



QB MONITOR

QB-99'ERS U.G. NEWSLETTER

(101) 4801

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The QB MONITOR is the Newsletter of the QB-99'ers User Group, is printed Sept. thru June and sent in exchange for other User Group Newsletters. Send Exchange Newsletter to Frank Cotty, Queensborough Community College, Bayside, NY 11364. Credit original sources.

The QB 99'ers meets the second Saturday of each month September through May, at Queensborough Community College, Bayside New York, room S225. See the calendar at right for the dates

February 1988							March 1988						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6			1	2	3	4	5
7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	13	14	15	16	17	18	19
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Editor's Note

In future issues of the Monitor I will present newsworthy articles and features I find in exchange newsletters. I hope you will become impatient for the information and look for the completion of articles and features in the exchange newsletters before they are published here. In addition, there are many articles of similar quality that I just can't justify publishing. If you have a preference for an article or for specific information you should look through the newsletters we have in binders available at the meetings. I don't have the time to reread all of the newsletters from other groups for you. Interesting information and entertainment are contained in the very fine newsletters we receive each month. How do you find out about the various new programs available? Do you know, for instance, that there are three major graphics programs for your TI 99/4A that rival those for the IBM and Apple computers? This information is in our current book of exchange newsletters; also in this month's newsletters are reviews for four different memory expansions (RAM disks) for your TI. These RAM cards can increase the memory capacity of your computer to two MEG! If the PEB is not your thing, did you know that you can add 32 K of memory inside the console and use it like the expansion box memory, and that it works much faster than the PEB expansion? You can use the Atari (UGH!) track ball with your TI. You can build a light pen and use it with programs, opening a whole new world of programming. If you are still using your cassette recorder to store programs there is a series by Mickey Schmitt of the West Penn Users Group for you.

There are still two subscription publications supporting the TI 99/4A with articles and news information. MICROpendium is unparalleled for "techie" information and programs. Computer Shopper contains news and User Group related information including recent and upcoming TI Fairs. If programming is your thing Jim Peterson offers "Nuts and Bolts" diskettes full of professional programs in MERGE format for you to use as subprograms within your own programs. You may never have to write another Extended BASIC program from scratch again! Jim Peterson's Tips are run in many newsletters every month-- These TIPS from the Tiger cub

are the best set of lessons you can get in programming.

How can you pass this up? Newsletters contain programs, programming tips, software reviews and hints and secrets not revealed in documentation. Hardware reviews, hardware modifications, hardware projects, sources for all your hardware and software needs. Lastly, newsletters contain human interest. Newsletters are all written by people. Editorials contain some of the most revealing insights into computer people. They may make you laugh or cry or violently disagree. They may cause you to think.

In order to get you interested in our newsletter exchange program I will present "teaser" articles copied from some of the finest newsletters we received. In this month's newsletter for instance you will find my favorite-- "brain teasers"-- from Lima Ohio. The GENIAL TRAVeLER also is presented for the first time in our newsletter this month. Perhaps you will find a subscription enlightening. Cassette storage of programs and files is not dead. Included in this month's newsletter is an article on high speed loading of cassette stored information. This article originated in the West Penn User Group newsletter. John Wilforth of that group is an excellent worker. He compiled a listing of vendors for T.I. hardware and software which appears on page 5 this month. He discussed RAM disks in the December 1987 issue the West Penn 99'ers newsletter. It is reproduced here for your information. PRBase is a real great fairware database program. Little can be done to improve the program itself; however, you may want to know what we have found out from other newsletters (here from the Southern California Computer Group's Computer Voice-Jan 1988). Lest you think programming has been forgotten in this newsletter, I reserved an article from the Miami County area Users Group that can get you thinking about the improvements you can make to your own programs. Gameing is fun on a T.I. Computer. To help those bitten by the ZORK Bug I present Adventuremania Infocomitis from the East Anglia Region 99'ers.

What have you been missing by not reading the Newsletters we receive each month? I'll let you read this issue of the Monitor and find out!

THE REDEFINING BUG

by Ed Machonis

QB-99'ers Bayside NY

No, this is not about a beetle that runs about writing his own dictionary. It's about a troublesome pest you may meet up with one day if you decide to RUN one program from another. If the first program redefines any part of the lower case character set, you will find you have a problem.

