

Date: 1st December 1998

Echelon Main LCD backlight driver

Problem

Transistor Q3 may fail prematurely when the main graphics LCD backlight is run at less than 100%, eg when set to either 0, 1 or 2 in the Setup-Panel display.

Affected

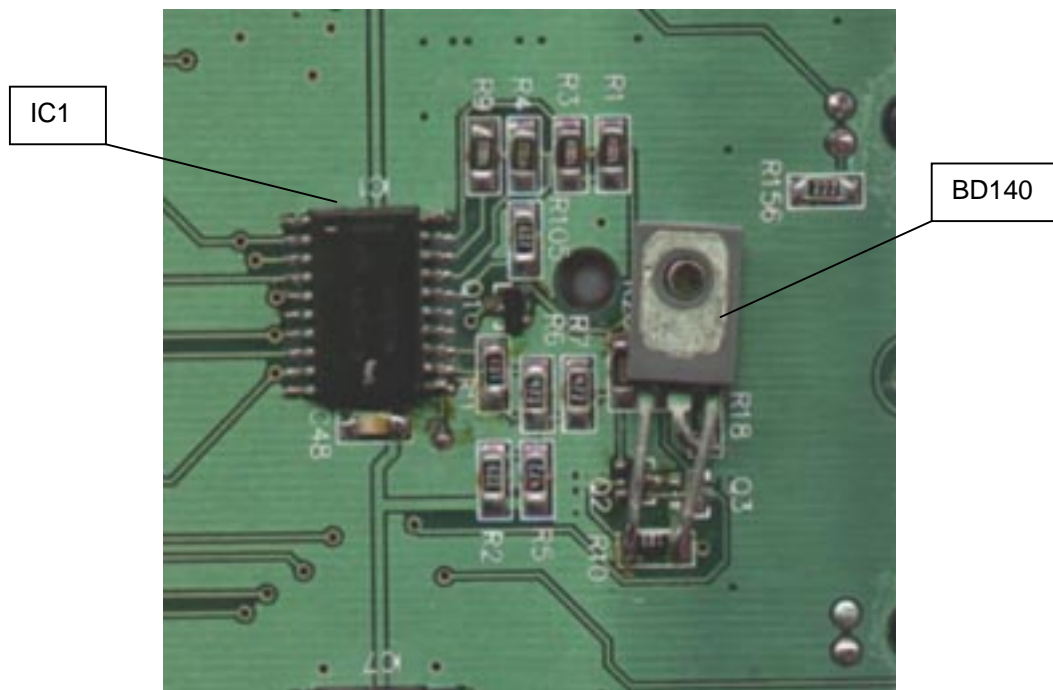
Echelon consoles with serial numbers up to and including E98343.

Solution

Replace transistor Q3 on ECHPROG2 with a BD140. These are available from general electronics part suppliers.

1. On the solder side of the PCB locate the backlight dimmer circuitry close to IC1 (74HC573).
2. Locate and remove Q3 (marked T1p).
3. Locate the end of an M3 bolt that is used to hold the main LCD to the program card. The bolt is nearby Q3.
4. Place the BD140 over the bolt with the metal faced heatsink side upward.
5. Solder the centre lead of the BD140 to the end of R18 furthest from the bolt.
6. Solder the outer leads of the BD140 to either side of R10 such that they don't cross over.

A minor shift in the backlight dimmer levels is be expected due to the different gain of the transistor. The diagram below shows a modified board.



T E C H N I C A L B U L L E T I N S H E E T

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