

# BYTEMONGER

LEXINGTON, KENTUCKY

Heart of the Bluegrass

FEBRUARY 1985

## BASIC TI-FORTH FEBRUARY TOPIC

Rich Hubbard will present a program on Basic TI-FORTH at our February Meeting. The meeting will be held at 7:00 PM Thursday, February 7, 1985 at Kentucky Utilities Operating Center - 500 Stone Road - Lexington. Rich will introduce you to some of the power and speed of FORTH with commands in the immediate mode and to the utility and ease of its use. We have devoted a considerable amount of space in the BYTEMONGER to FORTH programs and programming because of its ease of use, speed and versatility. You will note in this issue that we have printed the 7 FORTH screens modified by Rich which generated the calendar in the January Issue. While the 'language' of TI-FORTH is one of definitions and expanding upon those definitions to create additional words, you may expect to leave the introductory program with a better understanding of the possibilities TI-FORTH offers the programmer.

### FILE HANDLING PROGRAM DRAWS BEST ATTENDANCE OF WINTER

Wes Richardson's presentation in January covered file handling with a unique twist. He composed a cataloging program to illustrate his lesson which should prove to be a useful utility. The program is set up to handle membership list or could be used as a mailing list and the program is available in the library on both cassette and diskette.

### NEW TI-99/4A MAGAZINE

Copies of the first issue of a new TI magazine called 'Mini-Mag 99' were received recently and can be reviewed by contacting the Secretary Gerald Wells.

### 28 COLUMN CONVERTER REVISIONS

Jim Peterson's 28 column converter program which appeared in the January BYTEMONGER is the original program for which he published several revisions. Since we could not get the revisions to work we did not include them in the January edition. Mr. Peterson recently completely rewrote this unique and useful program and if you are finding it useful, then contact our librarian to get the latest revision.

### TI MODULATOR and POWER SUPPLY AVAILABLE AT RADIO SHACK

Several members including the Editor have purchased articles from Radio Shack which TI has recently dumped on the market that might be of value later when parts are hard to find.

The first is the Modulator or interface between the computer and a television set. It is listed as Cat. No. 277-1015 and currently sells for \$4.95. It comes complete with the cable that inserts into the back of the computer.

The other item is listed as a SWITCHING POWER SUPPLY CHASSIS Cat. No. 277-1016. Based on information supplied by Ken Hamai of the UG of Orange County CA published in the ROM Newsletter, this power supply will operate the old black 99/4A console with no modifications to the transformer. The Transformer provides two operating voltages, 18vac and 9vac which are provided by a tapped transformer. This means that the old black console transformer will work with the Radio Shack chassis. In fact, the transformer recommended by Radio Shack for use with the chassis is also an 18vac center tapped unit. This is another bonus. Should the transformer on your console burn out, you can use the Radio Shack transformer, Cat. No. 273-1515 as a replacement. The Power supply sells for \$4.95 if you can find it and should also fit into the 1983 beige model console.

### BLUEGRASS AREA 99er USERS GROUP NEWSLETTER

The BYTEMONGER is a monthly publication. Correspondence should be addressed to Editor, P.O. Box 11866, Lexington, Kentucky 40578-1855. Advertising rates are included with suppliers copies. Reports and Technical contributions are solicited from members and others.

Articles published in the BYTEMONGER may be quoted if the BYTEMONGER and Author are acknowledged.

Editor.....Don MacClellan  
Assoc Editor & Secretary.....Gerald Wells

NOTE: In several recent incidents reproduction of articles have appeared in User Group Newsletters without the appropriate credits being given. This is COMPLETELY UNACCEPTABLE.

LETTERS TO THE EDITOR

In addition to a number of written inquiries about the groups meeting night and membership requirements which have been answered by telephone or by sending a current BYTEMONGER, there are several letters requiring answers which should be of interest to many members. Several follow:

Bluegrass Area TI Users Group

Dear Sir: Is there anyone in the Lexington area who will repair a TI-99/4A computer? I am also interested in locating someone who can help my 11 year old son learn how to use it.