This bug had its genesis way back when TI first brought out the 99/4 without a lower case character set. Immediately the cry arose, "How many TI programmers does it take to change a light bulb?" We shall learn the answer to this and other earth shattering information in due time.

To appease the baying wolf pack, TI threw them an Extended Basic cartridge, which purported to fill some of the more glaring holes in console basic.

One of the neat features of Extended Basic was the ability to RUN one program from another. This revealed a slight problem. If any of the characters had been redefined in the first program (with CALL CHAR), the new definition was carried into the second program.

Not To Worry! TI provided a fix. CALL CHARSET was included in the Extended Basic and it would restore the entire character set to its original patterns. The entire character set of the 99/4 that is. ASCII codes 32 thru 95.

Any Monday morning quarterback worthy of the name can now see the problem beginning to take shape. Unfortunately, TI did not.

They brought out our beloved 99/4A with a lower case character set that appeared on screen as a miniature version of the upper case characters. They even brought out a new version of Extended Basic which, like the character set, closely resembled the old version.

Alas, CALL CHARSET still only provided for restoring character patterns for ASCII 32 thru 95. And which characters are generally redefined? You got it. The lower case character set.

Still no problem, until you start running programs from programs with redefined characters. I recently wound up with four such programs on one disk,

all returning the user to a disk menu. And on that menu was a READ ME file written, you guessed it, in lower case for clarity!

Shouts of "OUT, OUT DAMNED SPOT!", proved of no avail, so it was back to the book. AHA, what have we here? CALL CHARPAT? TI calls it the inverse of the CHAR subprogram, which is causing all this trouble. It places the character pattern into a string variable.

"Here", said I, with a sudden cry, "Is the solution to the problem!" In each program where characters are redefined, we place the normal character patterns in string variables with CHARPAT before we do any redefining. At the end of the program, before running another one, we restore the normal patterns with CALL CHAR.

The resulting code looks like this. (Change line numbers to suit)

At the beginning:

```
10 DIM Z$(32):: FOR I=1 TO 3
2 :: CALL CHARPAT(I+95,Z$(I))
):: NEXT I
```

At the end:

```
10000 FOR I=1 TO 32 :: CALL
CHAR(I+95,Z$(I)):: NEXT I ::
CALL CHARSET :: RUN "DSKn.F
ILENAME"
```

So the boys down at the Lubbock coral can put their white hats back on. They did provide a way out and "All's Well That Ends Well!"

Did you know how the term "BUG" originated? Way back when, in the early days of computers, one of the all relay computers locked up, as computers have been wont to do ever since. The trouble was finally traced to a moth, which had been electrocuted between a set of relay contacts and was keeping a circuit open which should have been closed. This Bug was properly documented by a young lady on the scene who preserved it in a scrap book.

Oh, the light bulb problem? Programmers do not change light bulbs. Like that first Bug, it's a hardware problem.

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BRAIN TEASER TIME

Thank to LIMA 99/4A U.G.

- #1. A B C Move one number
 ----- from one column
 1 4 7 to another column
 2 5 8 so all columns
 3 6 9 will add up to
 ----- the same number.
 6 15 24
- #2. Arrange the numerals 1 thru
 9 so that when added, they
 will equal 100.
 HINT: some have to be double
 digit.
- #3. What is the largest sum of money in
 current United States coins (not in-
 cluding silver dollars) that a person
 can have in his/her pocket, without
 being able to give change for a dollar,
 half dollar, quarter, dime or nickel?
- #4. What do the following words have
 in common...
- DEFT, FIRST, CALMNESS, CANOPY, LAUGHING,
 STUPID, CRABCAKE, HIJACK?

<*><*><*><*><*><*><*>

Also from the LIMA 99/4A U.G. Sept. '87

3.5 INCH DRIVES FOR THE 99/4A

We ran across an ad on page 210 of the Sept. issue of Computer Shopper offering a Toshiba 3.5 inch drive and conversion kit for the TI 99/4A for \$125. This is said to work with Myarc or CorComp controllers (no mention of TI controllers in the ad). For more info call or write:

Alpha Scientific
P.O. Box 626
Chesterfield, MD 63806
phone 314-878-7117

INTRODUCING THE GENIAL TRAVELER

A Magazine-on-Disk for the TI-99/4A!

