
THE GUILFORD 99'ER NEWSLETTER

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The Guilford 99'er Users' Group Newsletter is free to dues paying members (One copy per family, please). Dues are \$12.00 per family, per year. Send check to P.O. Box 21691, Greensboro, NC 27420. The Software Library is for dues paying members only. (Herman Geschwind, Editor)

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OUR NEXT MEETING

DATE: September 2, 1986. TIME: 7:00 PM PLACE: Glenwood Recreation Center
2010 S. Chapman Street.

Artificial Intelligence. This concept has been around in computer science circles for a number of years and now it is quite the buzzword in software marketing. How much of it is for real and how much is hype. What is it all about. Yes, AI can mean many things and even for the lowly 4A Artificial Intelligence is possible. We will cover these issues and demonstrate two simple AI programs for the 4A.

WELCOME

We would like to welcome two new members to our group: Robert Stitz and Frederick L. Barnett. Robert lives at 308 Idlewood Court in Greensboro (27406), Frederick's address is 2029 La Dora Drive, High Point, 27260. Welcome to you both and we hope that you will find our activities informative and fun!

TI SHOPPER

By Bob Carmany

It looks like the prices on TI programs and accessories are still dropping! In fact, all you have to do is look at the latest issue of MICROpendium to get a glimpse of some of the best bargains around.

If you are in need of diskettes for your system, TENEX has them in boxes of 50 at remarkable savings. They come in 10-packs with write protect tabs and jackets for \$29.95 (\$.59 per disk) for single sided and \$34.50 (\$.69 per disk for double sided. They are even certified 100% error free!

TEX-COMP has the 300 baud VOLKSMODEM advertised for \$39.95. It might be a way for some of you to enter the world of bulletin board access and terminal to terminal communication.

There are some remarkable "freeware" programs available. One of the more interesting is one called MAX-RLE. RLE is the abbreviation for Run Length Encoded. The program allows you to display almost all of the graphic files available. The program will handle D/V 80 files, D/F 128 files, files created with TI-Artist and those created with GRAPHX. The interesting part of the program is that, not only can you display the files, but you can convert them from one format to another. So, you

can take a file created with TI-Artist, for example, and SAVE it so that it will load with GRAPHX. That gives the user an almost limitless source of graphics material. Some of the files rival the facsimile photographs that appear in the newspapers. The program is distributed as "freeware" by Travis Matford. As a footnote, the program works quite well and is "bug-free". (Note: Available for download on our new BB).

As an update to last month's column, THE SMART PROGRAMMER is alive and well! The second issue appeared on time and carries on the tradition of the original publication quite well. There are additional memory maps (continued from the original) as well as a couple of A/L programs of more than a passing interest. Two of the more interesting concern the transfer of programs from tape to disk and vice-versa. The S 1-4 (Forth) column was absent from the July issue but is promised on a quasi-regular basis in the future. It looks like a renewal bargain for those of you who are interested in A/L programming, GRAM KRACKER tips, and such.

TEX-COMP is still heavily advertising TI modules. Most of them are in THE \$6.95-\$9.95 range. Those that are priced cheaper are probably ones that you bought "way back when".

Of course, there is always the bargain basement version of GRAM KRACKER that is produced by PILGRIM'S PRIDE. Their MODULE EMULATOR allows the user to run a variety of cartridges from disk. It sells for \$69.95 and at that price "what you see is what you get"! The system will not handle XB or the MBX cartridges. You could probably alter the cartridges with a disk sector editor and run the altered copies but it certainly doesn't have the wide range of options available with GRAM KRACKER. It might be worth looking at if all you want to do is run your cartridges from disk.

As a brief note, most of the cartridges have been "liberated" and load with either normal or customized loaders and are readily available from bulletin board sources anyway. Besides, there are other programs available to dump cartridge contents with just the acquisition of a load interrupt switch. ROMERAID is one that comes readily to mind.

It looks as if another manufacturer is at odds with TEX-COMP and its sometimes bizarre marketing practices. QUALITY 99 which has produced a number of XB loaders for various programs among other things has had a little "squib" in MICROpendium the past two months disclaiming TEX-COMP as an authorized dealer of their products. In fact, they state that they will not provide any support or service on products purchased from TEX-COMP after June 4th. Sounds to me like there might have been a little unauthorized copying and distribution going on!!

Well, that about does it for another month so I'll dump this file to disk and sign off for now.

PLATO SOFTWARE
by Gary Cox

In a recent letter received from Control Data Corporation I was informed that the Plato education software is still in production for TI owners!

According to the catalog which I received from them "manufacturing for the TI99/4A products in 1986 will be primarily on an order basis only three times during the year. This is so that we can manufacture the products on a volume basis and pass the savings on to you, the customer. However, because we realize that you have special needs in between these ordering dates, we will carry some inventory to help you out during those unexpected times." Volume discounts of up to 25% off are available.

