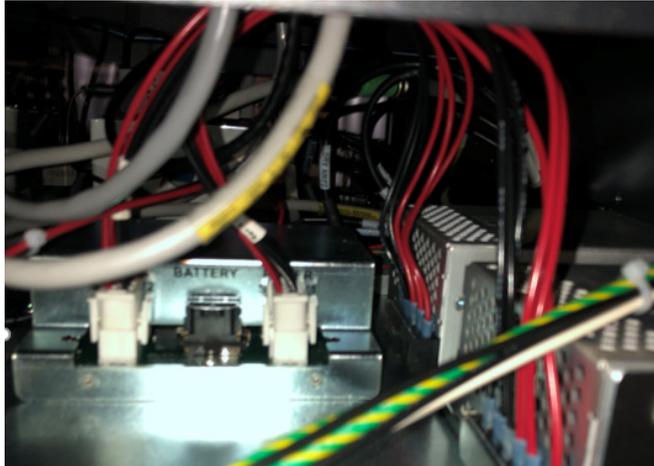


## Power Supply Node Replacement in PARALLAX Transmitters

### Overview

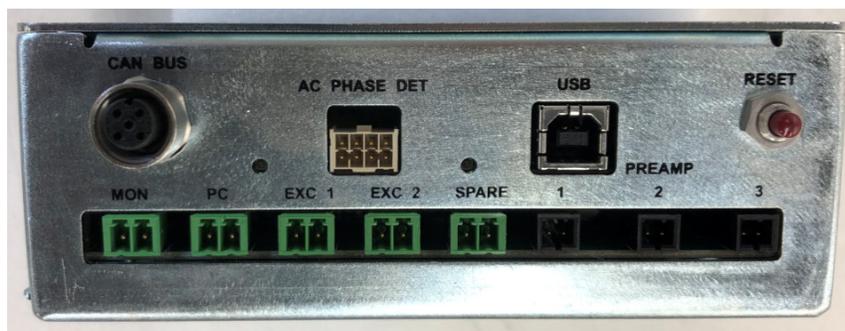
The Power Supply Node (pn 65000737) is located underneath the access panel in the top of the PARALLAX's main cabinet.



Pic1. View from inside access panel

The unit provides DC power to the exciters, preamps, touch screen, Ethernet switch, and the PCA computer. In the event of a replacement, the CAN BUS termination settings of the replacement unit must be the same as the original unit.

**Note:** This procedure is based on receiving a replacement programmed/configured Power Supply Node from Comark, which cannot be interchanged between cabinets or with units from other stations without being reprogrammed at Comark.



Pic2. Power Supply Node Assembly – Front View

Depending on the vintage of the main cabinet, there are three different methods that are used for termination:

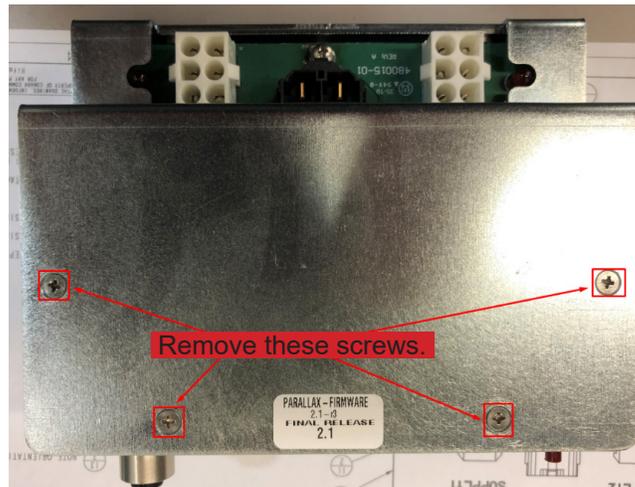
1. A CAN BUS “TEE” that is connected to the PS Node Assembly: One of the ports of the TEE has a termination resistor assembly.
2. Internal termination of the CAN BUS: Jumpers inside the PS Node Assembly allow for an internal resistor to be selected to provide termination.
3. Patch Panel Interlock Assembly: Either the internal termination in the PS node or a CAN BUS termination on the Patch Panel Interlock Assembly could be used (see the Patch Panel Interlock Assembly section of this bulletin for more information).