If you have a TI-99/4A with a disk system, you'll be interested in the Genial TRAVELER, an exciting magazine-on-disk which provides over 700 sectors of programs and articles in each issue.

TRAVELER is edited by Barry Traver, whose programs have been published in various TI magazines, including 99'er Home Computer Magazine, Craig Miller's Smart Programmer, Rich Mitchell's Super 99 Monthly, and MICROpendium. He is also the author of ARCHIVER, the standard file archiving procedure used on CompuServe, Delphi, GENie, and the Source. He was the founder and first President of the Philadelphia Area TI Users Group. He is now a Sysop on both CompuServe and GENie.

He keeps in touch with the TI community in other ways as well, such as attending TI Faires in San Francisco, Chicago, Milwaukee, New Jersey, Boston, Providence (R.I.), Los Angeles, Ottawa, Seattle, and Washington, D.C.

The "diskazine" is actually priced less than some "freeware": you get a six-issue subscription for only \$36 (that's over 4000 sectors, so that you are paying less than a penny per sector!).

Authors whose programs and/or articles have already appeared in TRAVELER include Ron Albright, John Bhenke, Barry Boone, Paul Charlton, Mike Bodd, Tom Freeman, Herman Geschwind, J. Peter Hoddie, Todd Kaplan, Jim Peterson, Wayne Stith, Mike Wright, Jonathan Zittrain, and others, including Barry Traver, whose ARCHIVER first appeared in TRAVELER.

The "diskazine" is being published on commercially-made SS/SD "flippies," so that the same format will work on everyone's disk system. It is assumed that subscribers will have at least a 32K memory card, Extended BASIC, and Editor/Assembler. (Warning: the publishing schedule can be somewhat erratic: it took about two years to complete Volume 1!)

TRAVELER SUBSCRIPTION FORM

Check one: Volume One @ \$36.00 (4 issues plus bonus disks)
 Volume Two @ \$36.00 (six issues)
 Volume One and Volume Two @ \$65.00

Name _____

Address _____

City _____ State _____ Zip Code _____

Please make your check payable to Barry Traver, and send it - along with this form - to Barry Traver, editor, Genial TRAVELER, 835 Green Valley Drive, Philadelphia, PA 19128. Thank you!

(ED Note: I subscribed to the first set and thought it quite technical for the "average user". Mr. Traver has promised more for people like me in this next volume. Just the other day I went through all the disks and pulled out what I could use and what I could contribute to the club's library that was public domain or freeware. The first issue of Volume 2 was to have been mailed in October. I have changed my mind and am going to renew my subscription. Hope you do too!)

CLYDE COLLEGE'S HIGH-SPEED CASSETTE LOADER

(The following information is excerpted from Mickey Schmitt's articles in the PUG Peripheral (Pittsburgh UG) from October and November, 1987. If you only have a bare console, you can install 32K memory "inside" the machine for under \$30. For an additional \$5, you can run many assembly language programs and increase the use and versatility of your system.)

The assembly language routines that do the "saving" and "loading" of programs are loaded very easily from cassette tape and reside in an area of memory not usually used by Extended Basic programs. The high-speed cassette utility will allow the "saving" and "loading" of programs up to 24K of bytes in length.

In addition to increased program size, the same size program can be "saved" or "loaded" in approximately half the

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amount of time that the original routines required. The increase in speed is due to removing duplication of data sent to the cassette recorder. While this decreases reliability slightly, few errors have been encountered in use and error checking is still recommended. The size limitation was increased by writing directly to the memory expansion rather than to the console memory which the program was sent to by the original cassette routines.

While loading Clyde's program is not a difficult process in itself...understanding the procedure for the very first time can be a little confusing. With that thought in mind, I have tried to keep the "load" instructions as simple as possible.