This requires advanced planning due to the longer volume manufacturing cycle. Orders must be placed with Control Data before, April 1, August 1 and October 1. All educational series are available (those that are converted for TI which is a LOT!). Control Data also has the Plato Interpreter for \$50 (discounted price slightly lower) and Plato software is also available through third parties such as Tenex.

I recently purchased the Plato Interpreter and demonstrated the software at a recent meeting and I found the software to be of TOP quality. In my opinion it is the next best thing to actually taking a course in the subjects and sometimes better as you can take it at your own pace with the Plato Software and it is fun. Subjects range from Physics, Math, English to foreign languages in assorted grade levels...

The Plato Interpreter cartridge is required to run the Plato Software and the cartridge required a disk system and 32K memory. For more information you should write to L. B. Lewytzkyj who is in charge of the TI product line at Control Data at the following address: L. B. Lewytzkyj, Control Data Corporation, 8100 34th Ave. So., HQB026, Minneapolis, MN 55440. (612) 853-3162.

_ _ _) _ _) (_ _ FIDO _ _)

Alert_Data_Fido
300/1200/2400 baud
SysOp: Ben Mann

Enter your REAL name below

OUR ELECTRONIC BULLETIN BOARD

by Herman Geschwind

The picture of FIDO is the welcome message of our BBS for the Greensboro area. This service is now available to all club members and TI users right here in Greensboro without connect charges or the expense of long distance calls.

The local number to call is: 274-5760. This bulletin board is part of the FIDO network which is worldwide with nodes not only in the US, but also in Canada, Europe, Asia and Australia.

We can use this board to enter messages, either to specific club members, or TI Users in general, plus there is a file section where you will find the latest and the best in TI software.

Board Hardware: IBM with a 20 Megabyte Hard Disk (according to the SysOp a second 20 Meg drive is available for hookup when needed). The board supports 300, 1200 and 2400 baud transmission speeds and is available 24 hours a day, seven days per week.

To access the board you will need a modem (any TI-compatible will do) and necessary support hardware (32K memory expansion, RS232 card, and at least one disk drive). To download files you will need software that supports the XMODEM protocol (The TE II cartridge is good for text only). The best software to use is FastTerm by Paul Charlton or MassTransfer. If you need a copy, let us know at the next meeting. MassTransfer is easier to use for the novice, FastTerm is more comprehensive in features, but command driven.

Some pointers in using the board:

- (1) As more and more of us use this board, there will be times when the board is busy. Just try again a little while later.
- (2) The board modem needs to adjust to your transmission speed. Hit <ENTER> several times until the opening screen comes up.
- (3) The FIDO system is not a toy system for juveniles or the electronic equivalent of washroom graffiti. The first time that you log on to the board you will be asked for your real name, phone number, etc. Only after your data has been verified will you be granted full access to the board. When you log off from your first visit, leave a message to the SysOp to the effect that you are a member of the Guilford 99er US. This will speed up your access clearance.
- (4) Messages: From the FIDO menu select M and message base #1. At the prompt "Check for Mail", answer Y for yes. If there is no message addressed for you, key in R for Read Messages, 1 at the next prompt. Read all messages starting with number 1. N for "Next" will step you through the messages. From now on the system will remember the last message number that you read and prompt you accordingly when you log on again. To enter messages key in E and follow the prompts. A line editor will guide you. At the end of each line press <Enter>. At the end of the message press <Enter> twice and S for Save Message. Press Q to leave the message section.
- (5) Files: From the FIDO Main Menu select F for files. There are a number of file areas, the TI section is number 12. At the file menu select F again to get a display of the files available with a brief description. Pressing <Ctrl C> will always take you back to the top of the file menu.
- (6) Downloading Files: Press D for download and XC for XMODEM CRC protocol (this protocol will automatically retransmit a

block with transmission errors to assure that the downloaded program will run). Next key in the file name EXACTLY as you saw it in the file listing. Be sure to include extensions such as .ARC, etc. Start your own system to receive the file. Take your time with your first download. Even though there are several keystrokes involved on your part, the BBS will patiently wait until you are ready. Be sure to use a freshly initialized disk to receive your download. Some of the files will take up a full disk.

(7) ARCHIVER: To speed up the process of uploading and downloading files, many of the files have been "packed" using ARCHIVER software. Be sure that the first file that you download is ARCHIVER. Files with the ARC extension or ARC in the description will need to be "unpacked" by you after download before they can be used. (ARCHIVER will work with either a single or a two drive system. We are in the process of converting the download library such that an ARC file will be no larger than 180 sectors to allow unpacking on the same drive/disk. For single drive operation just specify DSK1 both for input and output. By the time that you read this, all files will have been converted to single drive support.)

