2650 KEYBOARD

In Jeff Roloff's reply to a reader's question in the September 1977 issue of **Radio-Electronics,** he stated that the Radio-Shack keyboard works well in the 2650 computer system. This is not entirely correct. This keyboard is not standard ASCII, and the key functions may need to be redefined for this system.

Specifically, the PROM's recognize a 1B code for the escape function, whereas the Radio-Shack keyboard generates a 7E. Code 1B is not generated anywhere on this keyboard. A major modification would be

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required to correct this, such as the availability of a PROM that would recognize 7E as an escape. Actually, it would be better to use 00, using the BREAK key since 7E would leave a "less than" symbol on the screen after the escape function.

Another problem with this keyboard is in the control key. Instead of modifying the normal key code, this key generates a code by itself, causing problems in the editor/assembler tape. The control C code is generated with a shift C, but using HERE IS takes only one keystroke. Control P is not available, so RAM locations 2348 and 28FA should be changed from 10 to 02, and SHIFT R can be used for this function. For control O, use shift O. Change location 28EC from 15 to 05, and use shift U for control U. Carriage return is generated by shift], but it is better to use LINEFEED to get this into a single keystroke. For this, change the following locations from 0D to 0A: 2245, 2289, 22EA, 2359, 2364, 23A5, 2695, 284D, 28A5, 2921, 296C, 2D82.

One last change in the keyboard is to add a 1000-ohm resistor from pin 5 of Z11 to V_{CC}. This eliminates a floating input that may cause continuous REPEAT functions.

These may seem like a lot of changes, but the Radio-Shack keyboard is still the only easily available, inexpensive keyboard sold with a guarantee.

MIKE HERBACH
Signetics Engineering Staff
Sunnyvale, CA

Regarding the use of the Radio-Shack keyboard with my board, it would certainly appear there are many problems. I had not tried it myself—several customers just said it had worked fine with their boards.

I recommend (contrary to Mike Herbach's opinion) that people not use this type of keyboard unless they want to keep modifying all the Central Data programs—which will not be offered in Radio-Shack form. I regret ever mentioning the Radio-Shack keyboard; I should have tried it myself first.—Jeff Roloff

P.S. If you modify the keyboard you invalidate the warranty—Editor

letters

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This letter is in reference to the Radio Shack keyboard (No. 277-177) and to Mike Herbach's letter in the February 1978 issue.

It is quite easy to make the conversion from a "7E" code to a "1B" code as needed for the 2650, provided that you don't mind unsoldering the board from the keyboard. The information on how to do this is available from Jerry Heep, Project Engineer, Tandy Systems Design, 1800 One Tandy Center, Fort Worth, TX 76102.

I have already modified my board and it works perfectly.

KEITH LITTLE
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