INSTRUCTIONS FOR LOADING CLYDE'S LOADER:

1. Insert the XB module into the computer.
2. Select Option 2 - Extended Basic.
3. Type : OLD CSI
4. Then : Press Enter
5. Follow the directions as they appear on your monitor or TV screen:
 - 5.1 * REWIND CASSETTE TAPE CSI
THEN PRESS ENTER
 - 5.2 * PRESS CASSETTE PLAY CSI
THEN PRESS ENTER
 - 5.3 COMPUTER DISPLAYS MESSAGE:
* READING
 - 5.4 COMPUTER DISPLAYS MESSAGE:
* DATA OK
 - 5.5 * PRESS CASSETTE STOP CSI
THEN PRESS ENTER
6. Wait for the flashing cursor to appear in the lower left-hand corner of your monitor or TV screen
7. Type: RUN
8. THEN: PRESS ENTER
9. The computer will then return to the XB screen with the message: * READY * and the cursor will once again be flashing in the lower left-hand corner of your monitor or TV screen. Clyde Colledge's High-Speed Cassette Loader is now loaded.

INSTRUCTIONS FOR USING CLYDE'S LOADER:

1. After you have loaded Clyde's loader,
TYPE: CALL LINK("OLD")
2. THEN: PRESS ENTER
3. You can now load in any program which you have on cassette in half the amount of time it would have normally taken.
4. Just follow the directions as they appear on your monitor or TV screen. That's all there is to it!

Clyde's Loader has two very special features that should not go without mention. First of all...the high-speed cassette routines are exactly the same as Texas Instruments cassette routines - making this program very user friendly. Secondly...once the load program has been placed in the 32K memory, it will stay in memory, even if you accidentally hit "Function Quit". Just retype "CALL LINK("OLD") and you are ready to go. You can't lose the "LOAD PROGRAM" unless you turn off the console!

If you wish to purchase this program, please send \$5.00 to: Pittsburgh User Group, P.O. Box 8043, Pittsburgh, PA 15216,
ATT: PUG Librarian.

T.I. VENDOR LIST

Here are some additional vendors from the list compiled by John Wilforth of the West Penn 99ers.

Horizon Ram Disk.....Provides the perfect upgrade for your system. DSSD Disk equivalent with battery backup. Very FAST! Comes as bare board w/manual/software, or assembled in either SSSD or DSSD models. The November NW Ohio 99ers news announces special prices of \$45 for PC board with manual and software \$38 PC board only, no minimum purchase. \$195 constructed 192K DSSD card with MANUAL, SOFTWARE and 90-day warranty.

HEIM INDUSTRIES....Has a statistics program. Requires 32K, P.O. Box 296 *Basic, disk and printer. \$19.95 + \$3.50 Clifton Park, NY 12065 S&H

T.A.P.E. Ltd.....Mechantronics Products: *Extended Basic II 1439 Solano PL *Eprover & More. Ontario, CA 91764 1-714-989-9906

Forth Interest Group Complete support for FORTH enthusiast P.O. Box 8231 San Jose, CA 95155 1-415-962-8653

LISP INTERPRETER (Fairware)

Charles Rentmeesters....Send \$15 and one disk/mailer. In- 410 N. Carroll St. complete but will be updated. FAST! Madison, WI 53703 Has 44 commands, supports recursion, 1-608-256-0725 includes brief primer.

SOFTWARE - GENEVE...AC-BASIC, AMOS, AC-PASCAL, AC-FORTRAN, AEI either available now, or nearly ready. 6700 Belsrest Rd, #723 (call). Soon to release 360K upgrade Hyattsville, MD 20718 for the original Horizon Ram Disk.

QUALITY 99 SOFTWARE...DM IV, DRAW n*PLOT, SCREEN DUMP11, 1884 Columbia Rd #1021 DB99, SPAD XIII, Much More. Washington, DC 20009-5161 1-202-667-3574

AMNION HELPLINE...."A Non-profit volunteer effort, free help 116 Carl St. to "orphan + Clone" computer users" San Francisco, CA 94117 9 to 4 (Pacific time), Mon-Sat 1-415-753-5581

DISK ONLY SOFTWARE...9640(GENEVE), modified Myarc 256K and P.O. Box 244 512 cards for 9640, DELPHI start kit Lorton, VA 22079 and Help Disk. ORPHAN SURVIVAL HAND- 1-301-369-1339 BOOK, Programs for the TI Home Com- Touchtone order: puter, and Intro to Assembly Language 1-800-446-4462 and for the TI, LOTTO MANIA, PPD TEST at tone enter UTILITY, DRAGON STORM, PIRANAH, *897335* for re- CURRENCY EXCHANGE UTILITY, FLYING corded order FORTRESS FLIGHT SIMULATOR, KARATE, message. EPROM FOR HORIZON RAM DISK, SRAM PACKER, XB:BUG, AND TI WRITER TIPS AND TRICKS

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PRBASE Hints ~~~~~

The following essential tips on PRBase are presented the courtesy of Jim Sleeth of the Southern California Computer Group in their Computer Voice newsletter of January 1988.

