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NEWSLETTER

MYARC 512K Memory
Paul Meadows

After much head scratching and pondering about expansion memory, and notwithstanding the fact that Terry and Tony had gone to CorComp, I decided that I needed a MYARC 512K card to augment my system. The main purpose of this purchase was to give the bulletin board a little more scope and flexability.

As a result of a phone call to my supplier in Indiana, I found that I would need a 128K card and a 512K upgrade kit in order to accomplish this feat.

The 128K card arrived as a 256K card (chips inplace) and the 512K upgrade kit consisted of sixteen type MCM4464P integrated circuit RAMS. Since the card had already been upgraded at the supplies to 256, half of the upgrade chips were already inplace and only the other eight were necessary for plugging into the IC holders on the board.

The installation of the required chips to upgrade the card from 256 to 512 was remarkably straight forward, even for me. Just open up the clam shell, locate the empty chip sockets, note the alignment and plug in until there isn't any room left! Bingo 512K ondeck.

Just to be absolutely sure of the operation of this new card, MYARC has included an onboard diagnostic routine that will test out the banks of 32K in either TI Basic or TI Extended Basic. This test provides a message on the screen for each bank describing the status of the banks. It requires about 25 seconds to test a 32K bank of memory. ("CALL RDTEST")

Now comes the fun part...

Since I managed to get the card installed without too much difficulty and since it is functioning properly, according to the memory test routine, just what options do I have in the use of this marvelous card?

Since the expansion memory card was provided with a XBII EPROM, the extra memory can be partitioned into three seperate and useful parts. ("CALL PART(w,x,y)")

w = CPU RAM (must be 128 for XBII)
x = RAM Disk (cannot exceed 400)
y = Print Spooler

The following table was provided and represents the extremes to which the partitioning may be carried.

	without XBII EPROM	with XBII EPROM+XBII	with EPROM without XBII
128K	(96,0)	(128,0,0)	(32,96,0)
	(0,96)	only option	
256K	(224,0)	(128,128,0)	(32,224,0)
	(0,224)	(128,0,128)	(32,0,224)
512K	(480,32)	(128,384,0)	(32,480,32)
	(0,480)	(128,0,384)	(32,0,480)

What happens when the system is powered-down? Well, while the text of the manual does not go into external power supplies, and talks quite a bit about the memory being lost during a power outage, there is a little subminiature jack on an extender out of the back of the board. I have heard rumors that an external power supply was planned but never came about. We will have to wait and see what the gurus say about that little jack.

One thought about all of this RAM disk capability had me worried about loss of information while switching the RAM disk back and forth from emulating one drive to emulating another. This has neatly been taken care of, in that the files and programmes on the disk remain intact no matter how many time you change the RAM disk around. You can have it emulate drive three while you are loading up from drive one, then tell it to switch to emulating drive one without any loss. The range of emulations, by the way, is from 0 (turn off emulation) up to drive 3. CALL VOL will also provide the RAM disk with a disk or volume name.

For operation of the print spooler, all of the normal commands for printing are maintained with designated commands added to indicate that you wish it to be spooled rather than sent straight to a designated port. ie SP for RS232, SP/1 or /2 for RS232/1 or /2, SPPIO for PIO. The command CALL RSPS will abort any print spooler operation.

On invoking the print spooler, and having the data transferred to the spooler partition, the computer becomes free for other operations. This, in effect creates a multi-tasking condition.

Having had a taste of the phenominal speed that a RAM disk can provide, I can relate it to the difference I experienced between a cassette operation and my first disk drive experience. It sure makes filehandling, like TI-Writer etc much more fun to operate. The BBS no longer has little delays while it goes to access a data file on my drives and programmes are recalled so fast I'm afraid to blink in case I miss something.

Since I have only had the card for five days, and most of that time has been devoted to the board, this will be a preliminary report on this MYARC product. I have heard some rumors that quite a few cards made it to the market in the early part of the summer that were in some ways defective, I think the delay I experienced in waiting for my order to be filled was is some way attributable to these defaults. I believe the version I have received is as error free as possible.

Along with this neat card trick, MYARC also provided me with Extended Basic II, the much spoken about level IV basic. See my article in this issue.

CorComp 512K Ramdisk
A first impression report
by Terry Atkinson

Having received the ramdisk this past Monday, I have not yet had the opportunity for a comprenensive test of the ramdisk....hence...this is merely a first-impression report. A more comprehensive report will follow in due course.

The version number on the bottom of the unit is #000330. Bear this in mind as it may be important to others at a later date.

The 512K ramdisk is about 9"(l)x5"(w)x2"(h) and fits neatly alongside the consol, with other peripherals such as 9900 clock, synthesizer and 9900 system chained outward. The preceding system is that which this report is based upon. Moreover, a good friend of mine, Tony McCabe received his ramdisk just before I received mine, and has the same system less the clock. In comparing notes, we arrived at basically the same conclusions.

The 512K actually has 524,288 bytes of memory, and formats like a disk drive, except it has 2048 sectors. (a DSDD disk has 1440 sectors). I have not yet "pushed it to it's limit" to see if all of those sectors are useable, but that is on my list of things-to-do. Recall that for a DSDD disk, sector 0 (AU0=bitmap) is completely filled if all sectors are used. To overcome this, I "think" CorComp has used AU0 and AU1 for the bitmap. This poses certain problems for cataloguers copiers as you might appreciate. Even Xbasic cataloguers will "bomb-out" if you try to get a listing of the programs contained in the Ramdisk. Supplied with the ramdisk is a resident cataloguer with features such as: Copy, Catalog, Rename, Protection, Format and Delete. There is no provision for printing the catalog to a printer, but DM1000 seems to work well with the ramdisk for most purposes.

