TECHNICAL SERVICE BULLETIN

Date: 4/1/96

merit industries, inc.

Problem: UART chip blowing out.

Games affected: All video games using the CRT-260 board.

Symptoms: Touchscreen controller failure.

Cause: Electro-static discharge feeding through the +5V line.

Solution: Add an additional +5V line and attach a transient suppressor diode.

Instructions (See Figure 1 for all instructions)

1. Turn off the game and unplug it from its power source.
2. Open the CPU section door and slide the CRT-260 into its service position.
3. Disonnect all wires, harnesses and ground straps attached to the CRT-260 and its daughter boards.
4. Remove the CRT-260 from the cabinet and turn it over to the solder side.
5. Place a piece of kapton tape between the pin rows for U41 (on the solder side), covering the traces and vias located between the pins. (This is to prevent the suppressor diode you are about to install from shorting against any exposed vias.)
6. Attach a 22 AWG wire from Pin 12 of U41 (chip select 0 and chip select 1 of the UART) to the +5V pin of the capacitor at CX41 (when viewed from the solder side, the +5V pin of CX41 is on the left).
7. Attach a transient suppressor diode from Pin 13 of U41 (UART) to the ground pin of CX41 (when viewed from the solder side, the ground pin of CX41 is on the right; you can see that it is connected to the ground plane). Make sure that the cathode end of the diode (the end with the band) is attached to the UART pin and the anode end is attached to the ground.
8. Using silicone, seal the diode in place.
9. Place the CRT-260 back into the cabinet and reconnect all wires, harnesses and ground straps. Close the CPU section door.
10. Plug in the game and power up.

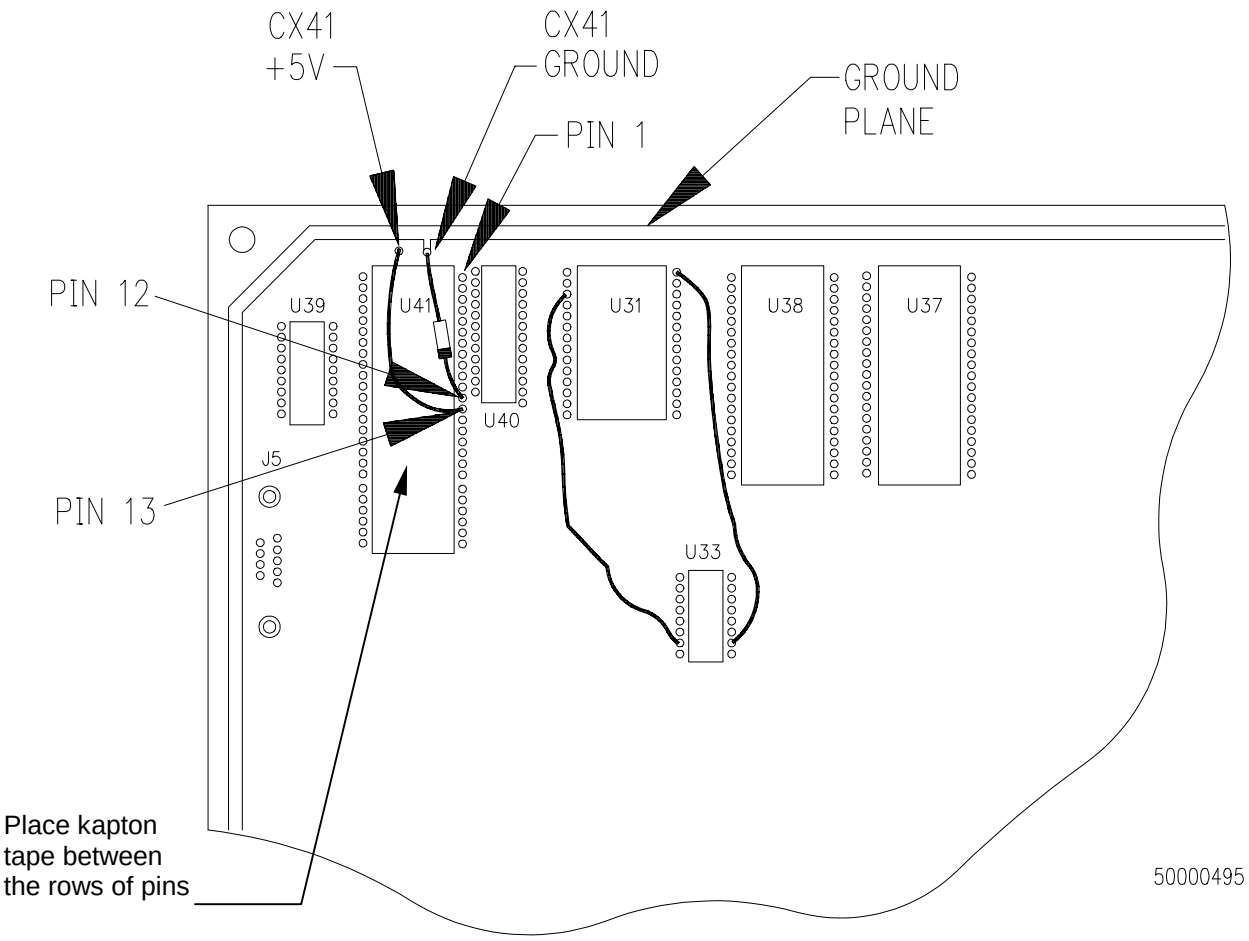

Figure 1 - Solder side CRT-260