Secondary Node Test Box - User Instructions

Version: rev 1.0 - 28 Jan 2011
By: Blackinton

1. On Laptop power up and log in:
   
   User Name: Aloha
   Password: Ohana

2. Open window and ping secondary node controller: 10.1.15.24
If successful, run “pmaesui.py seafloor”

This will open a program that shows the status of the sub-nodes as well as the temperatures inside the Secondary Node.

Note 1: the temperatures are measured from T1 (at the end of the chassis farthest from the penetrators) to T4 (close to the penetrators). T3 and the humidity sensor are the same distance from the penetrators. The 400 V DC:DC converter is between T2 and T3.

Note 2: The currents shown on the screen might not be correct. The new LCM board has a different calibration than the old one and a calibration table needs to be changed (somewhere).

Move the highlight with left and right arrows (does not go up and down except at end of line). Press space bar to toggle highlighted setting.

Note 3: turn on dead face (DF) before Enabling and disable before turning DF off. DF is a mechanical relay that completely isolates the sub-node. The Enable actually starts and stops the current so the relay is always switched with no load. This should make it last longer.

Note 4: User Port 1 is connector J2, User Port 2 is connector J3, etc.

Connect the 4 sub-nosed (J2 to J5) to the simulator box and, one at a time, verify that the 48 V and the PPS are present when switched on in the pmaesui program.

The Ground FaultMonitor is gfm.py seafloor. As set now, it checks for a ground fault every 2 minutes but does not remember them between checking. It should be rewritten. It measures the 48 V plus and common coming our of the main supply in the Secondary Node. Thus, to isolate a ground fault, the individual nodes need to be shut down one at a time.

Power from the SIIM ports:

J2: Port 1, spare, 48 V
J3: Port 2, 6 Pin, W13 cable, BB2F, 12 V, RS-232
J4: Port 3, 4 pin, W12 cable, CTD, 12 V, TTL with pull up
J5: Port 4, 4 pin, W11 cable, CTD, 12 V, TTL with pull up

Use siim-ctl.py ON 10.1.15.xx to turn on power (both FET switch and relay) and connect to device.
Use siim-ctl.py OFF 10.1.15.xx to turn power off (FET switch only)
Use simm-ctl.py ISOLATE 10.1.15.xx to open relay for galvanic isolation.

Note 5: User port 10.1.15.37 includes a fixed, non-isolatable filter to quite the power
for the Acoustic Modem.