### Preparation

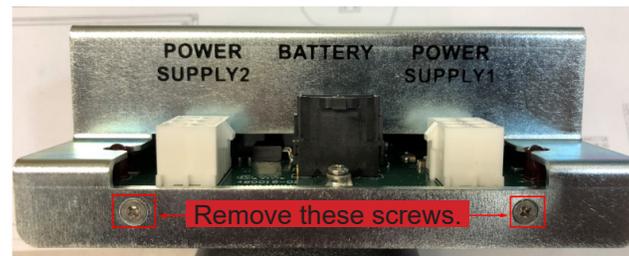
Turn the transmitter OFF and shut down the PCA computer via the touchscreen. Then, shut off the internal control breakers (CTRL1 and CTRL2) and disconnect the connections from Power Supplies 1 & 2 and the backup battery. Then, disconnect the output connections (exciters, pre-amps, touchscreen monitor, PCA computer, and Ethernet switch). Lastly, disconnect the CAN BUS.

### Confirmation of jumpers and jumper settings

To confirm jumper settings, remove the cover of the defective Power Supply Node Assembly and verify the jumper settings. Then, remove the screws as shown:

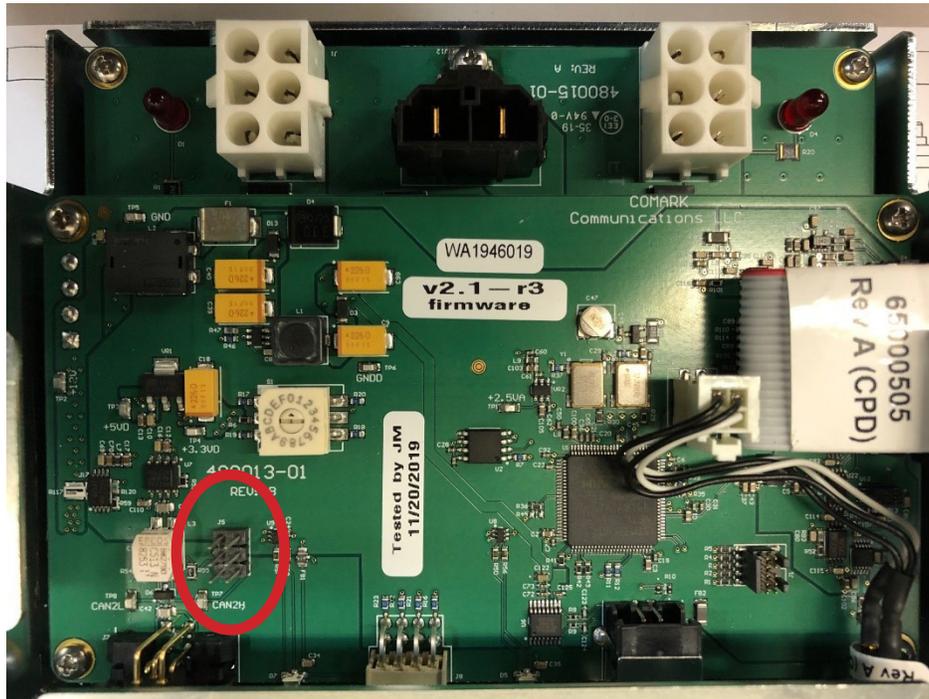


Pic3. Power Supply Node – Top View



Pic4. Power Supply Node – Rear View

After the top cover is remove, locate J5, which allows internal termination of the CAN BUS.



Pic5. Redundant PS Controller Board – J5 location (in red)

If the original PS Node Assembly has the J5 jumpers, remove them and install them on the replacement unit. If there are no jumpers in the original unit, re-install the cover and proceed with installing the replacement PS Node Assembly.

### Patch Panel Interlock Assembly

As previously mentioned, one of the methods to determine whether or not the jumpers are used in the PS Node is by checking which Patch Panel Interlock Assembly is on top of the cabinet (if so equipped). See pictures below for location and revisions. If your transmitter does NOT have this option, then the first two methods of verifying the termination must be performed and this section is irrelevant.

If you have the above Patch Panel Interlock, 65000707, RevC (1 Ethernet port and 2 CAN BUS connectors), the jumpers are not required. However, there should be a terminator installed on one of the CAN connectors on the Patch panel. If you have RevB (6 Ethernet ports and no CAN BUS connectors), jumpers in the PS Node assembly. are required.



Pic6. Cab1/Main Cab with Rev C, 65000707 Patch Panel Interlock



Pic7. Cab1/Main Cab with Rev B, 65000707 Patch Panel Interlock

After the termination of the CAN BUS has been confirmed and the replacement Power Supply Node has been installed, reconnect the CAN BUS, followed by the output wires for the exciters, preamps, touchscreen monitor, PCA computer, and Ethernet switch. Once completed, reconnect the Power Supplies 1 & 2 and the backup battery. Next, turn on the internal control breakers (CTRL1 & CTRL2) and then the PCA computer. After the PCA has finished rebooting, turn the transmitter ON via the touchscreen. The transmitter resumes normal operation.

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