

UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE

OUR NEXT MEETING will be on Thursday
NOVEMBER 15, 1984 at 7:30 pm

THE DECEMBER Meeting will be
DECEMBER 13, 1984 at 7:30 pm

PLACE: CAPITAL DISTRICT PSYCHIATRIC CENTER
New Scotland Ave. Next to Albany Medical Center

The program for the November meeting will be as follows: How the computer uses variables by Stuart P. Doling, The Albany Bulletin Board (TIBBS) by Dick Ferrigan, Software Library demonstration, Assembly Language by Shen-Tong Law.

A NOTE to other Users Groups: The articles printed in the Upstate Newsletter may be reprinted if proper credit is given to the author and to the Upstate New York 99/4 Users Group.

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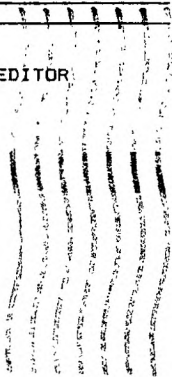


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FORTH ASSEMBLER SOURCE CODE

Texas Instruments has released to the Users Groups the source code to Forth. If you wish to get a copy please bring two initialized disk to the meeting and see Rich Lane. Many of you have gotten a copy of this but wondered what it was all about. These two disks contain the portion of TI Forth written in assembler. The disk contents is as follows:

Part 1 (ABMSRC) is the dictionary entry for the 250 or so primitives that are present when Forth is booted. This is loaded into memory at >A000.

Part 2 (DRIVER) is the code for the I/O system and support for Forth. It contains the disk and screen I/O, the allocation of user variable space, the stacks etc. Because it is more efficient to rearrange memory from the way that it defaults in the Editor-Assembler, this section also includes (in the UTIL* files) those portions of the E/A utilities that Forth requires and assembles them to different addresses. A small portion of code is also placed into the console RAM at >B300 for speed reasons.

Also on part 2 is a program called BOOT. After Forth is loaded using ASMSRC and DRIVER, Forth can (after loading the file words) save an image of itself to the VDP RAM and write this image to disk as a program file. BOOT is used to read this image and to reconstruct the forth system from the image. When booting the Forth system in the normal manner, the file FORTH is the object code of BOOT and the file FORTHSAVE is the memory image of the system. Note that if the size of the system changes, BOOT will have to have some addresses modified to work correctly.

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Annual elections were held at the October meeting. The new officers are as follows:

Richard B. Lane (President)	Stuart P. Doling (Vice President)
B43-0637	43B-4616

Arthur F. Payer (Secretary)	Stephen Goodman (Treasurer)
370-5215	885-8755

Stuart Doling has kindly volunteered to chair the meetings which will begin promptly at 7:30 (please note this time change) and end no later than 9:30. This and following meetings will follow this basic format: first a basic topic, then a demonstration, software library demonstration, and last an advanced topic. The software library will be open both before and after the meeting for your convenience.

DISKS

When bringing diskettes to the meeting to obtain updates to such programs as TI Writer etc. please bring the disks already initialized, this will speed up the process and reduce the wait. Thank you for your cooperation in this matter.

Any of you who have the TI Writer, and would like to have the Formatter configured to you specific printer (such as PIO.LF I PIO.LF, VARIABLE

132 ; R6232/2.BA=4800.DA=B) bring your disk to the meeting and we will happily do it for you. See Rich Lane.

EDITOR/ASSEMBLER

Another undocumented feature has been found. In the Assembler when it asks for the options you type RLB (for Registers, List, and Symbol table dump). You may also type T for full Text which gives you each byte rather than just the first one in each line.

ANOTHER TI CHRISTMAS?

There has been another drop in the price of most of the TI modules. Just about everything except Extended Basic, TI Writer, and Multiplan. In the new Triton Fall catalog many of the game prices are \$5.95 or six for \$29.95, this also includes some of the personal finance modules and some of the educational programs. The Adventure International series is now \$9.95 except for Pirate which gives you the module that is \$15.95. Touch Typing tutor is now down to \$19.95. And for those chess nuts Video Chess is now within reach at a low \$19.95 (as compared to the \$70. I spent). Other dealers should have similar prices. It seems that TI still has its hands on the prices.

