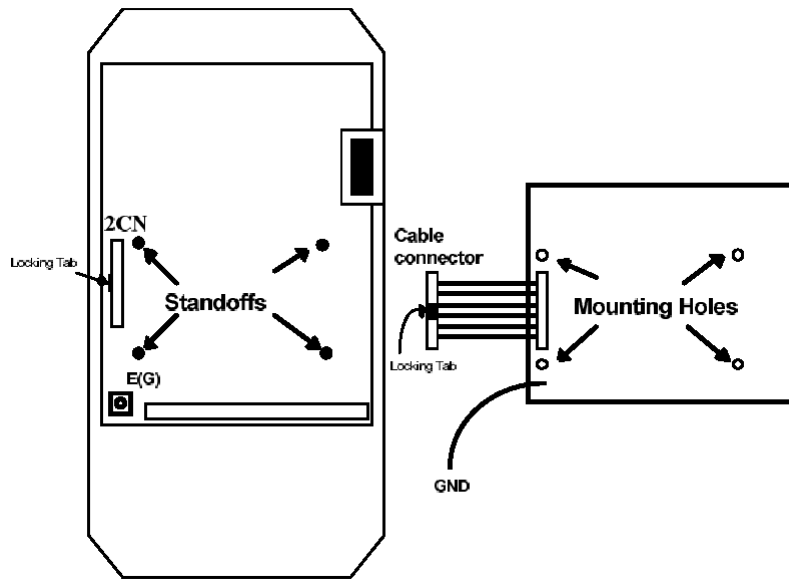


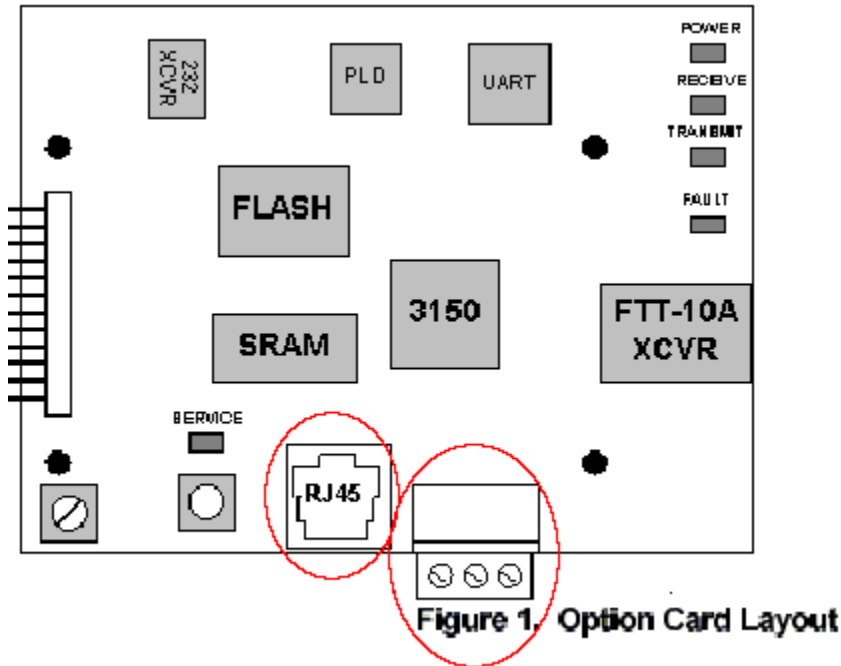
Here are several tips that may help resolve intermittent serial communication loss with Lonworks and the GPD506/P5:

**1) Check for possible loose connections.**

A) The Lonworks board is connected to the 2CN connector of drives control board by a 4 wire cable. Verify this cable is snapped in firmly to the 2CN connector. Also, make sure that the individual wires on the cable have not pulled out of their locations.



B) There are 2 connectors on the Lonworks board that allow for network communication from a building automation system. One is a 3 terminal green phoenix connector and the other, a RJ-45 plug. Verify the cables at these plugs are properly connected.



## 2) Possible electrical noise interference problems.

Poor electrical grounding at the drive, or Lonworks board can generate noise and disrupt network communications. Please refer to page 1-12 in the GPD506 / P5 Technical Manual (TM4506) for proper grounding of the drive.

- GPD506/P5 Technical Manual

The grounding of the Lonworks board is described in the following paragraph.

- GPD506/P5 Technical Manual with Lonworks

### Excerpt from TM4567 page 4:

"Install a green ground wire to the Ground terminal of the CM047 Lonworks interface, to a noise free control ground (typically this will be either the panel power supply line ground, or the ground connection referenced at the local controller).

**Note:** Ground the Lonworks interface is recommended to correctly supply reference to the network. However, if a noise free ground is not available, leave the ground terminal on the Lonworks interface un-terminated."

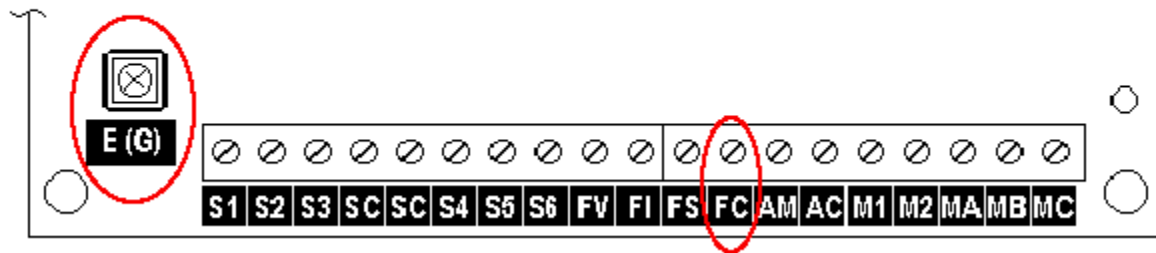
Electrical noise causing interference with serial communication may be observed on the drive by using an oscilloscope.

Connect the positive and negative probe leads of the scope to terminals E (G) and FC, respectively, of control board.

Observe the wave form on the o-scope first. Then connect a .1uf 50VDC ceramic capacitor between the E (G) and FC terminals and observe the O-scope waveform again.

If a significant reduction in spurious waveforms are obtained , then the .1 uf capacitor may help filter noise levels that can affect network communication at the Lonworks board.

# GPD506/P5 Control Terminals



### 3) A possible faulty Lonworks option circuit board may be the problem:

- If the wiring connections are OK
- If noise levels appear to be minimal
- If the building automation serial transmission signal is functional

Then replace the Lonworks option card .

For further information, please see "Link to related files" below.