Jim mentions the Fairware PRBASE utility program by John Johnson to copy the header. (John Johnson, 2981A Vermont Ave. Homestead AFB. FL 33039)

Another hint involves the label design in "Database creation", Option 7 Will not permit exit of this mode unless at least one label has been designed. So don't get into this unless you are prepared to design a label.

The third, and perhaps most important, is that PRBASE can (I repeat CAN) be used to output to disk in DV80 format. This is how it was done on a two drive system:

When in the Database management program select the letter O for system options. When asked for data disk answer 2, for Output file: DSK1.NEWFILE; then replace the PRBASE system disk with a TI disk formatted in the normal (not PRBASE) manner. Press enter. Then press L to list the file as per your label setup

No carriage return or line feed symbols are inserted. However, some unwanted characters may appear, so edit the file using TI Writer before printing.

PRBASE can also be used to build a new file(s) one at a time or in groups as indexed. This is done using another PRBASE utility found on the same disk as PRBASE. "You could sort and do the same if your data base has been designed to do so. Type numbers with leading 0's like 001 or 010 for 1 and 10 (respectively). This will give you clean sorts on the numbered fields."

Robert C. Holland of 6188 Caninito Baeze, San Diego CA 92112 has written a IBM and a TI program that can be run on any TI disk controller. This program will transfer any type of file to the IBM or TI through the RS232 port just by connecting the two computers by cable. You might want to send him a SASE to get the details or check with your user group because this will be FAIRWARE! Now you can link PRBASE to TI Writer to IBM to Lotus 123 (with the Sig. command). Once you are in Lotus 123 you can find many DataBases that will input Lotus files. Keep the program on a floppy. One side for the TI and the other for

* CLEAN UP THOSE PROGRAMS *

Back in the "good ol days" when I first joined this group, I remember a program that is still in our library called "CLOSE ENCOUNTERS of the SIMON KIND". This program is of unknown origin (to me) but I think that it came from an early issue of 99'er. Encounters is written in BASIC and is a very large program (44 sectors on disk), too large in fact, to be run from BASIC with the disk drive turned on. I can remember some efforts get around this problem by removing the REM's etc., but in those early days we did not have knowledge of little tricks such as CALL FILES etc. so this project was not a success.

Encounters is a fun program that my children and I enjoy playing once in a while but loading it from tape got to be too much of a chore and we gave up on it. As time went on, three products became available that have let me modify Encounters so it can be loaded from disk and at the same time have slightly speeded up it's execution. Not only was Encounters written in BASIC, the author chose to use character sets 15 and 16 for some of his graphic displays. This made the program unable to run out of Extended BASIC, and as you will remember, BASIC can't make use of the 32K memory expansion. If someone were to go through the program and change the code so that sets 15 and 16 were not used, the problem would be solved. I tried this but the task looked to be quite involved because the program is very very large and confusing. Finally Jim Peterson of Tigercub Software offered a solution.

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On one of my copies of the Genial TRAVELER Diskazine I came across a program in merge format by Jim called BXB. If memory serves me correctly, I have seen this program listed in other newsletters and I think it is available from Tigercub on one of the "Nuts and Bolts" disks. BXB is a short but useful subprogram that allows Extended BASIC to use character sets 15 and 16. To use it, first load your program into Extended BASIC and then merge BXB with the program in memory. Next resave your original program back to disk and you are done. In the case of Encounters, the access to the 32K memory that Extended BASIC offers allowed room for the program to execute without tricking the system with CALL FILES. Moving the program into the Extended BASIC environment offered two other opportunities to improve the code as you will see below.

