

SCULLCOM HOBBY ELECTRONICS

Electronic DC Load (Version 9.2) Calibration Procedure (updated 15-4-2018)

1. Connect a meter to test pin J7 (4.096V) and ground (GND) J4
2. Adjust RV5 (Ref. Trim preset) for a reading of 4.096 volt on the meter
3. Connect a power supply which has a voltage and current display to the Load Terminals of the DC Load (capable of supplying slightly over 3 Amp). Set Power Supply current to maximum. If the Power Supply does not have a current display then connect a multimeter in series with the power supply and DC Load, set on Amps range.
4. Set the power supply voltage to 5 volt
5. Connect the Sense Terminals of the DC Load to the power supply (with Sense switch ON)
6. Adjust RV2 (Sense Null) so the voltage reading on the DC Load LCD reads 5 volt
7. With the Load switched off check the current reading on the Power Supply for leakage current. If no leakage current is seen adjust RV3 until some leakage current is seen on the Power Supply.
8. Slowly adjust RV3 until the current reading on the Power Supply is Zero – DO NOT CONTINUE ADJUSTING AFTER ZERO IS REACHED.
9. Ensure the Set current on DC Load is set to Zero
10. Switch the Load On
11. Check that the current reading on the Power Supply is still Zero – if not slightly adjust RV3
12. Switch Load Off
13. Set current on the DC Load to 3 Amp with a 5 volt input
14. Switch the Load On
15. Adjust Cal Preset (RV4) for a reading of 3.000A on the Power Supply
16. Set current on the DC Load to 1 Amp with a 30 volt input with the Load still ON and allow the DC Load to get up to 35°C (heat sink temperature shown on DC Load LCD)
17. Set current on the DC Load to 3 Amp with a 30 volt input
18. Adjust Cal Preset (RV4) again for a reading of 3.000A on the Power Supply
19. Check that DC Load tracks the Power Supply current at 1, 2 and 3 Amp.

Transient Pulse Width Adjustment

1. Disconnect all power from DC Load
2. Connect an ohms meter from the end of R28 (nearest to RV1) and ground
3. Adjust RV1 for a reading of 250Kohm

