

Procedure for adjusting overcurrent interlock on 600 watt Trim Power Supplies:

The maximum current of the 600 watt power supplies is 20A. The trim magnets can operate at a maximum current of 14A. This procedure will be used to adjust the overcurrent to 15A.

1. Turn the p.s. OFF.
2. Rack out the p.s.
3. Remove the cover of the p.s.
4. Put the p.s. in LOCAL mode. Make sure the CURRENT/VOLTAGE switch is in CURRENT mode. Make sure the p.s. local reference pot reads 5.00 (zero Amps) by looking at the dial setting on the knob. The following table explains the dial settings and the voltages read on the VOLTAGE bnc and the CURRENT bnc.

LOCAL REFERENCE POT DIAL SETTINGS	CURRENT BNC (volts)	P.S. CURRENT (amps)
0	-10	-20
5	0	0
10	+10	+20

Current BNC:  $10v \text{ at bnc} = 20A \text{ at p.s. or } V(\text{bnc}) \times 2 = I(\text{ps})$

Voltage BNC:  $10v \text{ at bnc} = 30v \text{ at p.s. or } V(\text{bnc}) \times 3 = V(\text{ps})$

5. Now that the local reference pot is set for zero current press the turn on the orange AC breaker switch. Press the STANDBY pushbutton. Press the local rack reset pushbutton. Press STANDBY again.
6. Measure the Current BNC with a fluke voltmeter.
7. Press the ON pushbutton.
8. Run the p.s. up to +10A by turning the local reference pot clockwise until the Current BNC = +5.00volts.  $+5.00\text{volts} = +10A$ , or  $+5.00 \times 2 = +10A$ .
9. Measure the voltage from TP43-TP42. This is V1. Record this value.  $V1 = \text{volts at } 10A$
10. Run the local reference pot back to 5.00 which = 0A. Press STANDBY.

11. Now multiply  $V1 \times 1.5$ . This result is the volts at 15A. Call this  $V2$ .  $V2 = V1 \times 1.5$ . Record  $V2$ .
12. While the p.s. is in STANDBY measure the voltage from one side of R165 to TP42 with a voltmeter. Call this voltage  $V3$ . The side of R165 you want to put the probe on is the side not connected to pin 2 of U1. If you are looking at R165 from the front of the p.s. the side of R165 you want to put the probe on is the end closest to the back of the p.s. not the end closest to the front of the p.s.
13. While measuring  $V3$  someone else should adjust pot P5 until the  $V3 = V2$ . When  $V3 = V2$  remove the voltmeter.
14. Place the cover back on with one screw.
15. Make sure the local reference pot = 5.00 (0A). Turn the p.s. ON. Turn the local reference pot clockwise until the Current BNC reads +7.00v (+14A). The p.s. should operate at +14A. Now turn up the local reference pot until the Current BNC reads +7.50v (+15A). The p.s. should trip on OVERCURRENT at +15A.
16. After the p.s. has tripped on the overcurrent run the local reference pot back down to 5.00(0A). Press STANDBY to reset the overcurrent fault.
17. Press the ON pushbutton. Now run the p.s. back up to +14A (+7.00volts on the Current BNC) to make sure the p.s. has not been damaged.
18. Now turn the local reference pot counter-clockwise until the Current BNC = -7.00volts(-14A). The p.s. should operate at 14A. Now turn the local reference pot until the Current BNC reads -7.50v (-15A). The p.s. should trip on OVERCURRENT at -15A.
19. After the p.s. has tripped on the overcurrent run the local reference pot back down to 5.00(0A). Press STANDBY to reset the overcurrent fault.
20. Press the ON pushbutton. Now run the p.s. back to -14A (-7.00 volts on the Current BNC) to make sure the p.s. has not been damaged.
21. Run the local reference pot back to 5.00(0A). Press STANDBY. Press OFF. Turn OFF the AC breaker switch. Rack the p.s. back into the rack.