The resident manager is not very impressive. Using the Copy function, three sub-options are presented. I find these features "archaic"...somewhat like the old D* II module. Option one allows you to specify a single filename to copy, and you can copy from any drive to RD or RD to any drive (as expected). The second option will scan through all the filenames on the source drive (one-at-a-time) and lets you select Y/N to copy (or not). The disk-copy (3rd option) allows you to copy a whole disk to RD. But here's the hitch. If the source disk is SSSD, then so will be your RD, therefore, only 360 sectors in the RD can be used. So, to utilize all 2048 sectors of the ramdisk, you must copy files either singly or selectively. If CorComp had been smart, they would have used DM1000 for the resident manager as Horizon had the foresight to do. I'm sure the DOG would not have complained in the least. As I mentioned, DM1000 does work well with RD. The comprehensive report I intend to prepare will give more details.

The resident manager can be called from basic or Xbasic by a simple command "CALL RMGR". Loading is very fast. Additional commands are: 'DELETE "SD.1"' which tells the ramdisk that it is now to respond to DSK1. (at which point the REAL DSK1 is inoperable). It can be configured to any drive from 1 to 5. The default is DSK5. In addition, it can always be accessed as "DSKR", and also by disk-name. In fact, you can do anything with the ramdisk that can be done with a "real" disk-drive, from opening files to "running" a program from it. Of course, loading of programs is almost instantaneous....which is standard for any ramdisk I have seen, and is one of the big reasons for buying such a peripheral in the first place (my opinion, naturally).

Another command is 'DELETE "LOWER"', which loads a lower-case character set with true descenders. The charset is not bad, and the command should be used in a program. For those who like to have a different character set in the command mode, type this in Xbasic command mode:

DELETE "LOWER"::ACCEPT AT(1,1):A....then, when the cursor jumps to the top of the screen, hit FCTN 4. Your charset will be changed. However, if you make an error, it will reset to normal. And that concludes the new commands available. Not an impressive list, to be sure.

The RD is NOT battery-backed. It DOES have it's own power supply so that you can turn off your peripherals and consol and still have the programs intact in the RD when you re-boot your system. Power up/down must follow a prescribed sequence. The RD had a toggle switch on the front (which simulates a write-protect) , and a power indicator light. Power down: RD switch down, off consol, off peripherals. Power up: RD switch up, on peripherals, on consol. Correct sequence ensures your progams will be intact in RD. Incorrect sequence will most definetly blow one or more programs away...and may cause the RD to re-initialize. I have also found that when my consol locks-up (for whatever reason) some programs are "wiped" too. A power failure will also blow the RD programs away since it is not battery-backed.

More good features include the ability of having two 512K RD's on the same system, bring the total RAM (disk) to over 1megabyte. For use on TI systems, one RD must be the CARD version, and the 32K card MUST be removed. Then, the other RD MUST be a Stand-Alone-Unit (SAU). With the CorComp 9900 system, the RD is IN ADDITION to the 32K of the 9900 system. A second RD can be chained. However, if two RD's are used, one MUST be configured as DSK6 by repositioning a jumper wire either on the SAU or on the card. From then on, it can only be accessed as

DSK6. If you purchase a 256K ramdisk (card or sau) you can upgrade it yourself to 512K by installing the appropriate ramchips (8/256Kxi dynamic ram). However, the card/sau will only be warranted as 256K if this (simple) operation is carried out.

The RD is initially selected at CRU >1000, and can be changed to CRU >1400 to allow for the use of other ramdisks. This is why most assembly language loaders will not work, as they do not follow the "standard" TI method of DSR links. Later, I will describe some of the loaders which do work, and some that don't.

That's about all the good points of the system. Now, on to the bad points. First and foremost is the "manual". CorComp has NEVER produced a good manual, at least, on the first run. They seem to "push" the hardware on the marketplace while largely neglecting the manual. This one is no different. It is merely six sheets of 8.5x11 paper, printed both sides in two columns, folded and punched (the holes are punched right through the text on a couple of pages). They didn't even bother to staple it together! The above method provides for 24 pages of condensed print, of which 5 sides are blank. Moreover, pages 6 through 12 are essentially reproductions of the TI Xbasic manual regarding file accessing, loading and running programs. Since 1 page is the cover, 1 page is warranty info, 1 page is a disclaimer and 1 page is a table of contents, this leaves only 8 pages of "new" information. However, those 8 pages give you everything to know, even if you need a magnifying glass to read it.

"Other" managers such as DM1000 and the SD command of TI-WRITER do not return the true number of sectors used/free. In fact, mine shows 1920 sectors (480K) total, even though the format showed 2048 sectors initialized. Now 512-480=32K (missing). Remember that the SAU RD, when used with the 9900 system is supposed to give the full 512K IN ADDITION to the 32K of the 9900. Is this a coincidence or have I misread the documents?. I will also note at this point that at one part in the manual, it states 1900 sectors are available. Here's a table of those "inconsistancies":

	RMGR	DM1000	TI-W (SD)
FREE	1292	1823	1600
USED	628	97	318
TOTAL	1920	1920	1918

(I don't know why they come out this way, but I'm sure someone out there will figure it I can't)

The actual program size count is 625 sectors. 625+3=628, so therefore I can only assume the accurate one is the resident RMGR. In case you are wondering what the +3 is all about...recall I suspected that there were two FAU's (disk bit-map) set aside to accommodate the extra sectors. This supports that theory. Finally, the RD does NOT act as a print-spooler. I was hoping it would have this feature, and was disappointed when I found that it was not the case. At any rate those are my three main peeves. The remaining complaints I have will assume the RD is configured as DSK1.

1. Many "loaders" will not work if "run" from DSK1. In all fairness, though, I would not have expected otherwise. Strangely, DM1000 loader DOES work, although once loaded, the screen APPEARS to have frozen. But, just hit FCTN 4 (TWICE) and the program is there! Strange!! Remember, this is using the DM1000 loader!

2. Even though DM1000 "MSK1" is in RD, you cannot make a permanent change to the color scheme and output file attributes. Boot-up will be in the (ugh) white-on-blue default, and if you want them changed, you must do so each session.

