THE FIRST TIME RIGHT. HEY A LITTLE LUCK CAN'T HURT EITHER. WANT A RUMOR, THE PRINT SPOOLER IS JUST A FEW WEEKS AWAY FOR THE HRD'S! WAS I WRONG ABOUT THE 1-MEG. RAM DISK?

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FOR SALE:
ADVENTURE MODULE WITH PIRATE ADVENTURE ON CASSETTE (\$5.00)
SEE MICKEY AT THE MEETING - OR CALL 412-335-0163

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SPIN-A-FORTUNE GAME (COMES ON TWO CASSETTES) (\$4.00)

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ABOUT THE PRINTER TO
BE RAFFLED OF AT THE FEB.
MEETING.....

The printer is a RADIO
SHACK LP-VII on an ALPHACOM
81 interface. Bob Strong,
has modified the interface
to work with the parallel
printers. It will need a
little more modification
to work with any printer.
But the printer will have
an interface with it. So
come to the meeting. You
may leave with a useful
piece of hardware.

John Drennen will have
something very interesting
for us in the next issue
of the West Penn 99'er,
concerning changing those
Version 2.2 consoles to
run all the non-TI carts.
So stay tuned!

THE WEST PENN 99'ERS

% JOHN F. WILLFORTH
R.D. # 1 BOX 73A
JEANETTE, PA
15644

NEXT MEETING.....

FEB. 16, 1988 at the
UNITED PRESBYTERIAN
CHURCH of the COVENANT
corner of OAK and 4th
St. IRWIN, PA. at 7:00
PM.

