

TECHNICAL SERVICE BULLETIN

06/7/95

merit industries, inc.

- Problem:** Failure of video sync driver chip.
- Games affected:** Some games with CRT-250 or CRT-260 CPU boards.
- Symptoms:** Unstable picture due to loss of vertical or horizontal sync.
- Cause:** Sync driver chip may be damaged by ESD from monitor.
- Solution:** If game exhibits this problem, replace U8 (7406) (or U23 for the CRT-250 board) and add two transient suppressor diodes to the to the sync outputs for protection. To order the diodes, call Merit Customer Service at 1-800-445-9353 and ask for (2) SC2111 Zener diodes.

Instructions

1. Open the rear door and slide the CPU board into its service position.
2. Disconnect any harnesses, cables and/or ground straps connected to the CPU board and remove the board from the cabinet. Be sure to remember the orientation of the board so you can put it back the same way.
3. Locate J3, the 65-position connector on the CPU board. Turn the board solder-side up, and locate the pins for J3.
4. Following the diagram in Figure 1, solder the cathode end of the supplied voltage-suppression diodes, to Pin 4 and Pin 5 of J3, **on the solder side of the CPU board.**
5. Solder the other end (anode end), of the diode attached to Pin 4, to the ground patch to the right of Pin 1. You may want to scratch off some of the green coating covering the ground patch, to make a better connection. Solder the anode end of the Pin 5 diode to the ground patch(es) to the left of Pin 6 or to Pins 7, 8 or 9. Ground patches and pins can be seen in Figures 1 and 3.
6. Remove the existing video sync driver chip by carefully inserting a screwdriver underneath it and gently prying it up. Install the new chip in its place. Chip locations can be seen in Figures 2 and 4.
7. Place the CPU board back on the PC shelf and reattach all harnesses.
8. Put the shelf back into the cabinet and you're ready to go.