3. Standard Xbasic disk-catalogers (CATS) cannot catalog the ramdisk. Some investigation reveals that the opening attributes do not follow the standard...i.e. OPEN #1:"DSK1.",INPUT,RELATIVE,INTERNAL

4. Both Tony and I have been having trouble "running" Xbasic programs which have been "loaded" from RD. I suspect that some (or all) of these programs have had "glitches" introduced...perhaps from improper flash-up or shut-down of the system.

5. Sometimes, when programs are "saved" to the ramdisk, a file will be over-written. I am not sure about this, but it may have been due to the fact that the programs on the ramdisk were loaded there with DM1000 and not RMGR. It will take a lot more experimentation to find out where that bug creeps in.

6. Tony has had trouble logging a "session" to RD with Fast-Term. I have not yet had that problem. Since we are on the subject of Fast-Term, I hope to be able to find a way to print-spool to RD by finding where the appropriate PAB is and altering it to specify DSK1. as a filename, rather than those available at this time. (See the DEFAULTSET program). Maybe Paul Carlton will put out a change when he is finished his 1001 other projects.

7. While the FUNNELWRITER version 2 loader works well, version 3 does not. I will test version 3.3 when I get it.

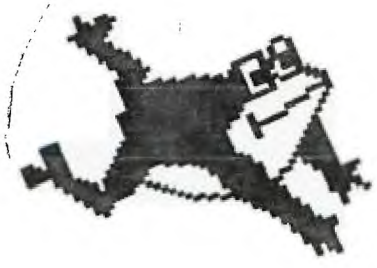
I phoned CorComp already, and explained some of the problems I was having. A day later, Tony did the same. Although the party at CorComp didn't alleviate my frustrations, he told Tony that new eproms would be shipped to Tony and I. Seems there is already a version change. Remember that number I gave you at the

beginning? Well, that is the initial version. I will give another go at it when I install the new eprom.

Now, to end on a positive note before my conclusion. All TI software such as TI-WRITER, Multiplan, Editor Assembler, etc run extremely well in RD. For example, TI-WRITER loads in less than a second. Saving files is very rapid indeed, as is loading of files. DM1000 loads as quickly as TI-W, when loaded through TI-W option 3, as does Fast-Term. Program files and DF80 assembly programs which are loaded through the E/A options 5 and 3 again, load very quickly.

Conclusion. I cannot, at this time, recommend the Corcomp 512K Memory Plus Ramdisk, because of the "faults" in the system. Hopefully, the new eprom will change my mind. As everyone knows, I am a staunch supporter of CorComp, and I am not out to "smear" them. But, again, they have left themselves open to criticism by "pushing" a product out on the marketplace before it has been thoroughly tested. Again, both Tony's unit and mine react in a similar manner. Inconsistancies in the manual 2440 sectors (formatted), 1920 sectors (showing), 1900 sectors (in manual) is just one example, and could have been explained further. I will keep everyone posted on new developments as I discover them, or, as they are brought to my attention.

PARTING NOTE: This file was saved to DSK2 in 29 seconds. It took only 4.5 seconds to save it to the ramdisk. Total: 36 Sectors. Later...



POKES
by:Terry Atkinson

The following are a listing of peeks/pokes you may find useful. This file was prepared by Scott Darling, who has used (in part) my original file which I composed in 1984. I am not responsible for errors, though.

24K OF DATA STORAGE If you need to work with quite a bit of data or would like to change programs, but save the data after you press CALL QUIT then you can set up the 24K of High-Memory in the PEB as a single data file called "EXPMEM2", you open this file just as you would a disk file with one exception-you must PRECEED the

OPEN statement with a CALL LOAD to the location -24574 as follows:

For INT/VAR files - 24
For DIS/VAR files - 16
For INT/FIX files - 8
For DIS/FIX files - 0

Here is and examole:

If you want to open up the Expansion Memory for Display,Variable 80 files this is what you'd do:

```
100 CALL INIT
110 CALL LOAD(-24574,16)
120 OPEN #1:"EXPMEM2",RELATIVE,UPDATE,DISPLAY,VARIABLE 80
```

Then continue on as you normally would.

If you want to store both data and assembly language routines time do this:

```
100 CALL INIT
110 CALL LOAD(-24574,-16)
120 OPEN #1:"EXPMEM2"
130 CALL LOAD ("DSK1.ASSM1")
140 CALL LOAD ("DSK2.ASSM2")
150 CALL LINK ("START")
160 REM CONTINUE REST OF PROGRAM
```

In the above example the 24 K of high-memory was saved for use as a DATA file (DIS/VAR 80 format) then the assembly routines were loaded. The computer wil look for the best place to put the routines and will adjust the pointer accordingly. After the routines are loaded. a LINK statement starts the first rutine and off we go.