As mentioned above, Encounters is a very lengthy program and as usual with programs for the 99/4A, long programs take forever to start executing because of the prescan that is part of the operating system. With Encounters moved into the Extended BASIC environment, we now have the ability to use the "Prescan ON" and "Prescan OFF" features to reduce the pause between typing RUN and when the program starts running. Once again, the long and complex code of this program made this a chore that I did not want to tackle. Peter Hoddie offers a tool to do this complex task for us. His program "FRE SCAN IT" searches through the program that you wish to modify and rewrites it making use of the prescan feature. After I had modified Encounters, the delay in the start of execution was reduced from roughly 16 seconds to about 10 seconds! This was well worth the effort in my book.

My final improvement to Encounters was to shorten the program's total length by converting the code from single statement lines to multi statement lines. This is another task that could have been done manually but it would take weeks to do. I used a product called XBasher by Mike Dodd to do this task for me. XBasher does just as described above, that is, shorten programs by converting them to multi statement lines plus offering other options to reduce program size. Shorter programs not only take up less space on your storage media, they also load faster, and multi statement lines often times execute faster. In the case of Encounters, I took a 44 sector program and lengthened it by adding BXB, lengthened it again by using FRESCAN IT, and it ended up with a 41 sector program after it was modified with XBasher.

Finally I want to talk about one more utility that is available. I have not used this one but there is a program on one of the GENIAL TRAVELER disks called UNBASHER that takes XB programs written with multi statement lines and rewrites them using single statement lines. If you ever tried to sort through a piece of code written in multi statement format you will be able to appreciate why anyone would want to take this giant step backwards.

It used to be that only the skilled programmer could generate efficient and compact XB code. Now thanks to those same skilled programmers, the rest of us can use their products to convert our less than perfect code into something that appears to have been written by an expert.

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ADVENTUREMANIA INFOCOMITIS

ZORK III

(C) 1984 Infocom, Inc.

You may never see the light of day again!! Explore a huge and long-hidden region of the long lost Great Underground Empire. Outsmart the ancient necromancer at his trickery, solve a barrage of diabolical puzzles and, ultimately, bring the Wizard's powers under your control! GOOD LUCK!

ITEM	POINTS
Pierpont's Portrait	20
200 Zorkaid Bills	25
Passage to Lava Room	5
Blue Crystal Sphere	20
Unicorn's Gold Key	15
Dragon Statuette	20
Passage to Pearl Room	5
Pearl Necklace	15
Raising the Bucket	10
Rare Candies	15
Red Crystal Sphere	20
Stradivarius Violin	20
Moby Ruby	15
Zorkaid Coin	20
Rare Staap	10
Pierpont's Gold Crown	20
Enter Wizard's Workshop	10
Clear Crystal Sphere	20
Black Crystal Sphere	30
Using Gold Key	2
Using Dragon Statuette	2
Using Gold Crown	2
Using Zorkaid	2
Using Rare Staap	2
Using 200 Zorkaid Bills	2
Using Stradivarius	2
Using Pearl Necklace	2
Using Moby Ruby	2
Using Portrait	2
Getting Wizard's Wand	30
Getting Dog Collar	15
Thru Oddly-Angled Rooms	5
Reaching Cerberus Room	10

Reaching Ante-Chamber 5
Reaching Crypt Room 2

TOTAL POINTS REQUIRED 400

After reaching 400 points, you still have some work cut out for you ... reaching the entranceway to Zork III! Quite a challenge!

HINTS: (1) The items in the Gazebo are worth your while - bring them along with you on your adventure. Worry about the Unicorn later in the game! The Princess will help you here if you know what to do! (2) To arrive anywhere without feeling disoriented, you'll have to 'fix' the carousel. This will be done in the Machine Room. One button has the answer. Have the robot do the dirty work, and he'll also help you get the red sphere. (3) To get there you must pass by the Riddle Room. Answer the riddle and you gain entrance to the Pearl Room, etc. The Frobozz Magic 'Well' Company gives you access to the Low Room. If the Dragon did his job, you'll find what you need at the Deep Ford. (4) The Tea Room makes you feel like Alice in Wonderland. Examine the cake(s) - perhaps look at them through something? (5) The Dreary Room hides a treasure. Examine the lock here, and be sure you have a mat and letter opener with you! (6) You just might get the Dragon mad enough to do you a favor. They do breath fire, don't they? (7) Walk through any walls lately? (8) There's more than one way up the volcano. Go up from the Ice