Thank you,

Mrs Tom Murrell  
269-1528

Dear Mrs. Murrell,

I am not aware of any authorized TI repair facility in Lexington. The closest Texas Instruments Customer Service Center is located at 18101 Linn Station Road \* Plaza East, Suite 658 \* Louisville 40223. Mr. Larry Doyle is manager of that center and has been very helpful in the past. He can be reached at 502-426-1632. Mr. Doyle has test programs which can determine the problem with your computer and it can either be repaired or traded on the spot. The fee for repair or replacement is the same - about \$29.75 - and if the computer is replaced you will receive a new one year warranty. The same fee is charged if you prefer to have your computer repaired at Lubbock, TX., however it must be shipped to them and takes about 6 weeks. The same repair service is usually available for the PEB, DSK Drive, Cards etc. however replacements may not always be available on the spot. The cost of the DSK Drive replacement for instance is just under \$50.00. TI is required by law to maintain repair and service facilities for 5 years from the date of ceasing manufacture of the equipment. I am sure you will find Larry most helpful. You may also send the equipment by a friend if you give them your purchase receipt.

Your request for a tutor will, by virtue of this newsletter, go to quite a few TI owners who may want to respond directly to you. Our Group exists for the purpose of sharing information between ourselves and others and of necessity would require you son (and because of his age) a parent to attend the monthly meetings. We do not currently have any grammar school students participating - Largely because we do not have any Grammar School student parents bringing children. We would certainly be receptive to a young (comparatively) group if there are parents which would take some initiative working with us to develop such a program. Ed.

Mr. Donald T. MacClellan Editor, BYTEMONGER

Mr. MacClellan,

I had a chance to obtain a copy of "Bytemonger" and am impressed with it. Most of our members as well as other owners of computers (here) cannot program them even in beginners basic so when we do get a newsletter from another group, they all say that the letter reminds them of a 30 second sportscast that only the well versed can understand.

Of "Bytemonger" however they all find it easy to read and seem to understand most of it and hope to see more in the future. Give thanks from these people to your John Schmidt for his 'Pressing Forth'. Our people here say that his article is by far the most understandable and useful text they have seen on FORTH anywhere so far. I myself thank you because it seems (at last) these people have been awakened by your newsletter and Mr. Schmidt.

[ Mr. Downs goes on at some length to describe an incident in which some protected software which was developed by a group in Danville and which was being very successfully used at the Kentucky School for the Deaf was copied or 'leaked' surreptitiously without permission to others and is being distributed throughout the area. Mr. Downs is not only distressed about this leak of a privately held program but the widespread practice of reproducing and distributing copywrite and protected material. ]

E. M. Downs  
For the DANVILLE 99ers

Dear Mr. Downs,

First, I should acknowledge that we are gratified that the BYTEMONGER is well received and readable. We think you will find it increasingly so as our contributors increase such as they have in this issue. Second, you and as many of your group as wish should feel free to attend our meetings on the 1st Thursday of each month. We are placing you on our mailing list so that you will have adequate notice.

I guess, to begin responding to your main question, that I should point out that copying other peoples work is probably the Worlds Second Oldest Profession. It is probably more lucrative if you copy currency or the renaissance masters! The protection which has evolved includes the patent and copyright laws and in some few states this protection now extends to software. We can expect to see more as States and the Federal Government respond in their usual slow methodical bureautic way to a Computer technology which has grown very rapidly and produced a medium of information which was not anticipated by present laws. The Software development companies as well as computer manufacturers are accutely aware of the problem of 'pirating' and because of the slow response in legislative protection

enactment, have developed more and more sophisticated techniques for protection.

It should be pointed out that we are basically against the willful use of someone else's material for gain without specific written permission, whether or not it is copyrighted or patented and whether or not it is protected. We are very careful in what materials are in our software library because of not only the law but of the ethics. The guidelines are hardly clear cut and there are so many grey areas and lack of court decisions and direction that it is difficult sometimes to know what is permitted.