If that's not enough for you, you can also use the MINI-MEMORY for 4K more of storage of assembly routines! Now that's 16K of program space, 12K of Assembly routine space!

```
*************************************************************************
* These are all of the peeks/pokes I have com across for XBASIC         *
* and 32K memory expansion (be sure to CALL INIT). The P/Q variables are *
* used for "PEEK" and the numbers are for "POKE"/"LOAD".                *
* If you have others please forward them to us                          *
*************************************************************************
=========================================================================
ADDRESS , VALUE(S)  MEANING IN EXTENDED BASIC
=========================================================================
                    CALL VERSION(X)  IF X=100 100= NEWEST VERSION OF X/B CART
  8192  , P         USE (PEEK,P) IF P() 70 OR ()121 THEN DO A CALL INIT
  8194  ,           FIRST FREE ADDRESS IN LOW MEMORY
  8196  ,           LAST FREE ADDRESS IN LOW MEMORY
 -28672 , P         P=0 SPEECH NOT ATTACHED  P=96 OR P=255 SPEECH IS ATTACHED
 -31572 , 0 TO 255  VARY KEYBOARD RESPONSE
 -31740 , P , Q     PUT IN DIFFERENT TO CHANGE BEEPS,WARNINGS, ETC
 -31744 , 0 TO 15   CONTINUATION OF LAST SOUND (0=LOUD AND 15=SOFT)
 -31745 , 0         PRODUCES A FROZEN SCREEN, THEN BLANKS. RESTORE WITH FCTN(-)
 -31746 , 0 TO 255  CHANGE THE CURSOR FLASHING AND RESPONSE TONE RATES
 -31788 , 160       BLANK OUT THE SCREEN (MUST PUSH A KEY TO ACTIVATE)
        , 192       NO AUTOMATIC SPRITE MOTION OR SOUND
        , 224       NORMAL OPERATION
        , 225       MAGNIFIED SPRITES
        , 226       DOUBLE SIZE SPRITES
        , 227       MAGNIFIED  DOUBLE SIZED SPRITES
        , 232       MULTICOLOR MODE (48 BY 64 SQUARES)
 -31794 , P         TIMER FOR CALL SOUND (COUNTS FROM 255 TO 0)
 -31804 , X , Y     RETURN TO THE TITLE SCREEN (USE "PEEK (2,X,Y)")
        , P         CHANGE THE CURSOR FLASH RATE (0 TO 255)
 -31806 , 0         NORMAL OPERATION
        , 16        DISABLE QUIT KEY (FCTN =)
        , 32        DISABLE SOUND (USE NEG DUR FOV CONTINOUS SOUND)
        , 48        DISABLE SOUND  QUIT KEY
        , 64        DISABLE AUTO SPRITE MOTION
        , 80        DISABLE SPRITES  QUIT KEY
        , 96        DISABLE SPRITES AND SOUND
        , 128       DISABLE ALL THREE
 -31808 , P , Q     DOUBLE RANDOM NUMBERS (0 TO 255) NEED "RANDOMIZE"
 -31860 , 4         GO FROM EX-BASIC TO CONSOLE BASIC (NEED "NEW")
        , 8         AUTO RUN OF DSK1.LOAD
 -31866 , P ,(Q     END OF CPU PROGRAM ADDRESS (P6+Q)
 -31868 , 0         NO "RUN" OR "LIST" AFTER "BREAK" IS USED
        , 0 , 0     TURNS OFF THE 32K MEMORY EXPANSION
        , 255 , 231 TURNS ON THE 32K MEMORY EXPANSION
 -31873 , 3 TO 30   SCREEN COLUMN TO START AT WITH A "PRINT"
 -31877 , P         P32 = SPRITE COINCIDENCE  P64 = 5 SPRITES ON A LINE
 -31878 , P         HIGHEST NUMBER SPRITE IN MOTION (0 STOPS ALL)
 -31879 , P         TIMER FOR VDP INTERRUPTS EVERY 1/60 OF A SEC (0 TOP 255)
 -31880 , P         RANDOM NUMBER (0 TO 99) NEED "RANDOMIZE"
 -31884 , 0 TO 5    CHANGE KEYBOARD MODE (LIKE "CALL KEY(K,...)")
 -31888 , 63 , 255  DISABLE ALL DISK DRIVES (USE "NEW" TO FREE MEMORY)
        , 55 , 213  ENABLE ALL DISK DRIVES (USE "NEW" TO FREE DRIVES)
 -31931 , 0         UNPROTECT X-B PROTECTION
        , 2         SET "ON WARNING NEXT" COMMAND
        , 4         SET "ON WARNING STOP" COMMAND
        , 14        SET "UNTRACE" COMMAND
        , 15        SET "UNTRACE" COMMAND  "MUM" COMMAND
```

```
       , 64        SET "ON BREAK NEXT" COMMAND
       , 128       PROTECT X/B PROGRAM
 -31952 , P        PEEK  P=55 THEN 32K EXPANSION MEMORY IS OFF (/55 MEANS ON
 -31962 , 32       RETURN TO THE TITLE SCREEN
       , 255       RESTART X/B W/DSK1.LOAD
 -31974 , P , Q    END-OF VDP STACK ADDRESS (P6+Q)
 -32112 , 8        SEARCHES DISK FOR ?
 -32114 , 2        RANDOM GARBAGE
       , 13        SCREEN GOES WILD
       , 119       PRODUCE LINES
 -32116 , 2        RANDOM CHARRACTERS ON SCREEN
       , 4         GO FROM X/BASIC TO BASIC
 -32187 , 0        UNPROTECT XB PROGRAM
       , 2         SET "ON WARNING NEXT" COMMAND
       , 4         SET "ON WARNING STOP" COMMAND
       , 9         SET 0 LINE NUMBER
       , 14        SET "UNTRACE" COMMAND
       , 15        SET "UNTRACE" COMMAND  "NUM" COMMAND
       , 16        SET "TRACE" COMMAND
       , 64        SET "ON BREAK NEXT" COMMAND
       , 128       PROTECT XB PROGRAM
 -32188 , 1        CHANGE COLOR AND RECEIVE SYNTAX ERROR
       , 127       CHANGE COLOR AND RECEIVE BREAKPOINT
 -32572 , 128      DISABLES KEYBOARD
 -32630 , 128      RESET TO TITLE SCREEN
 -32699 , 0        UNPROTECT XB PROGRAM
       , 2         SET "ON WARNING NEXT" COMMAND
       , 4         SET "ON WARNING STOP" COMMAND
       , 14        SET "UNTRACE" COMMAND
       , 15        SET "UNTRACE"  "NUM" COMMAND
       , 16        SET "TRACE" COMMAND
       , 64        SET "ON BREAK NEXT"
       , 128       PROTECT XB PROGRAM
 -32700 , 0        CLEARS CREEN FOR AN INSTANT
 -32729 , 0        RUN "DSK1.LOAD"
 -32730 , 32       RESET TO TITLE SCREEN
 -32961 , 31       RESET TO TITLE SCREEN
       , 149       SETS "ON BREAK GOTO" LOCKS SYSTEM
================================================================================
THE FOLLOWING LOADS REQUIRE E/A OR MM
================================================================================
ADDRESS , VALUE(S)  MEANING ==================
================================================================
  784   , P         USE POKEV(784,P) (WHERE P IS 16 TO 31) CHANGES BACKGROUND
    !               COLOR OF CURSOR
 -24374 , 8         I THINK THIS ALLOWS THE MINI-MEM TO USE THE 24K FOR STORAGE
 -30945 , 0         WHITE EDGES
 -32272 , 0 , "" ,  -30945 , 0 )  WILL PUT YOU IN TEXT MODE
 -32768 , 0         BIT MAP MODE
 -32768 , 0         GRAPHICS (NORMAL MODE)
 -32280 , 0         MULTI-COLOR MODE
 -32332 , 107       WILL BLANK THE SCREEN, ANY KEY PRESS WILL RESTORE
================================================================================
* PASCAL LOADS
================================================================================
  14336 , 0 , 0     THIS ALLOWS YOU TO DO A "RUN-TIME WARMSTART" FROM PASCAL TO
                    BASIC
```

