

LANL Testing
of
Front End Boards
&
Low Voltage Power Supply

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Raspberry Simpson)

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Front End Boards

- Analog boards
 - All ~78 repaired and tested by Scott Delay
 - All 75 ohm termination and same time constants
 - HV jumper removed so 8 (not 16) PMTs with 1 HV
- Digital boards
 - So far Raspberry Simpson has checked ~20 using 16 PMTs to confirm rates and that all outputs are working (no problems found)

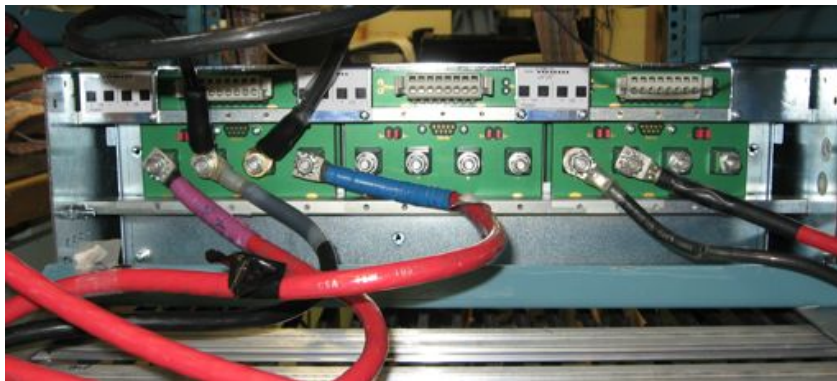
Low Voltage Power Supply

Weiner LV supply to replace Milagro's Acopian supplies

- +5 V (3.6 amps) and -5 V (4.1 amps) for each analog board
- -5.2 V (4.9 amps) for each digital board
- Up to 21 boards per crate
- Testing with 120V AC power (but can run on 208V AC power to get higher wattage)
 - One FEB requires 156 W
 - Each additional FEB adds ~90 W



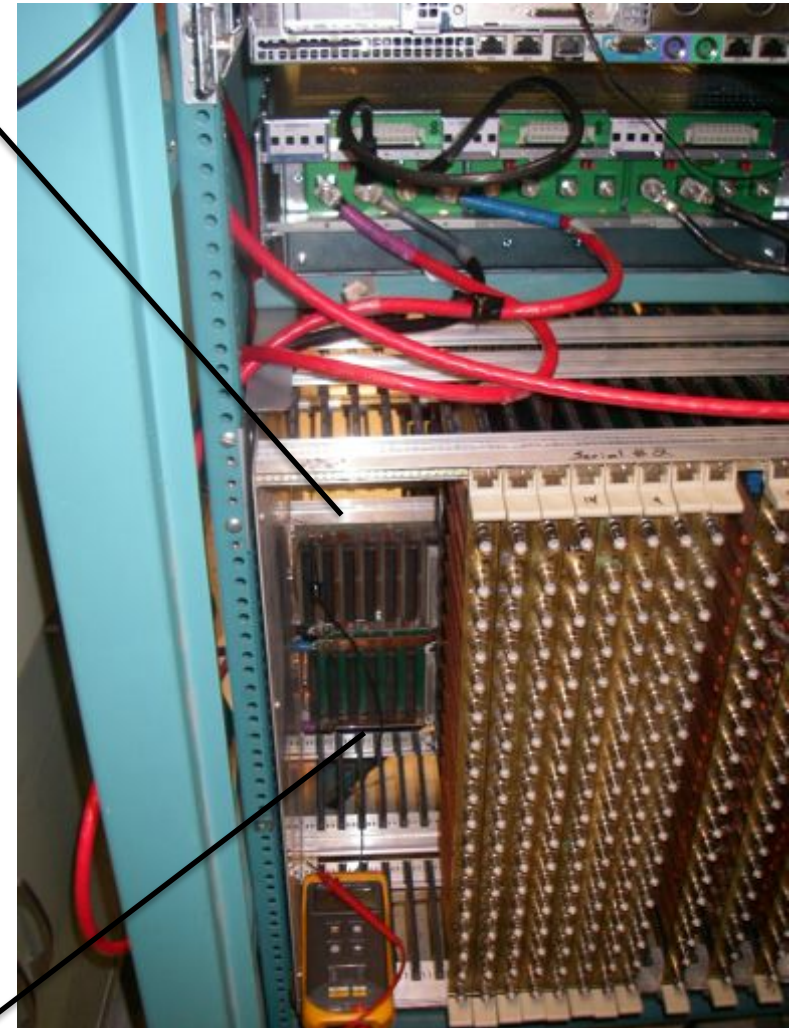
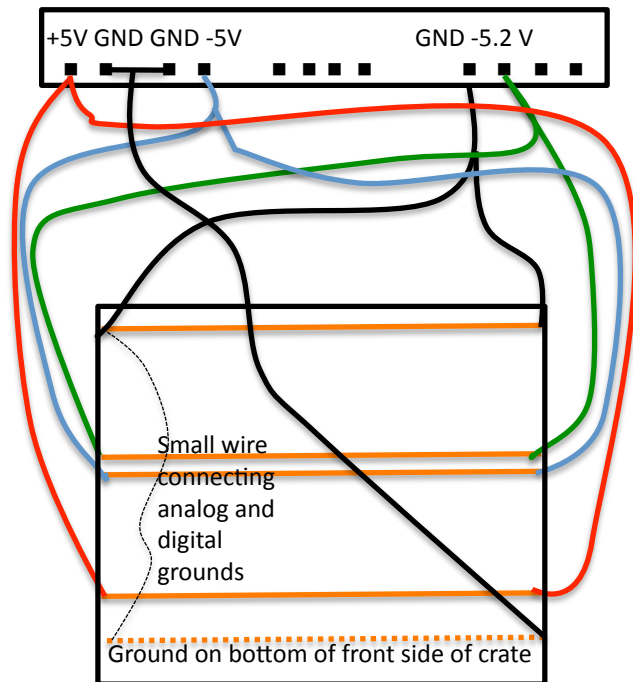
Front of Power Supply with AC power cord and ethernet connection using SNMP to program voltage and various limits



Back of Power Supply with 4 AWG cables going to Front End Board. Left supply is +5V. Middle supply in -5V. Right supply is -5.2V.

Low Voltage Connection to FEB

- Need to make new cables which are the correct length for the layout of LV supply and FEB crates



Other Tests?

- Confirm low noise on FEB outputs with this LV power supply?
- Test full load of FEB (not possible at LANL because 208 V needed)
- Understand other programmable limits of power supply (e.g. Temperature, current, ...)