At present we already have quite a collection of TI software in the file section such as the latest version of FUNLWRITER, PRBASE, the c compiler, several game collections, etc. The Winston Salem TI U6 is also making use of this board and they in turn have uploaded a number of programs from their collection.

If your system is equipped with the RS232 card but you do not yet have a modem, purchase of the 300 baud Volksmodem which is available for around \$40 from TEXCOMP is a minimal cost way of exploring the world of TI communications. A 1200 baud Volks 1200 is available from the same source for under \$190. I have used both and they work real well with the 99/4A. Software to support communications is available for \$15 or less (Stay away from the TE II cart which is obsolete and good only for Speech Synthesizer support).

We invite you to make use of the BBS as often as possible. We are prepared to use the message system to help you with any and all questions related to TI hard- and software and the file section will be your source for the latest and best in TI software. Stay in touch!

CORCOMP 512K RAMDISK

by Terry Atkinson

Having received the ramdisk this past Monday, I have not yet had the opportunity for a comprehensive 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 #60630. 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 console, 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 at most time, but bombs out on others...I know not why.

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 DM 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 OUG would not have complained in the least. As I mentioned, DM1000 does work well with RD (most of the time). I hope to give more insight to this when I have investigated the problems (causes and effects) fully.

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 console 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 console, off peripherals. Power up: RD switch up, on peripherals, on console. Correct sequence ensures your programs will be intact in RD. Incorrect sequence will most definitely blow one or more programs away...and may cause the RD to re-initialize. I have also found that when my console 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 (8/256Kx1 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.

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 I don't know why they come out this way, USED 628 97 318 but I'm sure someone out there will figure it TOTAL 1920 1920 1918 out. 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 AUO'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 "MSR1" 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-cataloguers (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 FUNLWRITER version 2 loader works well, version 3 does not. I will test version 3.3 when I get it.

8. I have had problems "listing" a program to disk. i.e. LIST "DSK1.xxx". The file is opened correctly, but no info is written. Same as saving a program in a "merge" format. Total bomb-out!!, BUT this does not happen on all occasions something obviously is happening to prevent saving programs in these formats. Suffice to say, the 512K is very ERRATIC at best!

9. I have not had any success in operating MULTIPLAN in RD, (yes, I did rename the disk to TIMP). The main program boots up...only after I get 3 or 4 errors, being persistent, it eventually loads. However, the HELP files cannot be accessed, no matter how persistent I am. This is a MAJOR bug that is just going to be fixed!!

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. Most TI software such as TI-WRITER, 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 V80 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 "swear" 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.

FORTH FORUM

by Bob Carmany

We haven't done anything in TI-Forth lately and certainly haven't done anything that is just plain fun. Here is a series of screens that appeared in one of the early issues of THE SMART PROGRAMMER. After you have typed in the screens and saved them to disk, you will need to load -VDPMODES and -GRAPH to get them to run. Just type in RUN and the program will start.

Here it is:

SCREEN #116

```
0 ( Diamond Draw - An Original Forth Program by J. Volk 4/2/84 )
1 : AT GOTOXY ; ; INSTR CLS 1 1 AT ." Diamond Draw " 1 3 AT ." by
2 John J. VOLK" 1 7 AT ." USE E,S,D,X,W,R,Z,C TO MOVE DIAMOND" 1 9
3 AT ." 'Q' TO CHANGE DIAMOND COLOR" 1 11 AT ." 'O' FOR DRAW ON --
4 'F' FOR DRAW OFF" 1 13 AT ." '.' TO CHANGE BACKGROUND COLOR" 1 2
5 0 AT ."----- HAVE FUN ! -----" 1 23 AT ." ANY KEY TO
6 START" BEGIN ?KEY 0 > UNTIL ; 1 VARIABLE STAT 2 VARIABLE SCOLR
7 124 VARIABLE YPOS 1 VARIABLE SCRCOLOR 94 VARIABLE XPOS HEX ; SET
8 UP GRAPHICS2 3800 'SATR ! 2000 SSBT 20 DCOLOR ! 1028 4482 B244
9 2810 0 SPCHAR YPOS @ XPOS @ SCOLR @ 0 0 SPRITE ;
10 : DELAY 500 0 DQ I DROP LOOP ;
11 : STATEON 1 STAT ! ; ; STATEOFF 0 STAT ! ;
12 : SDCHANGE 10 DCOLOR +! DCOLOR @ FO > IF 00 DCOLOR ! ENDIF 1 SCD
13 LR +! SCOLR @ F > IF 0 SCOLR ! ENDIF SCOLR @ 0 SPRCOL DELAY ;
14 DECIMAL ; BCHANGE 1 SCRCOLOR +! SCRCOLOR @ 15 > IF 0 SCRCOLOR !
15 ENDIF SCRCOLOR @ SCREEN DELAY ; -->
```