CorComp 512K MEMORY PLUS
by:Terry Atkinson

Having received the new Eprom from CorComp, installed it (easily done), I have now had the opportunity to sit down and run the CC-512K Memory+ through it's paces again. (The new eprom edition is: "D").

The only difference that can be SEEN with the new Eprom is the resident manager (still archaic). It now has one additional option, that is, it allows one to "configure" the RD from the menu, rather than from CB or XB.

The programs listed have been tested under two conditions. First, as the RD configured as DSK1, and the applicable DISK copied to RD. Secondly, the RD was set-up as DSK3, and the applicable program disk in the REAL DSK1. Where applicable, DISK-NAMES have been changed (I.E. TI99UPDLY).

Loaders tested	RD CONFIG.	NOTES
TI99UPDLY V1.4	DSK1	Real drive #1 accessed vice RD Starts to load, but XB program bombs out with an error in a non-existant line #, and/or file error.
	DSK3	Still had problem. Had to disconnect RD in order to get it to run.
TI ARTIST II	DSK1	Had problems copying in DISK copy mode, but all files copied properly when copied as files in the multiple file mode. Real drive #1 accessed vice RD.
	DSK3	No problem.
FUNNELWRITER V3.3	DSK1	Loads to selection menu, then cannot access the files (EDITOR, ASSEMBLER, Etc):(See also NOTE3)
	DSK3	No problem.
DM1000 V3.3	DSK1	REAL drive 1 accessed vice RD. Loads O.K. using TIWRITER loader (from RD) Loads O.K. using the Quick-Loader program.
	DSK3	No problems.
Krolls CATLIB	DSK1	Using E/A loader. This program works almost 100 percent for file accesses. However, it will not make a catalog of the RD.
FIRST-TERM V1.6	DSK1 or 3	Works 100%
GG Convertez	DSK1 or 3	Works 100%
MULTIPLAN	DSK1 or 3	Works 100%. With the old Eprom, it would not access the Help files. No problem now.
INFOCOM GAMES	DSK1 or 3	100%. What a joy not to wait for disk accesses.
CorComp 9900 mgr	DSK1 or 3	Will not work. Jeez, I would have thought that they would have made their own mgr compatible!! (Again, thank goodness for DM1000).
XB-DETECTIVE	DSK1 or 3	No problems.
Track-coolers		None of the track-coolers I have will work. The "real" DSK1 is always accessed.
WYCOVE FORTH	DSK1 or 3	Loads in 4 seconds. Screen loads are very fast.
TI FORTH (E/A)	DSK1 or 3	Loads in 8 seconds.
TI FORTH (XB)	DSK1 or 3	Loads in 10 seconds but first accesses the real DSK1, after which it proceeds to the RD to load the remainder.
[illegible]	DSK1	No.
	DSK3	Yes.
GRAFEX	DSK1 or 3	Yes, and loads "SCREENS" (pics) very rapidly.

MAX-RLE	DSK1 or 3	Yes. See note 4.
EZ-LOADER	DSK1	No.
	DSK3	Yes.

If there are any other programs thay you wish me to i. QUICK-LOADER: Works 100% written by Gale Ringly with Barry Boone's name in the program as well. It has loaded several programs, such as Warren Disassembler, Diskfixer, DM1000, and DISKU (PGM IMAGE) without any problems, and no matter what the RD is configured as. This may be the best general purpose program image loader available. 2. All programs such as DM1000 and FAST-TERM can be loaded through TI-WRITER with the RD configured as DSK1, and there seems to be no problems with assembly games loaded through EA option 3 or 5. 3. Strangest thing (to me)...loading FWrtr 3.3 using it's resident LOAD program does not work, yet if I rename the LOAD program as LOAD1 (for example) and write a short program to load the LOAD1 program, it works! I.E. 100 CALL INIT::RUN "DSK1.LOAD1" Wish I had an explanation for this, and I wonder if it works the same for all ramdisks (Horizon/Myarc). 4. MAX-RLE. Very interesting indeed. An RLE file (DV80/DF128) loads in about three seconds from RD. A TI-ARTIST (_P) with only the filename specified (i.e DSK1.TIGER) loads in about 2-3 seconds. However, and here's the strange part, when specifying a full filename (I.E. DSK1.TIGER_P), it loads IMMEDIATELY, but, the bottom 2-3 rows are garbled. I suspect the latter statement would be true if loaded from a real DSK too. Must try it out sometime (what a super program).

The problems experienced before this new eprom was installed have largely disappeared (notwithstanding the fact that the Memory+ is still a bit erratic in it's operation). One of the biggest faults with the RD now, is the resident disk-manager. I still find it rather "archaic", and too limited in scope. A few problems with it are: 1) if a full disk (i.e. USED=1440, FREE=0) is copied to the RD, the manager cannot catalog the RD. The screen freezes, and the only way to abort is to turn the computer off/on and reload the RD. However, DM1000 will catalog the RD. 2) With the old version, when RD is configured as DSK1, and you specified DSK1 to format, you were presented with the options for formatting: i.e. DSDD or whatever. No matter what options you (oecified, however, the manager would format to 2048 sectors anyway. Now, with this new version, the options are not presented. As soon as you specify the drive number that the RD is config'd as, it formats to 2048 sectors automatically. 3) assuming you had copied a 1S1D disk to the RD, then at a later time, wish to copy a 2S1D (or larger) disk over to RD, the resident manager will return an error rather than proceed with the copy. So, under this circumstance, you must reformat the RD (2048 sectors) then copy the disk to it. Waste of time, eh! 4) the only feat. I like about the resident manager are: the ability to call it from CB or (upper or lower case) and; the ability to change RD config to disk 1-3 from t menu, rather than having to out in a command in CB or XB. 5) the sooner CorCo gets rid of this turkey, the better.