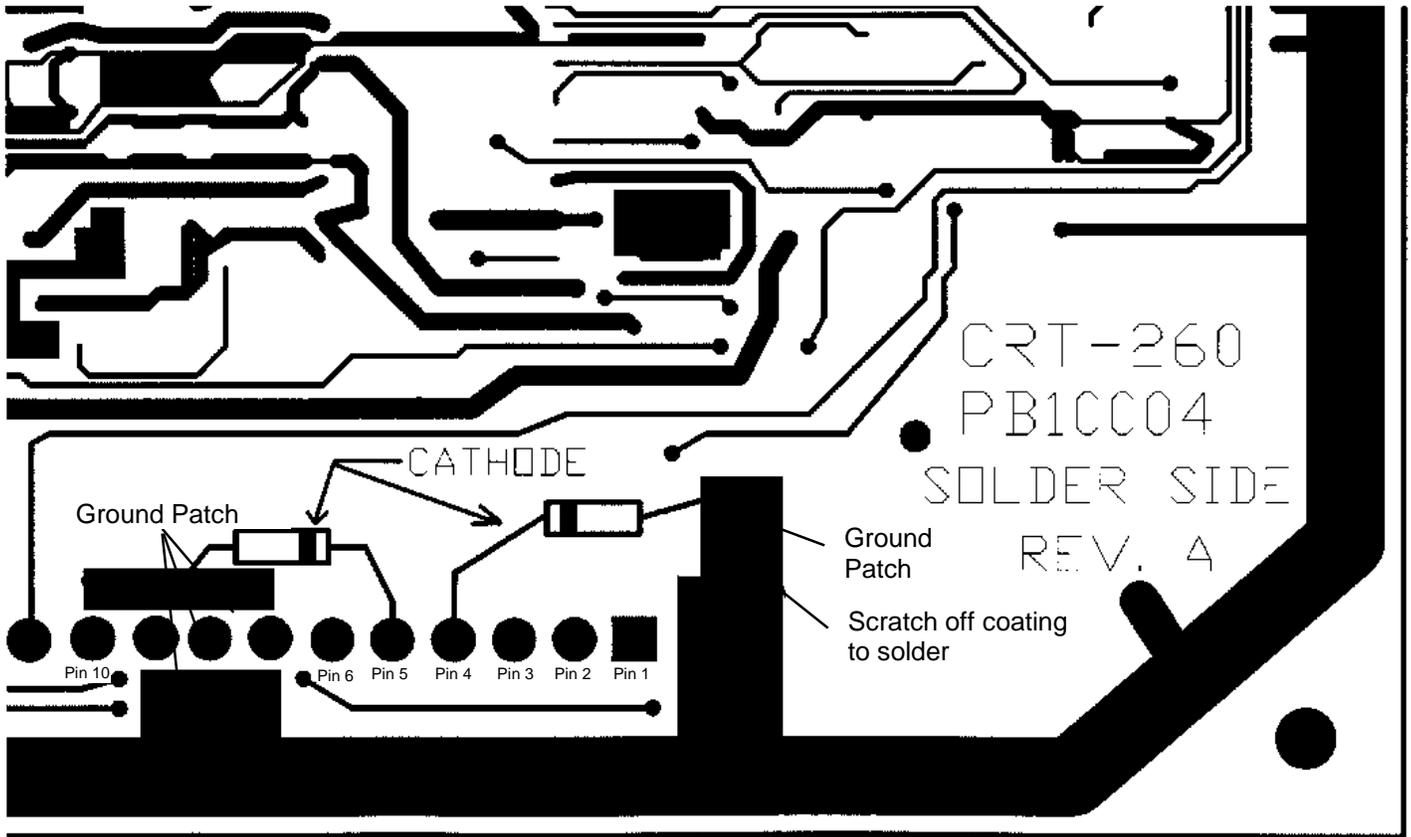


Figure 1 - Diagram for Attaching Suppressor Diodes to the CRT-260 Board

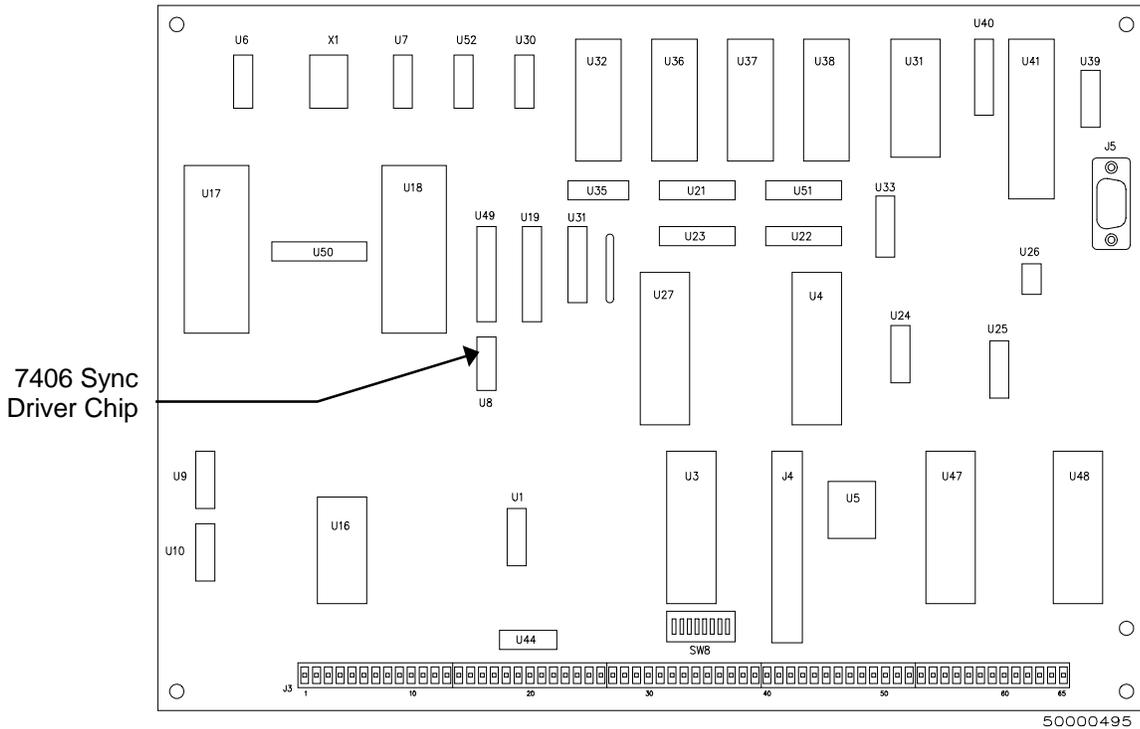


Figure 2 - Video Sync Driver Chip Location for the CRT-260