AUTO-LOAD TIP

There are a number of public domain auto-load programs available, but some of them will not display long programs that are stored as INT/VAR 254, which is how programs longer than about 13K are stored by the TI on disk. Programs less than 13K are stored as PROGRAM.

Auto-load programs, of course, are like catalog programs except that after the disk catalog is listed the user may select one of the programs and have it load and run automatically.

Users can modify auto-load programs so they will display long programs filed as INT/VAR 254. All you need to do is add a similar line to your auto-load program where comparisons for file types are made. Here is the line: 235 IF ABB(A)=4 AND B=254 THEN 250. The line number references and variables, of course would depend on the program you are using. the line above is for the program from 99'er. At the least, this is something to go on.

Reprinted from the October MICROpendium

NEVER, NEVER

There are some things one should never do with a computer. One should never take a bath with a computer, for one. Another is to never hang up on an electronic bulletin board or telecommunications service without signing off in the proper way. Just hanging up the phone on The Source, for example, could result in extra charges because you will continue to be billed for a connection until the host computer finally figures out you're no longer on line (this can take 20 minutes). And with many local bulletin board services you could lock out other users from the system by simply hanging up. Some systems require operator intervention to correct this problem while others do it automatically. Either way it takes time.

Reprinted from the October MICROpendium

HAPPY THANKSGIVING

H I N T S F R O M H E N R Y

I have been reading, initially with some amusement, the moaning and groaning by other columnists in computer users group newsletters that they feel a real sense of loneliness because they never get any feedback from their readers. I now empathize with them. Two months ago, in desperation, I issued a challenge to you to come up with a subroutine to do in TI BASIC what LINPUT does in EXTENDED BASIC. Instead of being totally discouraged, I'll assume that it was too tough a problem to bring a lot of feedback. This month's problem will be a little easier.

CHALLENGE:

Write a short, efficient subroutine that will print out numeric output that is right-justified to a specified column and to a fixed number of decimal places (for example the user would specify two decimal places for data representing dollars and cents).

Send your solutions to me c/o the post office box in the return address of this newsletter. I'll credit all correct solutions and publish the one judged to be the most efficient. Show your great programming skills to your friends!

I T E M #1:

From Jim Peterson's Tigercub Software newsletter comes this hint on how to play and print the frequency codes for the two "secret" suboctaves of bass notes on the TI-99/4A. The demonstration program is:

```
100 DEF R(X)=INT(X+.5)
110 F=1652
120 FOR J=1 TO 25
130 READ N#
140 PRINT N#;" ",R(F)
150 CALL SOUND(500,30000,30,30000,30,F,30,-4,0)
160 F=F/1.059463094
170 IF J<12 THEN 190
180 RESTORE
190 NEXT J
200 DATA A,A FLAT,G,F#,F,E,E FLAT,D,C#,C,B,B FLAT,A
```

To play these bass notes, the CALL SOUND must contain 3 tones and a noise. The first two tones may be of either an audible or inaudible frequency and volume; the third tone must be the frequency code printed by this program (not the actual frequency) for the note with an inaudible volume; and the noise must be "-4" with an audible volume. Note that you would only make the first two tones audible in a case where you wanted to use the two "secret" octaves in chords.

I T E M #2:

If you have a disk system and are having trouble reading some of your old cassette programs, there may be help for you. Your disk system uses enough memory to keep three files open at the same time and this uses 512 bytes per file. Since you only need one open file to get the program off your cassette tape and save it to disk, you can reduce the open files to one. Do this by:

```
) CALL FILES(1)
) NEW
) OLD CS1
```

You will now have 1024 extra bytes available to read in your program. Save it to disk before you RUN it, since just because you can read a program into memory does not mean that you have enough memory to execute it. Remember that even if you have the 32K MEMORY EXPANSION that TI BASIC does not see the extra memory; only EXTENDED BASIC does.

M i k e H e n r y