The problem with saving in a "merge" format to the RD seems to have been solved, as is the problem of "listing" a program to the RD. An Xbasic cat program won't catalog the RD no matter h_____ The following screens were printed out (to disk) using Steve Vukelich's "DISK REPAIR" disk-fixer. There were a total of 78 filenames on the RD, which were copied using the "multiple file copy feature" of the resident manager, and the disk had been previously formatted at 2048 sectors. It can be seen that with the above format, the sectors are used as follows:

SECTOR 0: Disk-name ONLY (normally, this is also the disk-bit-map).
SECTOR 1: Directory information (normal)
SECTOR 2: Disk-bit-map. (normally the file direc
SECTOR 3: The first file header (file directory) is stored here.

```
DUMP OF DISK SECTOR  3                               **INTERPRETED**
3132 3030 2020 2020 2020 0000 8003 0001  1200      ??????
1750 0100 0000 0000 0000 0000 4800 0000  ?P??????????H???
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0004 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
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0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
```

```
DUMP OF DISK SECTOR  2                               **INTERPRETED**
3132 3030 2020 2020 2020 0000 8003 0001  1200      ??????
1750 0100 0000 0100 0000 0000 2200 0000  ?P??????????"???
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0004 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
```

I then reformatted the RD using DM1000 in 252D format, and copied 60 files to the RD, and produced another dump as above. It can be seen that using this method produces a normal disk-map. (All 1440 sectors are used).

```
DUMP OF DISK SECTOR  0                               **INTERPRETED**
5241 4D44 4953 4B20 2020 05A0 1044 5348  RAMDISK   ???DSK
2020 0202 0000 0001 0004 0000 0000 0000   (??????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
FFFF FFFF FFFF FFFF FFFF FFFF FFFF FFFF  ????????????????
```

Note: A
A

```
DUMP OF DISK SECTOR  1                               **INTERPRETED**
0002 0003 0519 052D 0017 0534 0018 0004  ???????-???T????
0005 0019 0569 001A 0598 001B 0006 001C  ?????i??????????
001D 0007 0008 000= 001E 000A 000B 000C  ????????????????
001F 0020 0021 02DE 02F7 0310 0329 0342  ??? ?!???????)?B
035B 0374 000D 000E 038D 03A6 03BF 03D8  ?[?t????????????
03F1 040A 000F 0010 0011 0423 043C 0455  ???????????#?(?U
045E 0012 0013 059F 0487 04A0 0014 04B9  ?n??????????????
04D2 0015 0016 04EB 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
```

```
DUMP OF DISK SECTOR  3                               **INTERPRETED**
3330 3020 2020 2020 2020 0000 8003 0001  300       ??????
1750 0100 0000 0000 0000 0000 2300 0000  ?P??????????#???
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
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0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
0000 0000 0000 0000 0000 0000 0000 0000  ????????????????
```

FINAL CONCLUSION:

With the majority of bugs now "squashed", I think the CorComp 512K memory Plus has proven itself a worthwhile investment. At the same time, if CorComp ever gets their act together and produces some GOOD documentation, I think a buyer of this hardware would experience less pain in trying to determine what will/will not work with the system. CorComp could also have explained the disk-layout of the RD to start with....it would have saved me some trouble. Also, CorComp MUST get rid of the resident disk-manager, and replace it with either their own diskmanager (that comes with their controller) or with DM1000 or another similar manager which has the versatility of DM1000. Both my buddy (Tony McCabe) and I are now happy with the Ramdisk, and I can now recommend the system. Incidentally, Tony calls it the Memory Minus. If there are any further questions, you may contact me at my address: Terry Atkinson, 28 Savona Ct, Dartmouth, NS, B2W4R1, Canada or; STD)TI6450; CIS)75375,1277; TimeLine)TERRY.A147E; Delphi)HURON Later...

TEXAS INSTRUMENT HARDWARE

The following hardware items are available from MCS on mail-order demand. In order to prevent a large buildup on 'on-shelf' items, and a costly inventory, MCS requires a 75% prepayment on all orders.

CORCOMP

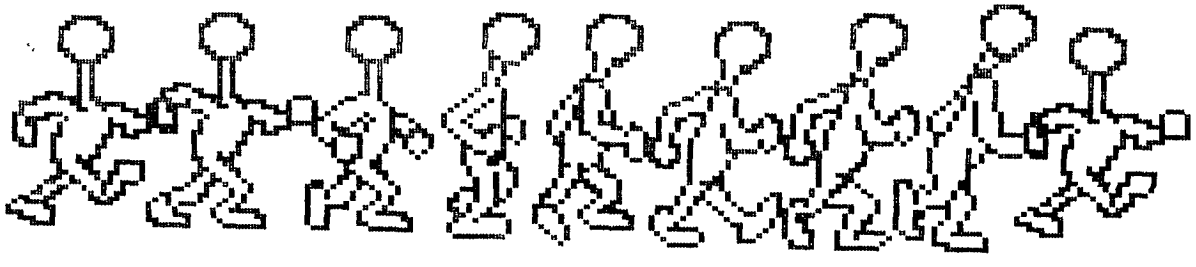
Expansion box cards.... Corcomp offers cards for the TI 99/4A PEB. Rugged metal clamshell construction much like TI's own cards