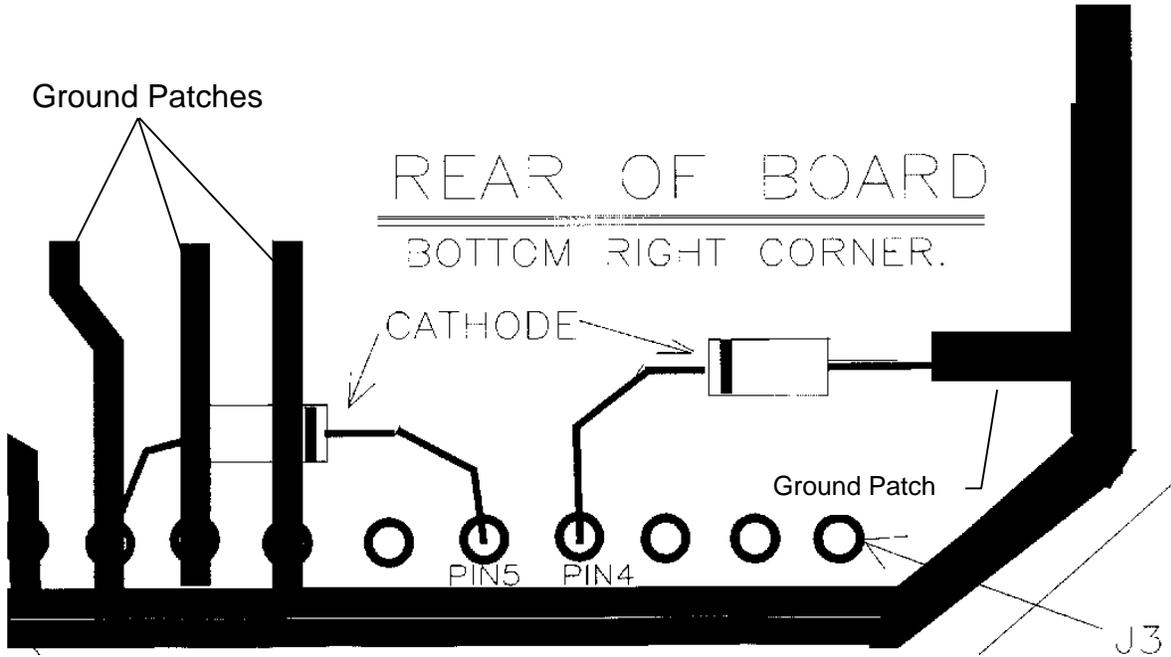
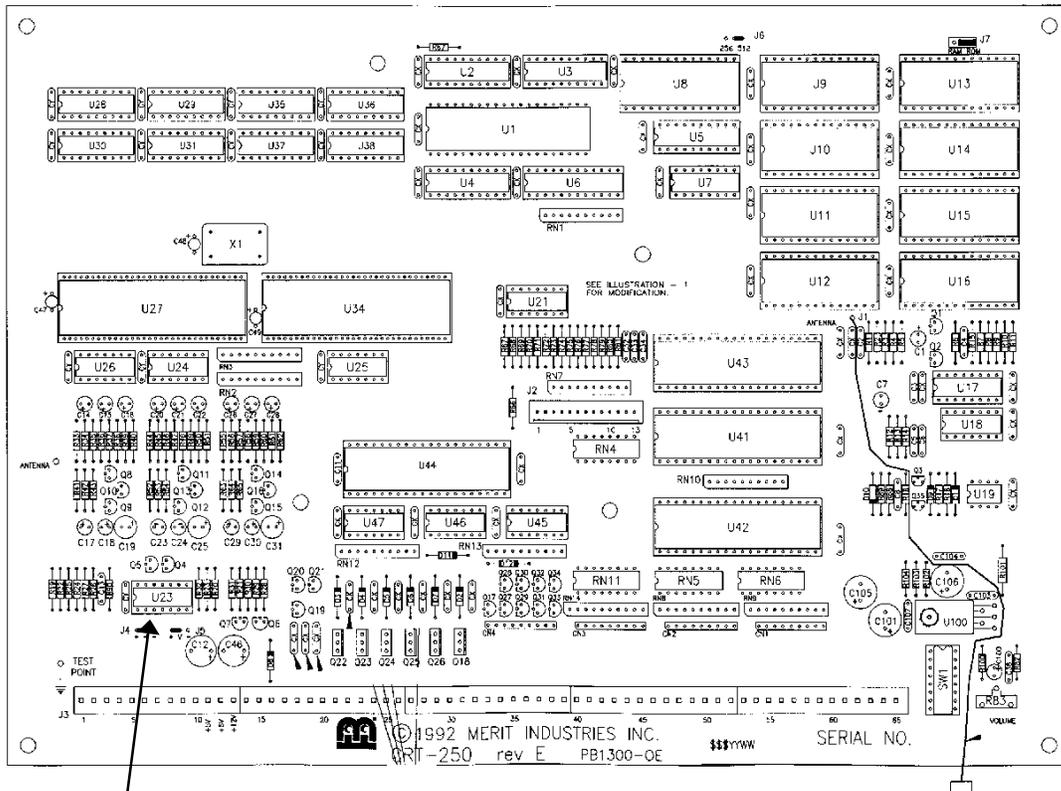


Figure 3 - Diagram for Attaching Suppressor Diodes to the CRT-250 Board



7406 Sync Driver Chip

Figure 4 - Video Sync Driver Chip Location for the CRT-250