Let me give you an example. There have been a number and still are several magazines which publish articles and programs which are intended to be used in the TI-99/4A. The magazines are themselves copyrighted and so the articles and so the programs. The programs are obviously useless in their published form on a piece of paper. Am I only entitled to type the program in from my Subscription or newstand purchased copy. If I loan the magazine to a friend - may he? What about my brother? What if it is my Grandfather's subscription? Is mailing the magazine to a friend in Alaska any different than loaning to a friend down the block? What if I send or give a program tape instead? What if a Users Group such as ours purchases the Magazines' Tapes? See what I mean! The intent of the magazine was surely to get the program into the computer, for it is the magazine's program; when the author sold or gave the program to the magazine, they acquired ownership. Does everyone have to type their own into memory? The only clear (to me) violation of a copyright would be for a subscriber or non-subscriber to take the program and sell it for some remuneration substantially greater than the value of the medium (CSI or DSK) on which it is stored. (For in this case, it is not being used for the intended purpose of personal enjoyment or utility but for other's personal gain which damages the program 'owner') So much for magazines: Let's talk about programs written on protected media for sale.

The areas are less grey as to ownership and theft where there is a program which is sold by the owner for a price whether it is protected or not. There are still problems, however. The first question and one I am not satisfied has been answered by the courts is "Did I purchase the program or an exclusive right to use the program - or did I purchase the 'kernel idea' of the program such as in a patentable mechanical device that does something (maybe not nearly as spectacular as the software)?"

What I am getting to is that there are still more unanswered questions than clear-cut rules. What residue of ownership remains (and can properly be enforced) with articles, poems, essays, lectures, computer programs, photographs (magazine pictures are copyrighted too.) when they are put in front of the public?

You might recall from NATIONAL GEOGRAPHIC that certain primitive tribes prohibited photographs of themselves since they thought the image in the photograph contained their soul. It appears to me that the legislative and judicial resolutions to these questions are still a long time away. This suggests that software developers will have to (and have) develop more sophisticated protection. The only clear-cut case I see, and the one that I am confident is the intent of the Patent and Copyright Laws is where my idea or device (or program) is sold on a widespread basis for financial gain - thereby depriving me of that income. The casual acquisition from someone else of a purchased program which I use myself and do not sell and probably would not have purchased at the price quoted would be hard to prosecute even though there is certainly a degree of theft involved. How much financial loss to the owner has occurred? Certainly not enough to pay an attorney for 15 minutes - much less the trip through the courts.

This I see, as the quandary of the software industry, because it appears this type of trading is widespread. It is practically impossible to prosecute unless a large group library acquires such programs and makes them available to a large number of people. There are cases such as this now pending in the courts.

I would like to think that we all are basically more honest than dishonest and certainly should be aware of the personal and property rights of others particularly where there is clear definition of right and wrong. Where there is doubt we might often take a chance. Until there is some legislation which clarifies what is right, permitted, or prohibited (and those laws have had at least a preliminary court test), I see no alternative but more elaborate protective systems. In your particular instance, there is little question that a theft occurred, that you feel abused, used and perhaps even violated after the hard work in writing the programs. If, as you suggest, the culprit is known, then you could be entitled to collect damages: however, they would have to be proved quantitatively in the court system in what would probably turn out to be a lengthy ordeal. For the casual non-professional program developer, we still must depend on our own moral values and be aware that gifts of a program outside our complete realm of control can be an unwitting gift to humanity. I am more inclined to think that the proper resolution of your problem may be more appropriately solved in the old fashioned way - a trip behind the barn. Editor

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RECENTLY RECEIVED FROM TI - WIRING DIAGRAMS FOR THE  
MEMORY EXPANSION, RS232, DISK CONTROLLER and P-CARD

THESE SUPPLEMENT THE WIRING DIAGRAMS NOW IN THE  
LIBRARY OF THE CONSOLE AND THE EXPANSION BOX INTERFACE

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## FREE SOFTWARE BY PHONE by Tom Rhodes

Last month I promised to cover downloading programs from CompuServe so here it is step by step. There are other ways through the network while you are logged on but the steps outlined below seem to be simple with direct prompts. All these steps pertain to TE2 terminal cartridge.

