

UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE UPSTATE

OUR NEXT MEETING will be on Friday,
MARCH 23, 1984 at 7:30 pm
PLACE: KEY BANK BLDG.
SW corner of Rt. 20 and Rt. 155

The MARCH meeting will be the last meeting held at the Key Bank.



UPSTATE 99/4A USERS GROUP
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H I N I M E M O R Y

This month let's take a shot at an assembly language program that will let us type something onto the screen using the MINI-MEMORY (MM) module. Using EASYBUG, first load the MM with the line-by-line assembler. Select NEW from the RUN option and type in the program (you type in the 3rd, 4th and 5th columns) as shown in the enclosed area below. Type carefully.

```

*****
-----|-----|-----|-----|-----|-----|
| OBJ   OP   |                                     | NOTES ON COMMENTS |
| ADDR CODE LAB CODE OPERAND(S) COMMENT |-----| | | | | | |
|---|---|---|---|---|---|---|---|
| 17000 0200 L1 LI RO,>0180 (1) | 1. Load starting screen location. |
| 17D02 0180 | | | | | |
| 17D04 04E0 L2 CLR @>8375 (2) | 2. Clear the byte at >8375 which |
| 17D06 8375 | | | | | | has ASCII code of key pressed. |
| 17D08 0420 | BLWP @>6020 (3) | | | | |
| 17D0A 6020 | | | | | |
| 17D0C C1E0 MOV @>837C,R7 (3) | 3. Accesses keyboard scan in MM to |
| 17D0E 837C | | | | | | see if any key was pressed. |
| 17D10 21E0 COC @ST,R7 (3) | | | | | |
| 17D12 7D44 | | | | | |
| 17D14 0300 LIM1 2 (4) | 4. You must enable interrupts to |
| 17D16 0002 | | | | | | allow you to exit the program |
| 17D18 0300 LIM1 0 (4) | | | | | | with the QUIT key instead of |
| 17D1A 0000 | | | | | | turning off the computer. |
| 17D1C 16F3 JNE L2 (3) | 5. Loads the ASCII code of the key |
| 17D1E D060 MOVB @>8375,R1 (5) | | | | | | pressed into register 1. |
| 17D20 8375 | | | | | |
| 17D22 0420 BLWP @>6024 (6) | 6. Uses the MM single byte write |
| 17D24 6024 | | | | | | routine to output the character |
| 17D26 0580 INC RO (7) | | | | | | in R1 to the screen at the |
| 17D28 0280 CI RO,>01C1 (7) | | | | | | location in RO. |
| 17D2A 01C1 | | | | | |
| 17D2C 16E8 JNE L2 (7) | 7. This program gives two lines of |
| 17D2E 0200 LI RO,>0180 (8) | | | | | | output, 64 total characters |
| 17D30 0180 | | | | | | ( >01C0 minus >0180). The logic |
| 17D32 0201 LI R1,>2000 (8) | | | | | | branches to "L2" until you type |
| 17D34 2000 | | | | | | 64 keys. |
| 17D36 0420 L3 BLWP @>6024 (8) | 8. After 64 keys, the program will |
| 17D38 6024 | | | | | | erase the 2 lines by resetting |
| 17D3A 0580 INC RO (8) | | | | | | RO back to >0180 and printing |
| 17D3C 0280 CI RO,>01C1 (8) | | | | | | spaces until R1 exceeds >01C0. |
| 17D3E 01C1 | | | | | |
| 17D40 16FA JNE L3 (8) | 9. Jumps back to the top of the |
| 17D42 10DE JMP L1 (9) | | | | | | program after we clear the two |
| 17D44 2000 ST DATA >2000 (10) | | | | | | lines to let us type in a new |
| 17D46 | AORG >701E (11) | | | | | | two lines. |
| | | | | |
| 1701E 7FE0 DATA >7FE0 (11) | 10. A reference to check the byte |
| 17020 | AORG >7FE0 (11) | | | | | | at >837C against to see if a |
| | | | | | key was pressed. |
| 17FE0 5459 TEXT 'TPYER ' (11) | | | | | |
| 17FE2 5045 | | | | | |
| 17FE4 5220 | | | | | |
| 17FE6 7D00 DATA >7D00 (11) | 11. Updates the REF/DEF pointer and |
| 17FE8 | END (12) | | | | | | names the program TPYER. |
| | | | | |
|-----|-----|-----|-----|-----|-----|
*****

```

After saving, try the program by selecting the RUN option from the MM and inputting TPYER as the PROGRAM NAME. Well this program is not spectacular, you can see here the basis for screen/keyboard interaction.

M i k e H e n r y

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

Another month has swept past. As I write this column (March 11, 1984), I still haven't received any issue of the Home Computer Magazine (alias 99'er Magazine). We're waiting 99'er! Maybe we'll all be reading the March issue by the time that this newsletter is printed and you have it in your hands. We're hoping 99'er!