	RS 232 Card	$150.00
	32K Memory Card	180.00
	Disk Controller Card	280.00
	Tripletech	180.00
9900 MES	Stand alone RS232	200.00
	Upgrade (32K&Dsk Ctrl)	355.00
	MES complete	490.00
Stand Alone Units		
	9900 32K Stand alone	155.00
	Clock/Calendar	115.00

MYARC

	128K Card	299.00
	Disk Controller	280.00
	RS232 Card	150.00
	Myarc Expansion system (Direct Connect)	660.00
	Myarc Expansion system (Cable type)	720.00
	512 Upgrade kit	call
	Level IV BASIC	call

M.C.S.
321 IONY HILL
LR. SACKVILLE, N.S. B4E 1M6

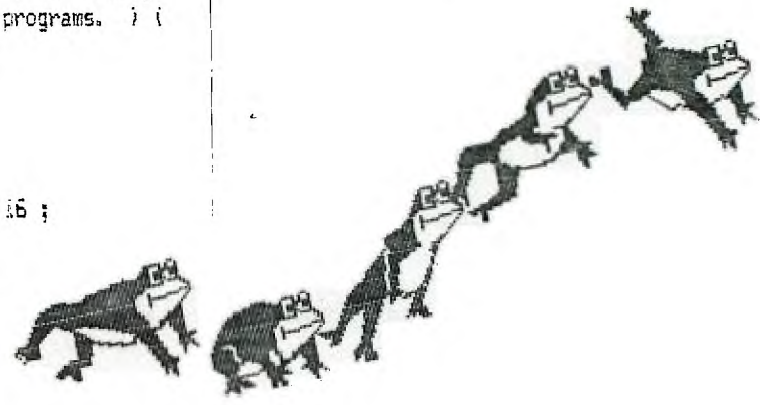


FORTH-ART
by Dennis Meisner

As you may have noticed the local TI FORTH group has been somewhat depleted by a migration to bigger and better?? machines. In order that this fine little language goes represented in our equally fine newsletter, I cobbled up the following code.

Its purpose is to take FORTH source screens and convert them into a format more ammenable to editing and uploading (ideal for including FORTH source code into that TINS article you promised 8 months ago). The following code could have been written in BASIC but somehow that would have seemed to defeat the purpose of this article as we are trying to recruite more FORTHophiles into our ranks. It should be noted that the following code was developed under WYCOVE FORTH and therefore the IO specific words would have to be converted into the TI-FORTH equivalent if desired.

```
( Screen to Disp/Var 80 Utility ) ( ---------- ) ( Purpose: ) ( ) ( Convert a specified range of screens ) ( to a Display Variable 80 format file.) ( This resulting file can be editted ) ( using standard text editors or ) ( undergo file transfer via standard ) ( terminal programs. ) ( ---------- )

24 CONSTANT LINES/SCREEN

: DV80 ( - record length\filetype ) 80 16 ;

DV80 PAB: OUTPUT_FILE DSK7.??????????

: FILENAME ( pab-filename ) 12 + ;

OUTPUT_FILE FILENAME 14 BL FILL

: INPUT_NUMBER ( - number ) QUERY INTERPRET ;

: INPUT_STRING ( - addr/len ) QUERY BL WORD HERE COUNT ;

: TRIM ( addr\len - addr\len ) BEGIN 2DUP + 1- C BL = OVER 0> AND WHILE ( len>0 and last char=blank ) 1- REPEAT ;

: INPUT_FILENAME INPUT_STRING 1+ SWAP 1- SWAP ( include length byte) OUTPUT_FILE FILENAME 1- SWAP CMOVE ;

: GET_SCREEN_LINE ( scr\line - adr\len ) SWAP (LINE) ;

: PUT_DV80_LINE ( start\len - ) TRIM OUTPUT_FILE WRITER OUTPUT_FILE WRITE ;

: USER_DIALOG ( - from\to ) CLS CR ." From Screen:" INPUT_NUMBER CR ." To Screen:" INPUT_NUMBER CR ." Filename :" INPUT_FILENAME ;

: CONVERT_LINE ( screen\line - ) GET_SCREEN_LINE PUT_DV80_LINE ;

: INITIALIZE ( - loop limits ) USER_DIALOG 1+ SWAP OUTPUT_FILE OPEN ;

: CONVERT_SCREEN ( screen - ) LINES/SCREEN 0 DO DUP I CONVERT_LINE LOOP DROP ;

: FINAL_HOUSEKEEPING OUTPUT_FILE CLOSE ;

: SCREENS->DV80 INITIALIZE DO I CONVERT_SCREEN LOOP FINAL_HOUSEKEEPING ;
```



SUPERCAT a review by Larry Dickinson Fredericton, N.B. TI99 User's Group

For those of you that haven't seen SUPERCAT you're in for a big surprise! It's probably the best disk cataloging program I've ever seen. You won't believe how fast it works. It requires the Editor Assembler cartridge or can be run from the "LOAD & RUN" option of the CORCOMP disk manager. To load the program from EA, select option number three, LOAD & RUN. Use the filename "SUPERCAT" and the program name "LOAD". This program will let you catalog up to twelve hundred and sixty-one files.

When the program is ready to run you will be greeted with a ten option menu. I will take you through them one at a time and explain how they work. Number one (ADD A DISK) takes you to a screen that let's you select which drive (from 1 to 4) you wish to catalog. It is very fast, especially if you have two drives, since you can be loading one drive while the other is being cataloged. You will be given a running count of how many disks and files are in the system, and the remaining space. If you try to catalog one disk too many, don't worry, the program tells you as it reads the last disk index that there isn't enough room in the system for this disk. If you make a mistake and try to add a disk that you have already cataloged, the program will tell you the disk is already in the system and will let you add it anyway, or return to the menu. After you finish cataloging, select zero to return to the main menu, and watch how fast it sorts the file names! You won't believe it. Even if you have a full load of files, it doesn't take long. I have never seen my TI sort so fast. You are then returned to the mail menu.