### Programs from ACCESS.

1. Logon to the System.
2. Enter Control 5 (turn off word wrap).
3. Enter Go PCS-30.
4. Enter 5 for ACCESS.
5. Enter "COPY <Filename>". (You know what you want by BROWsing.)
6. Enter "EXI" to exit ACCESS.
7. Enter "EXI" again to go from Videotex to Personal Computing Area.
8. When OK prompt appears enter "R USR:TE2TRN".
9. At prompt enter "D" for download.
10. At device prompt enter "DSK1" or other drive.
11. At prompt enter a name for the program. (\*do not\* use a period in the filename here even if CIS used one.)
12. At \*\*Successful file transfer\*\* message enter "EXI". This returns you to the Videotex area.
13. Go CIS 174
14. Use Delete File here to remove the filename from your personal storage area. You don't want to store numerous programs and begin paying storage charges over your free space.
15. Check your files here and Logoff.

### Programs from TI FORUM.

When browsing through any of the XA databases in the TI FORUM you can also save the programs by the following method.

1. Turn off word wrap with Control 5.
2. Use "Read this file" option.
3. For a short program in the XA area you can let the entire program scroll to the end. (The TE2 program will beep when the buffer is filled.) Logoff and then use the scroll function to output one screen at a time to Disk with the Control 2 Output function.
4. For longer programs you pause the output at each page with Control 5 and then output to disk with control 2. Restart the program scrolling with Control 0.
5. When all of the program has been written to disk, exit the XA database and logoff the system.
6. You now need to clean up the program with TI Writer. As the TE2 wrote the screen to disk it save the file as DV80 (Display Variable 80) which is the file format used by TI Writer. Use the editor program to delete any duplicate lines and any lines which are not a part of the program.
7. Save your work again to disk with the SF option.
8. At this point you need a program TEXTTPRO which is in ACCESS to convert your file saved as DV80 to a program which you can run.

There are many text tutorials in the XA databases which can be downloaded through this option. There is a file on Disk Directory usage, a file on Multiplan updates FORTH DSDD and more too numerous to name. Enjoy!

## TI-MINIWRITER

By Thad McHugh

The TI-MINIWRITER is designed to load from cassette into the Mini Memory. When used in this way it increases the memory capacity and power of your TI-99/4A with the following features:

1. Full screen text editing (24 lines x 40 characters).
2. Three overlapping 40 character windows (80 characters per line).
3. Editing of over 9500 characters (upper and lower case).
4. Add and delete characters or lines.
5. Move and copy the desired text.
6. Save and load text, using cassette or disk drive.
7. Print via the peripheral expansion box with RS-232 card to a serial or parallel printer.
8. Print via the joystick port to a low cost RS-232-C interface box and printer.
9. Search for desired information.
10. Scroll screen up, down, left, or right.
11. Minimum hardware required. TI-99/4A, Mini Memory, Cassette Recorder and Printer.

This is an excellent word processor for anyone like me who does not own a disk drive or a TI-WRITER word processor. Text is fast to load once the program has been loaded into Mini Memory. Documentation is 30 pages. However, all that is needed is the Quick Reference Guide on page 1.

It can be purchased from TexComp 19209 Parthenia Unit G Northridge, CA 91324 for \$22.95.

## PROGRAMMING AIDS III FIX

One of the features of the source is called POST. This is a bulletin board where individuals can write comments or questions. The TI-99/4 section is one of this writers favorite sections. The following are some excerpts of messages recently posted.