The local bulletin board (TIBBS - Phone number 518-765-4993) continues to be a real highlight for Albany area TI owners. If you don't have modem capability, then borrow it or visit a friend who does. This is a treat you shouldn't miss.

The time is right to share your ideas with fellow 99/4A users. If you have hints or tricks that you think are worth sharing with fellow club members, send them to my home at 734 Wright Avenue, Schenectady, New York 12309, to me c/o the Users Group at P.O. Box 13522 in Albany, or talk to me at our monthly meetings. If you pick up an idea someplace else that you have not seen appear in this column, send that along. Just include a note as to where you found it and we can give an appropriate credit when we use it.

Item 1:

EXTENDED BASIC has a system capability that allows you to "freeze" a list as it is scrolling on the screen. During a LIST, you just press any key to freeze the screen at the end of a line and then any key again to resume. I decided that it would be nice to have this capability when you are outputting information to the screen from inside a program. I have written a subroutine that will work in TI or EXTENDED BASIC. The subroutine is:

```
6000 REM FREEZE ROUTINE
6010 CALL KEY(3,KKK,SSS)
6020 IF SSS=0 THEN 6060
6030 CALL KEY(3,KKK,SSS)
6040 IF SSS=0 THEN 6030
6050 IF SSS=-1 THEN 6030
6060 RETURN
```

Now just put a GOSUB 6000 after each PRINT statement. RUN your program. Whenever you want to freeze your output, just hold any key down until the output stops (hold the key down because the key must be down when the program finishes a PRINT statement). When you want the output to resume, just press any key. I think you'll enjoy this one.

Item 2:

I found a bug in the DISK MANAGER (D/M). I'll share it with you because I thought that there was a problem with my system when I ran into the bug, and didn't know whether to cry or sell the system. The D/M allows you to write protect disk files. When you backup a disk the D/M transfers the file write protection to the new disk, and files are write protected or not write protected just as they were on the master disk. This causes a problem when the master disk has a large file and/or program that is write protected. If a file is over 45 sectors in size, then the D/M copies the file in two passes. On the first pass, it copies the information that goes into the directory entry for that file (including the fact that it is write protected). The second pass of the copying operation then results in an error because it is trying to write onto a write protected file. Sadly, you get a lousy error message. You get error code 01 which indicates "RECORD NOT FOUND", a totally inappropriate message. To overcome the bug, you must take the write-protection off of files over 45 sectors before you can back them up or copy them. You can restore the write-protection to the file on your master disk after backup is completed.

M i k e H e n r y

TUNNELS OF DOOM

A Review by John Moore

"I'm in front of a door in a 3-D graphical hallway. I listen at the door. Nothing. Cautiously my party enters. 2 Wights! With some sword & axe swinging and a bit of magic they are defeated. I look to their treasure hoard, and I find 200 gold pieces. And the King! My quest is completed! But, now I must return to the surface...."

Tunnels of Doom is a graphical adventure game for the TI-99/4 or 4A, comes with disk or cassette, and a solid-state command module. The game, which uses 3-D graphics for the hallways and overhead graphics for rooms, involves up to four characters (Wizard, warrior or rogue, or any combination thereof), in a quest to rescue a King and his Rainbow Orb from monsters who have abducted them and now hold them in a dungeon beneath a ruined castle. The dungeon can be of 1-10 levels (your choice) and is of three different skill levels (also your choice). The monsters are of great variety (Orcs, Wolves, Hobboblins, Ghosts, etc.,etc.), and, although I've seen scores, I have many yet to see. The treasures they guard usually consist of gold pieces, perhaps a map or weapon, or even a magic item to aid you in your quest! As far as equipment goes, you can buy weapons (swords, daggers, bows, etc.), armor (ring mail, plate mail, or leather), healing potions (if you have money) and rations.

And of course, it's random. The dungeon, monsters, treasure, king and everything else is completely random. So you don't have to worry about exploring everything and getting bored! The game can be saved if you want, just like the Adventure series!

Tunnels of Doom is not a game like the Attack or Hunt the Wumpus that you'll get bored of or master quickly. On the contrary, it is a game of nearly endless variations that defys boredom.

NEWS FLASH NEWS FLASH NEWS FLASH NEWS FLASH NEWS FLASH NEWS FLASH

Home Computer Magazine has not fallen off the face of the earth. We know of one person who has finally recieved their new issue. As rummored they now support other computers: Apple, Commodore, IBM, and still Texas Instruments.

FOR SALE

Custom Built Computer Workcenters

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FOR SALE

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If you have anything to sell or trade, let others know, put an ad in this newsletter. To do this see one of the officers of the group. There is no charge for this service.