SCREEN #117

```
0 ( Diamond Draw- Screen 2 ) DECIMAL
1 : CHECK XPOS @ DUP 0 < IF 1 XPOS ! ENDIF 180 > IF 180 XPOS ! END
2 IF YPOS @ DUP 0 < IF 1 YPOS ! ENDIF 250 > IF 250 YPOS ! ENDIF ;
3 : UP -1 XPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @ 1 = IF YPOS
4 @ 3 + XPOS @ 8 + DOT ENDIF ;
5 : DOWN 1 XPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @ 1 = IF YPOS
6 @ 3 + XPOS @ 3 + DOT ENDIF ;
7 : RIGHT 1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @ 1 = IF YPO
8 @ @ XPOS @ 3 + DOT ENDIF ;
9 : LEFT -1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @ 1 = IF YPO
10 @ @ 3 + XPOS @ 3 + DOT ENDIF ;
11 : LUP -1 XPOS +! -1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @
12 1 = IF YPOS @ 3 + XPOS @ 8 + DOT ENDIF ;
13 : RUP -1 XPOS +! 1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @ 1
14 = IF YPOS @ 3 + XPOS @ 8 + DOT ENDIF ;
15 -->
```

SCREEN #118

```
0 ( Diamond Draw-3rd Screen )
1 : LDOWN 1 XPOS +! -1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @
2 1 = IF YPOS @ 3 + XPOS @ 8 + DOT ENDIF ;
3 : RDOWN 1 XPOS +! 1 YPOS +! CHECK YPOS @ XPOS @ 0 SPRPUT STAT @
4 1 = IF YPOS @ 3 + XPOS @ 8 + DOT ENDIF ;
5 : INIT INSTR SETUP ;
6 : KEYIN3 CASE 69 OF UP ENDOF 88 OF DOWN ENDOF 68 OF RIGHT ENDOF
7 83 OF LEFT ENDOF ENDCASE ; ; KEYIN2 CASE 87 OF LUP ENDOF 82 OF R
8 UP ENDOF 90 OF LDOWN ENDOF 67 OF RDOWN ENDOF ENDCASE ; ; KEYIN1
9 CASE 79 OF STATEON ENDOF 70 OF STATEOFF ENDOF 46 OF BCHANGE ENDO
10 F 81 OF SDCHANGE ENDOF ENDCASE ;
11 : ENDALL TEXT CLS 1 1 AT ." ENTER 'FORGET AT' TO SAVE MEMORY" ;
12 : RUN INIT BEGIN ?KEY DUP DUP DUP 0 > IF KEYIN1 KEYIN2 KEYIN
13 3 ENDIF SP! ?TERMINAL UNTIL ENDALL ;
14
15
```


MINIMEMORY TIPS

by SubFile 99

While playing around with the Minimem module, made some interesting finds with the help of some article found in The Miller Graphic News Letter. While the MM manual states that files can be saved to an area in Memory Expansion called EXPMEM2, and it is well known that programs can be saved to the battery-backed RAM in the module, programs can also be saved to EXPMEM2, freeing the VDP RAM for other programs. This can be handy if you are doing a lot of work in TI BASIC, but would like to have something like a disk directory program handy. Just load your directory program, do a SAVE EXPMEM2, and you can then type NEW or anything else and your program will stay tucked away in the Memory Expansion. When you want to use it, you can go get it with, OLD EXPMEM2, and then perform a RUN (no, it cannot be MERGED with a program already in memory). How stable is this program? Here is what I did to find this out, I entered a program into EXPMEM2, executed a BYE, removed my Minimem, inserted the Extended BASIC mod and when it was running typed CALL INIT (wipes out everything in memory, right?). I then dx_BASIC, went back to Minimem and typed OLD EXPMEM2, and (you guessed it) the program was still there!

There is also another location called EXPMEM1, apparently located in low memory at >2000 (more tech talk), and completely undocumented in the Minimem manual! It looks as though it might be possible to have files open in the Minimem RAM, and in EXPMEMs 1 and 2 at the same time. Or, how about two different BASIC programs, one in E1 and the other in E2.

One last Minimem trick, this one by way of Miller's Graphics. You can use the "save to EXPMEM2" trick to run cassette programs that will not run because your disk system ties up VDP RAM. Here's how: First, enter the program from tape (everyone probably has a few of these that you never load anymore because you know when you type RUN you're going to get "MEMORY FULL IN XXX"). Next type "SAVE EXPMEM2". Now type CALL LOAD(-31888,63,255), which "disables" your disk drives and gives you back the memory they took (you DID remember to plug in your Minimem, didn't you?), and type NEW. Last, type OLD EXPMEM2, and like magic your unRUNable program moves into the expanded VPD and will run. Nifty, no?

GUILFORD 99^{ER} USERS' GROUP NEWSLETTER

P.O. BOX 21691

GREENSBORO N.C. 27420
