# BLUE RAM UTILITY CASSETTE Making Instructions.

1. Do a normal installation of UTILITY from your present TAPE.
2. MOVE 6000 THRU 6D6B TO 8080
3. MOVE 6DEC THRU 7FFF TO 8DEC
4. EDIT 8CA2 + 8CA3 TO 00 00
5. EDIT 8000 with startup program that follows —

| | | | |
|---|---|---|---|
| 8000 | C3 03 20 | JP 2003 | Jump to START of this cassette |
| 03 | FF 1B | RST 38H | CALL onboard FILL subroutine |
| 05 | 00 40 | E, D | Start Location 4000 H |
| 07 | FF 0E | C, B | Bytes to Fill TO 4EFE |
| 09 | AA | A | Value to write |
| 800A | 21 80 20 | LD HL, 2080 | Move from 2080 H |
| 0D | 11 00 60 | LD DE, 6000 | Move to 6000 H |
| 10 | 01 6C 0D | LD BC, 0D6C | Move 0D6CH Bytes (3436) |
| 13 | ED B0 | LDIR | |
| 15 | 21 EC 2D | LD HL, 2DEC | Move from 2DECH |
| 18 | 11 EC 6D | LD DE, 6DEC | Move to 6DECH |
| 1B | 01 14 12 | LD BC, 1214 | Move 1214 H Bytes (4628) |
| 1E | ED B0 | LDIR | |
| 20 | 21 6A 20 | LD HL, 206A | Move from 206A H |
| 23 | 11 D2 6D | LD DE, 6DD2 | Move to 6DD2 H (User Vector Area |
| 26 | 01 16 00 | LD BC, 0016 | Move 16H bytes (22) |
| 29 | ED B0 | LDIR | |
| 802B | FF 35 | RST 38H | CALL onboard String Display routine |
| 2D | 14 | E | Horiz. Position |
| 2E | 1E | D | Vert Position |
| 2F | 14 | C | Character Display Parameters |
| 30 | 43 20 | HL | Address of character string to display |
| 32 | FF 35 | RST 38H | |
| 34 | 14 | E | |
| 35 | 2E | D | |
| 36 | 14 | C | |
| 37 | 53 20 | HL | |
| 39 | FF 35 | RST 38H | |
| 3B | 14 | E | |
| 3C | 3E | D | |
| 3D | 14 | C | |
| 3E | 63 20 | HL | |
| 8040 | C3 D5 6D | JP 6DD5H | Jump to cassette SWAP LOOP |
| 8043 | 52 45 4D 4F 56 45 20 20 | | REMOVE |
| 4B | 55 54 49 4C 49 54 59 00 | | UTILITY |
| 53 | 49 4E 53 45 52 54 20 | | INSERT |
| 5A | 42 4C 55 45 20 52 41 4D 00 | | BLUE RAM |
| 63 | 48 4F 4C 44 20 3D 00 | | HOLD = |

Actual Location when moved and RUNNING.

| | | | | |
|---|---|---|---|---|
| 6DD2 | 806A | C3 3A 24 | JP 243A | Jump to RUN routine |
| D5 | 6D | F3 | DI | |
| D6 | 6E | DB 14 | IN A, (14) | Input Port 14 H |
| D8 | 70 | A7 | AND A | Test if 0 |
| D9 | 71 | CA D6 6D | JP Z, 6DD6 | If so go back |
| 6DDC | 8074 | 3E C2 | LD A, C2 | Load A with 194 |
| DE | 76 | D3 0A | OUT (0A), A | Out 0(10) = 194 |
| E0 | 78 | 00 | | |
| E1 | 79 | 00 | | |
| E2 | 7A | 00 | | |
| E3 | 7B | 00 | | |
| E4 | 7C | FB | EI | |
| 6DE5 | 807D | C3 15 20 | JP 2015 | Jump to cassette RESTART |

6. Now BURN a 2764 EPROM
7. Put it into a Test Cassette
8. RESET Start with BLUE RAM
9. HOLD RESET
10. Remove BLUE RAM and install UTILITY cassette
11. RELEASE RESET
12. Follow instructions on the screen
    Remove UTILITY
    Insert BLUE RAM
    HOLD = until UTILITY starts on the screen
13. Do what you normally would do at this point.

Dear Don,

Why does it hang up with a complete Lock up after putting the B of BLUE and with no normal sound being produced?

If you now do a BOMB RECOVERY and get the BLUE RAM recover, response on the screen, you can TYPE IN CALL! 6005 GO and you will be back in the cassette swap Loop. Just HOLD = and you will see that it now has opperated as it was intended.

Michael White sent me his EPROM burner to check out because it didn't work for him after putting it together. He forgot a feedthru solder joint. I just sent it back to him and also included this program for him to check out. Maybe between the two of you and me we can get the problem solved. I await your answer.

Norman got his car Thursday August 29, 1985. (20 weeks)

I hope the empty 4 bytes are enough to insert what is needed.

Your EPROM Burner (Flamm model) is working OK now after I replaced both of the IC's of all the old parts reused from your old burner. New parts (ones I didn't have lying arround) and mailing cost me about $5.00

Am now leaving to go to FLORIDA to see EPCOT.

Write me after Sept. 29, 1985

Your Friend from PA.

LeRoy

Sept. 12, 1985