

4 T807/808 Initial Set-up & Adjustment

The following section describes the initial set-up and adjustment procedures.

The following topics are covered in this section.

Section	Title	Page
4.1	Introduction	4.3
4.2	Test Equipment Required	4.3
4.3	Adjustments	4.4
4.3.1	Mains Input Voltage	4.4
4.3.2	Output Voltage Adjustment	4.5
4.3.3	Current Limit Adjustment	4.5
4.3.4	Overvoltage Cut-out Adjustment (Issues 05 & 07 Only)	4.5

Figure	Title	Page
4.1	Test Equipment Set Up	4.4

4.1 Introduction



Warning: The T807/808 contains voltages that may be lethal and extreme care must be taken when working on a "powered up" supply.



Caution: During set-up and adjustment it is essential that the T807/808 is connected to the mains supply via an isolating transformer. For additional protection the test set-up should be powered via an earth leakage circuit breaker.



Caution: Connecting test equipment earths to a T807/808 which is not supplied via an isolating transformer will connect the mains supply directly across R3 & D1 and result in the destruction of R3.



Caution: While the oscilloscope earth is connected to the DC primary negative rail (TP4), the T807/808 is no longer isolated from the mains earth and neutral. Extreme care is necessary when working on the power supply. Disconnect the oscilloscope immediately after use.

4.2 Test Equipment Required

Item	Capability
Earth leakage circuit breaker	10A min., 115 or 230V, trip current <30mA.
Mains isolating transformer	1kVA min.
Variac	1kVA min., 0-260V AC (0-130V AC).
AC current meter	true RMS readings, range to 10A FSD.
AC voltmeter	ranges to 300V FSD.
DC current meter	0-30A FSD.
Variable DC load	0-100 ohm, 20A, 250W for T807
	0-100 ohm, 30A, 400W for T808
*DC power supply	0-18V, 1A
*DC power supply	0-15V, 1A
Oscilloscope	20MHz, general purpose, good quality
*Oscilloscope probes	capable of handling 500V signals

*Required for Fault Finding only (Section 6).

4.3 Adjustments

The T807/808 mains input voltage is factory set to 230V ($\pm 10\%$)/50Hz and the output voltage to 13.8V DC. The current limit is adjusted to 16A (T807) or 27A (T808).

When adjusting the output voltage and current limit, set up the test equipment as shown in Figure 4.1.

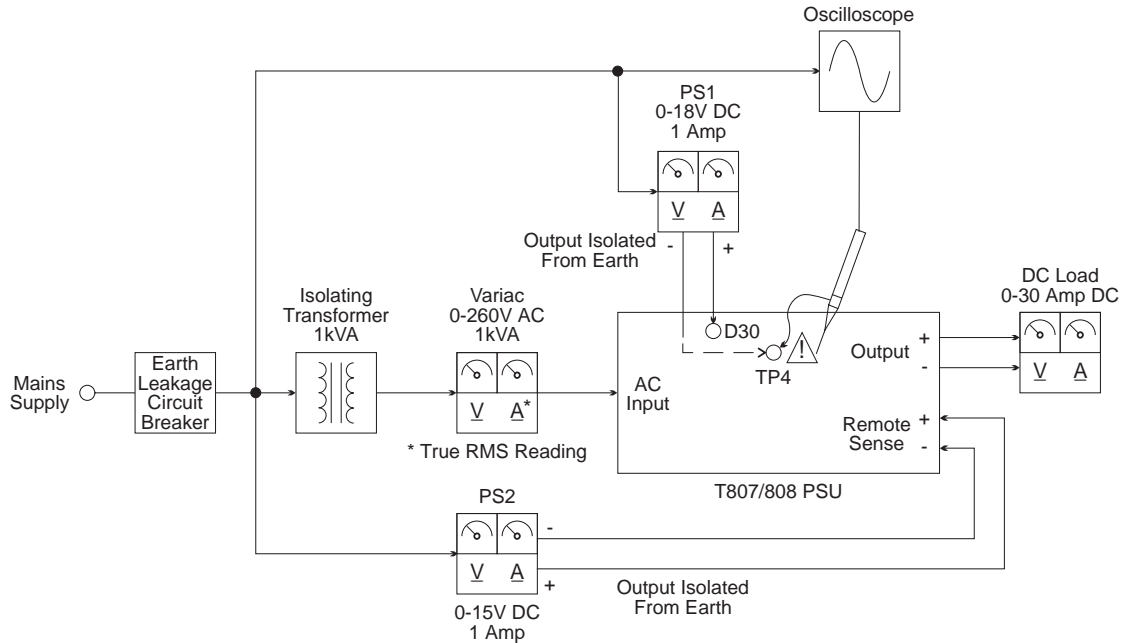


Figure 4.1 Test Equipment Set Up

4.3.1 Mains Input Voltage

The mains input voltage can be set to either 230V (200-264V) or 115V (100-135V) by either SW1 or by wire links on the PCB.

Disconnect the mains supply.

Set SW1 (where fitted) to the required input voltage - SW1 can be accessed through the cooling slots on top of the right side cover.

If SW1 is not fitted, remove the left and right side covers (refer to Section 3.2.3).

Change over the PCB links as indicated on the PCB encoding and refit the covers.

Remove or fit the supplied label on the rear panel to **indicate clearly** the mains input voltage to which the unit has been set.

4.3.2 Output Voltage Adjustment

Remove the right cover.

Switch the T807/808 on.

Adjust the "V/OUT SET" trim control (RV92) to produce the required output voltage, observing the limits given in Section 1.2.4.

Note: Connection of the remote sense terminals after the output voltage has been set will result in a slight change in the nominal output voltage (by approx. 0.3V). The remote sense option should be fitted before setting the output voltage (refer to Section 7.6).

4.3.3 Current Limit Adjustment

Turn the "CURRENT LIMIT SET" control (RV25) fully clockwise.

Switch the T807/808 on and set the variable DC load for a current just above the maximum desired current (observing the limits in Section 1.2.4).

Adjust RV25 until the voltage across the DC load just starts to drop.

4.3.4 Overvoltage Cut-out Adjustment (Issues 05 & 07 Only)

Set the mains input voltage to 240V (nominal) with a 15A (T807) or 25A (T808) load connected.

Adjust RV92 to give 15V output from the PSU.

Adjust RV81 slowly for power supply cut-out ("On" LED and "Overload" LED will flash on and off).

Reset RV92 to give 13.8V output from the PSU.