I have been having trouble with TI's PROGRAMMING AIDS III. When using the Editor program to resequence blocks of code, I find it fails to properly resequence line references. For example: 100 ON X GOTO 200,300,400 would resequence to: 100 ON X GOTO 100,100,100. I would appreciate any help that one could lend me in debugging this utility.

Posted the next day: I think the following line will correct the bug in the Editor program:  
6215 L1=ASC(SEG\$(L\$,P+1,1)); L2=ASC(SEG\$(L\$,P+2,1)).  
In addition add the following to the Crefpint program:  
851 RESTORE 920  
875 IF P=1 THEN 885  
882 GOTO 890  
885 PRINT #2:C\$

FROM: Fox Cities UG Newsletter

SCR #49

```

0 THE FORTH CALENDAR
1
2 The following seven FORTH screens were submitted by
3 Rich Hubbard and produce the Calendar printed in last
4 months newsletter. The original program can be found in
5 'THE COMPLETE FORTH' by Alan F.T. Winfield. Permission
6 to reprint this corrected and edited version from the Copy
7 right book has been granted by the publisher-WILEY PRESS
8 Inc. Comments on each screen should HELP explain how the
9 program works. Screen 54 contains the 'words' to print a
10 yr or mo to your monitor. I.E.-after typing 50 LOAD <ENTER>,
11 type 1985 year <ENTER>. The year 1985 starting with Jan.
12 will scroll up your monitor. Screen #56 was written by
13 Rich to print any calendar year or month from 1582 to
14 4902. You may have to alter these commands to match your
15 printer. Good luck & Happy FORTHing !

```

SCR #53

```

0 ( Calendar Vocabulary, daynumber and day) : C CONSTANT ;
1 1 C january 2 C february 3 C march 4 C april
2 5 C may 6 C june 7 C july 8 C august
3 9 C september 10 C october 11 C november 12 C december
4
5 : daynumber 0 13 0 DO ( calculate days up to date D/M/Y )
6 M 2 I = IF ( Loop through months )
7 D 2 + LEAVE ( until M=1 )
8 ELSE
9 I dpm + ( accumulate days )
10 THEN
11 LOOP ; ( - ) n
12 ( calculate day of week of date D/M/Y, 0-6 )
13 : D/M/Y janist daynumber + 1 - 7 MOD ; ( - ) n
14 : day Y ! M ! D ! datecheck ( print day of date given )
15 D/M/Y printday ; ( d m y - )

```

SCR #50

```

0 ( Calender Vocabulary, Zeller's congruence )
1 DECIMAL
2 FORTH DEFINITIONS
3 VOCABULARY calendar
4 calendar DEFINITIONS
5
6 0 VARIABLE Y 0 VARIABLE M 0 VARIABLE D
7 ( Year, Month, Day )
8 0 VARIABLE a 0 VARIABLE b ( work variables for janist )
9 : janist ( return the day, 0-6, of jan 1st in year Y )
10 Y 2 I - 100 / a !
11 Y 2 I - 100 a 2 * - b !
12 799 b 2 + b 2 4 / + a 2 4 / + 2 a 2 * -
13 7 MOD ; ( - ) n
14
15 51 LOAD 52 LOAD 53 LOAD 54 LOAD 55 LOAD

```

SCR #54

```

0 ( calendar Vocabulary, month and year )
1 0 VARIABLE chars ( character counter )
2 : month Y ! M ! 1 D ! datecheck ( print specified month )
3 CR M 2 7 SPACES printmonth 2 SPACES Y 2 . CR
4 CR SPACE ." Sun Mon Tue Wed Thu Fri Sat" CR CR
5 D/M/Y ( calculate 1st day of month )
6 4 * DUP SPACES chars ! ( go to day column )
7 M 2 dpm 1+ 1 DO ( step thru days in month )
8 I 4 .R 4 chars + !
9 chars 2 24 ) IF CR CR 0 chars ! THEN
10 LOOP CR CR ; ( m y - )
11
12 : year ( print whole year calendar )
13 13 1 DO Loop thru months )
14 I OVER month PAUSE DROP
15 LOOP DROP ; ( y - )