OPTION TWO lets you DELETE a disk from the system. As you catalog, the sequence that you enter disks is noted. You can simply type in the disk name, or the disk sequence that you entered it. You will then be given the option to change your mind.

OPTION THREE lets you DISPLAY A DISK in the system. Again the sequence or disk name is required. The space bar will let you scroll through the file names. This program runs incredibly fast. It's amazing how fast it scrolls and searches.

OPTION FOUR will DISPLAY DISK NAMES of all in the system and you can easily scroll through them.

OPTION FIVE lets you DISPLAY FILE NAMES for all the disks in the system. If you want to search for a particular file name press (F)ind and enter the filename. The name will be displayed at the top of the list. You can scroll through the list using the function "X" and "E".

OPTION SIX lets you LOAD a catalog from disk.

OPTION SEVEN permits you to SAVE your catalog to disk. A suggested filename is given, but you may wish to change it to suit your needs.

OPTION EIGHT will PURGE all information from the system. Make sure you have saved your catalog to disk before you use this option.

OPTION NINE will PRINT a listing of all the disks you have cataloged. You will be prompted for a heading which will be printed at the top of each page. If your printer has condensed print (17 CPI), it fits nicely on the page. The files are first listed in alphabetical order, then you get a listing of all disknames showing the sequence that they were entered, the number of files on each disk, and the amount of used/free space on each disk.

OPTION ZERO exits the program, but before it does, you are given the "are you sure" choice.

This is the fastest and most user friendly catalog program that I have ever seen. It was designed by Larry Duke and Scott Beeker of Albuquerque New Mexico and is offered as freeware through user's groups. A ten dollar donation is requested if you find the program useful, and it's worth the money!

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Editor TINS Newsletter
321 Iony Hill
Lr. Sackville, NS
B4E 1M6

* Now EPSON drive. Too good to be true, these are first class, AL, drives. Ask Les Carrie

M.C.S.
321 IONY HILL
LR. SACKVILLE, N.S. B4E 1M6

This half height disk drive offers double-sided, double-density storage of up to 360K when used with CorComp's Disk Controller Card; or up to 180K (single-density) if used with the TI Disk Controller Card.
Drive is shipped "bare" for installation in the TI Peripheral Expansion Box, or the external box with power supply listed below. If only one drive is installed in the box, a filler plate may be ordered to cover the additional space.
PLEASE NOTE - Hook-up cables are required. See "Disk Drive Accessories" below. Please contact our Customer Service Department for help in ordering appropriate cables.

31031	Teac Half-Height Disk Drive.....	189
31050	Optional Filler Plate.....	8.00

DISK DRIVE ACCESSORIES

20164	Box With Power Supply.....	99.95
10178	Cable For One External Drive.....	29.95
10182	Cable For Two External Drives.....	39.95 55.50
31045	Disk Drive Y Cable Package-Pin Type.....	
31523	Disk Drive Y Cable Package-Card Edge Type	29.95
30751	One Drive Cable-Pin Type.....	39.95
31538	Two Drive Cable-Pin Type.....	

SPEAK	OUTPUT	CANCEL	TRANS	WRAP	CASE	PAGE			EXIT		TE-II
										QUIT	

SINGLE EXECUTE	CONT EXECUTE	PRGM/STAT SCREEN	INTRUPS ON/OFF	SOUND OFF				SAVE OPTIONS		EXIT	CTRL
MEMORY WINDOW	MEMORY SIZE	DISASSEM SIZE	PAGE UP	SEARCH	PAGE DOWN	OPTIONS	REGISTERS	EDIT FIELD/MEM	BASIC BIAS ON/OFF	ASCII/HEX	FCTN

											SK
HEX	ASCII	E/A	↑	MainMenu	↓		WRITE				PATCH

Ascii	Block	Center	H-tab	Graphics	newLine	Mid line	New page	P-aragraph		Underline	
DELETE	INSERT	·	↓	BEGIN	↑	MENU	END	BACK	SCREEN	QUIT	COMP.

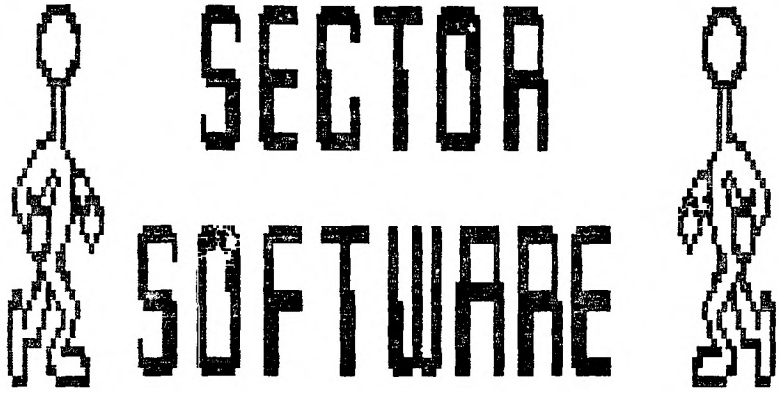
						InsertBkLn					
Delete	Insert	Pick-up	↓	<-->	↑	EraseLine	Deliver	ExitEditor			FORTH

OOPS	Reformat	Screen	Nxt.Para.	DupeLine	LastPara.	WordTab.	NewPara.	NewPage	WordWrap		T. I.
DELETE	INSERT	DEL.LINE	↓	<-->	↑	TAB.	INS.LINE	COMMAND	Line No's.	QUIT	WRT.

											APH
SLOWER	FASTER	DRAW	ERASE	NOHELP	ZOOM	COLORS	LINES	CIRCLES	COPY	MENU	X

BaudRate	PrintSpool	Parity	Mod.Port.	Prt.Par.	Prt.Port.	Prt.Baud					AST
			BreakTone	<-->		TextColor	SreenColor			QUIT	TERM

											M
DEL	INS	LISTDv.	HALT	MainMenu	Ex. Y/N	PrintCat.	REDO	BACK		QUIT	1000



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TI99-4A, TRS80

AUTH. ATARI DEALER