

# L.E.D. Sign Troubleshooting Guide

- **My sign has no display at all.**
  - **This issue can reside in either the Sign Logic or Display Matrix Boards**
  - Try to cycle power to the sign only.
  - Check 12 Volts at the power connector for the Sign Logic.
  - Check to see if there is any L.E.D.s lit and or flashing on Sign Logic / Sign Combo Board.
    - Does not apply to Display Driver Board.
  - Check to see if there is 5 Volts present at the Q1 voltage regulator on the Display Matrix using a D.M.M. or an Oscilloscope.
  
- **My sign is not communicating / has an old message on it / is not detected.**
  - **This issue can reside in either the Sign Logic, Communications Cable, or Main CPU**
  - **Before diagnosing anything, MAKE SURE IT IS A TOURNAMENT GAME!!!**  
(Check Serial # in **ITS Explorer** and or **Serial Lot** in Macola)
  - Verify that the communication cable (serial cable) is connected both at the Sign Logic and the Main CPU.
    - You may want to also ask if they have ever changed this cable out with a regular phone line (RJ11 cable). This type of cable **WILL NOT WORK**. It must be a serial cable (inverted on one end).
  - Check for kinks / cuts in the communication cable.
  - Suggest to the customer to try this unit on another machine to see if the problem follows. (Bring the Display Driver / Sign Logic / Sign Combo to another TOURNAMENT unit)
  
- **There is a bunch of random dots on my display that don't go away unless you turn the game off and on again.**
  - Verify that the customer has a Sign Logic and NOT a Display Driver
    - **Display Driver Boards** – Usually low 12 volts. No update fix.
    - **Sign Logic Boards** – Needs update to code version 1.14 with jumper wire.
    - **Sign Combo Boards** – SHOULD NEVER COME UP WITH THIS ISSUE.
  
- **The display on my sign sometimes gets “scrambled” or “jittery / jumpy”. With this they are referring to the characters going across the display becoming unstable, and dots sometimes appear in front of characters or are missing from characters while in motion.**
  - Make sure the sign has good grounds going to it and is tied to field ground.
    - There have been instances where customers have used a different power supply for the L.E.D. Sign power (+12VDC). This can cause this problem. All the equipment in the unit should be utilizing the power supply that is providing the P.C.B. with power.
  - Ask if the customer can confidently re-solder the four pin power connector to the Sign Logic (JP3) / Display Driver (JP2), the sixteen pin connectors on both the Logic (JP1) and Matrix. If yes, have them do so, this has corrected this issue more than once, but is not a guaranteed fix.
  - If either of these things does not correct this issue, the problem could possibly reside in the voltage regulator on the Sign Logic (U13) / Display Driver (U3). Or on the Display Matrix (Q1). Try replacing the part(s) if possible.
    - 7805 regulator (+9VDC input -- +5VDC output)

- **How do I erase the message off of my sign?**
  - **Display Driver Board** – Remove power and the 3 Volt battery, then re-apply power.
  - **Sign Logic Board** – Remove power, short pins 1 and 2 on the 6 pin GAME PCB connector next to the heat sink (*the 2 closest pins to the heat sink*), then re-apply power while pins are shorted. Remove short after power has been re-applied and it should have reverted back to the default message.
  - **Sign Combo Board** – YOU CANNOT PERFORM THIS ACTION ON THIS UNIT.