Room, or take the transport provided in the Volcano Bottom. Have your club and matches? After you arrive, beware the falling ledge! Explosions have a way of rocking loose ledges away! So watch your moves! (9) Make some pit stops along the way. Check out some books at the Library while you're there! (10) That's not really a brick. Notice a string 'coil' and matches were provided? (11) Offer the Lizard something delightful (and just maybe fattening). You never know what'll happen! (12) The Sea Serpent might look gentle, but he's really mean if you get too close. Use something you own at a distance to disturb the aquarium. (13) Use one of the crystals in the Pentagon Room. Be prepared for a visitor! (14) The Wizard struck you with a "Float" Spell, among other spells, - perhaps you could do the same to a heavy object? (15) The Oddly Angled Rooms are easier than expected. Can be thought of as a diamond shape - starting with no light, to dimly lit, to serenely glowing, to brightly glowing! It's the usual dreaded Infocom Maze! Just follow the lights! (16) Look for the stairs down and you'll arrive at the Cerberus Room. He's been looking for something you found! (17) Finding the way out of the Crypt can be a pain... don't be left 'in the dark'...

Be a MASTER ADVENTURER, and look forward to ZORK III: The Dungeon Master! GOOD LUCK and HAPPY ADVENTURING!

ADVENTUREMANIA

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LET'S TALK PEB, DISK
BY JOHN F. WILLFORTH

WE HAVE A PROBLEM AS TI-994A USERS THESE DAYS THAT MOST MARKET VIEWERS AND MANY TI OWNERS WOULD NOT HAVE BELIEVED POSSIBLE JUST A FEW MONTHS AGO. THERE ARE FOUR MAJOR VENDORS OF RAM DISKS IN THE U.S.A.. THERE IS ALSO A VARIETY OF FEATURES AND SIZES IN THESE UNITS, SOME OF WHICH ARE NOT FOUND IN UNITS BEING PRODUCED FOR ATARI, COMMODORE, APPLE, OR THE P.C. LINES OF COMPUTERS. THE BIGGEST PROBLEM FACING THE USER NOW IS "WHICH TO BUY?".

THE PURPOSE OF THIS ARTICLE IS TO PROVIDE SOME THOUGHTS AND FACTS TO HELP YOU DECIDE. THE NEXT SEVERAL PARAGRAPHS ARE NOT INTENDED TO PROMOTE ANY ONE OF THE RAM DISKS MENTIONED, AND MAY CONTAIN ERRONEOUS INFORMATION, HOPEFULLY BY OMISSION RATHER THAN COMMISSION.

FIRST A RAM DISK IS BY DEFINITION, A SOFTWARE/FIRMWARE SUPPORTED RAM CIRCUIT BOARD EMULATING A DISK. I.E. A CIRCUIT CARD, THAT WHEN PLUGGED INTO YOUR PEB, WILL ALLOW YOU TO STORE AND RETRIEVE DISK TYPE FILES TO/FROM THE UNIT WITH THE SAME EASE AS YOU WOULD TO YOUR PHYSICAL DISK DRIVE (DSK1 FOR EXAMPLE). BECAUSE RAM IS A NON-MECHANICAL DEVICE, IT IS NOT SUBJECT TO THE DELAYS OF POSITIONING A READ/WRITE HEAD OVER A CYLINDER (TRACK), AND WAITING FOR THE DISKETTE TO NOW ROTATE TO THE DESIRED SECTOR, AND THEN READ/WRITE DATA FROM/TO THE SPINNING DISK IN SERIAL (LIKE CASSETTE) FORM. THESE THREE MECHANICAL LIMITATIONS ARE THE MAIN REASON THAT DISKS ARE SLOW. YES, DISKS ARE ABOUT AS MUCH FASTER THAN CASSETTES AS RAM DISKS ARE FASTER THAN DISKS! IF YOU BUY ONE, YOU WILL ENJOY THAT KIND OF IMPROVEMENT, NO MATTER WHICH BRAND YOU BUY.

THE MAJOR TWO TYPES OF RAM DISKS ARE THOSE USING DYNAMIC RAM (MYARC, CORCOMP) AND STATIC RAM (HORIZON, MIKE BALLMAN ENHANCED HORIZON [SOLD BY BUD MILLS]).