```

SCR #51

```

0 ( Calendar Vocabulary, string printing )
1 : "days" ( weekday string table )
2 ." Sunday " ." Monday " ." Tuesday " ." Wednesday"
3 ." Thursday " ." Friday " ." Saturday " ;
4 : printday ( print weekday 0-6 )
5 12 * ' "days" + 3 + 9 TYPE ; ( n - )
6 : test1 DO I Y ! ." Jan 1st " I . SPACE janist ." - "
7 printday CR PAUSE DROP LOOP ; ( i.e. 2000 1900 test1 )
8 : "months" ( month string table )
9 ." January " ." February " ." March " ." April "
10 ." May " ." June " ." July " ." August "
11 ." September " ." October " ." November " ." December " ;
12 : printmonth ( print month 0-11 )
13 1 - 12 * ' "months" + 3 + 9 TYPE ; ( n - )
14
15 : NOT 0= ;

```

SCR #55

```

0 ( Calendar Vocabulary, yearend and daysleft )
1 0 VARIABLE Mend 0 VARIABLE Dend ( current end of year )
2 : yearend ( initialize end of year )
3 OVER OVER 2 = SWAP 29 = AND ( 29th of Feb? )
4 IF ." You can't be serious!" ABORT THEN
5 Mend ! Dend ! ; ( d m - )
6 : daysinY ( How many days in year Y )
7 Leap? IF 366 ELSE 365 THEN ; ( - ) n
8 : daysleft ( Number of days up to yearend )
9 Y ! M ! D ! datecheck daynumber
10 Mend 2 M ! Dend 2 D ! datecheck daynumber
11 OVER OVER ) NOT IF ( specified date BEFORE yearend? )
12 SWAP - .
13 ELSE daysinY SWAP -
14 1 Y + ! datecheck daynumber + .
15 THEN ; ( d m y - )

```

SCR #52

```

0 ( Calendar Vocabulary, date checking words )
1 31 VARIABLE dphtable
2 2B C, 31 C, 30 C, 31 C, 30 C,
3 31 C, 31 C, 30 C, 31 C, 30 C, 31 C,
4 : Leap? Y 2 4 MOD 0= ( is year Y a leap year )
5 Y 2 100 MOD 0= NOT AND
6 Y 2 400 MOD 0= OR ; ( - ) flag )
7 : dpm DUP dphtable + C2 ( return no of days/month )
8 SWAP 2 = Leap? AND ( add 1 if Feb and Leap yr )
9 IF 1+ THEN ; ( n1 -> n2 )
10 ( Check date within range, all return 'true' if NOT )
11 : Ycheck Y 2 DUP 1582 < SWAP 4902 > OR ; ( - ) flag )
12 : Mcheck M 2 13 U< NOT ; ( - ) flag )
13 : Dcheck D 2 1 - M 2 dpm U< NOT ; ( - ) flag )
14 : datecheck Ycheck Mcheck Dcheck DR DR
15 IF ." Date error" ABORT THEN ;

```

SCR #56

```

0 ( Calendar Print Options )
1 : 3EM EMIT EMIT EMIT ; ( n n n - )
2 : SUP 9 65 27 3EM ( SUP = set up printer )
3 15 EMIT ; ( opens pio in compressed/m )
4 ( line spacing at 9/72 in. )
5 : JANSWCH SWCH SUP 13 100 27 3EM UNSWCH ;
6 : FEBSWCH SWCH SUP 53 100 27 3EM UNSWCH ;
7 : MARSWCH SWCH SUP 93 100 27 3EM UNSWCH ;
8
9 : COLUMN 13 SWAP DO
10 I OVER month PAUSE DROP
11 3 + LOOP DROP ;
12
13
14
15

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