- * DYNAMIC RAM IS LESS EXPENSIVE, LARGER CAPACITY, BUT REQUIRES MORE SUPPORT CIRCUITRY, DRAWS MORE POWER, AND IS MORE CUMBERSOME TO SUPPORT IF THE POWER IS LOST (LIKE TURNING OFF THE PEB).
- * STATIC RAM IS LOWER POWER AND THUS EASY TO SUPPORT DURING POWER OUTAGES. THEY ARE MORE EXPENSIVE, TAKE MORE SPACE ON A BOARD, AND THUS FOR THE AMOUNT MEMORY NEEDED, MORE EXPENSIVE THAN DYNAMIC RAM.

I WOULD LIKE TO TALK ABOUT ADDITIONAL FEATURES. THE FIRST ONE THAT I AM MOST ASKED ABOUT, IS THE SPOOLING FEATURES. ALL BUT THE HORIZON, AND THE ENHANCED HORIZON, HAVE THE SPOOLING FEATURE. AT THIS PRINTING, ALL THAT HAVE SPOOLING DO IT IN A DIFFERENT MANNER, BUT JUST AS EFFECTIVELY. SOME OF YOU MAY ASK, "WHAT IS SPOOLING?" WELL TO MAKE IT SIMPLE, SPOOLING IS STORING DATA THAT IS TO GO TO A DEVICE (PRINTER MODEM, ETC.) IN MEMORY SPACE, AND RELEASING IT AS IT CAN BE USED BY THE RECEIVING DEVICE. REMEMBER THE TI SITS THERE SENDING TO THE PRINTER UNTIL ALL THE FILE IS SENT. THEN IT IS ABLE TO ACCEPT YOUR NEXT COMMAND OR CONTINUE INSTRUCTIONS. A SPOOLER ACCEPTS THIS INFORMATION AS IF IT WERE THE PRINTER, MODEM ETC., AND AT A MUCH HIGHER RATE THAN ANY OF THOSE PERIPHERALS COULD, AND IN MOST CASES WILL ACCEPT THE ENTIRE FILE TO BE PROCESSED IN A FEW SECONDS VERSES SEVERAL MINUTES. THE TI-99/4A WILL THEN ASSUME THAT ALL THAT IT HAD TO DO WAS DONE AND COME BACK TO YOU FOR FURTHER USE, WHEN IN FACT THE JOB IS STILL BEING COMPLETED BY THE SPOOLER AT A PACE THAT THE PRINTER, MODEM ETC. CAN HANDLE IT. PRETTY NEAT! HUH?

ANOTHER FEATURE IS PARTITIONING, OR MULTIPLE DISKS BEING ASSIGNED WITHIN A SINGLE RAM DISK CARD. WHAT THIS MEANS IS THAT IF YOU HAVE A SINGLE DRIVE ON YOUR SYSTEM (DSK1 FOR EXAMPLE), YOU MAY CALL A PORTION OF A RAM DISK DSK2, OR DSK3, DSK4, ETC. NOW YOU HAVE ONE PHYSICAL, AND UP TO WHO KNOWS HOW MANY OTHER DISKS WHICH ARE PART OF THE RAM DISK.

STILL ANOTHER FEATURE IS BUILT IN COMMANDS, EACH DISK MENTIONED ABOVE HAS IT'S OWN SET. FOR EXAMPLE, YOU CAN TYPE "CALL DM" IN BASIC COMMAND MODE, AND A FILE CALLED DM1 WILL BE BOOTED FROM THE DISK, FOLLOWED BY DM2. MANY COMMANDS DEALING WITH MEMORY ARE ALSO INCORPORATED.

FEATURES SUCH AS CLOCK, (TIME OF DAY), ANALOG-TO-DIGITAL, ETC. ARE NOW COMING AVAILABLE ON THE RAM DISKS.

YOU MAY NEED MORE INFORMATION TO ORDER YOUR RAM DISK THAN I'VE PROVIDED HERE. NEXT MONTH'S ARTICLE WILL GET MORE SPECIFIC ON EACH RAM DISK BUT IF YOU BELIEVE THE ADS, MAYBE YOU CAN UNDERSTAND THEM A LITTLE BETTER NOW, AND YOUR READY TO JUMP IN. GOOD LUCK!