

Final Set up And Adjustment

No attempt should be made to set up or test a power amplifier module that is not correctly mounted on a heatsink. Make sure the main power supply is fused and the work area is clear. First check all your work and make sure the output devices are insulated from heatsink. The set up is done without an input or a load connected to the power amplifier.

1. Check the power supply is operating correctly and verify the rail voltages. Switch the power supply off and check with a multimeter that the rail capacitors have discharged.
2. Using a multimeter measure the resistance of VR2 and set it for maximum resistance.
3. Correctly connect the ground lead, the two positive leads plus the negative lead to the power amp module.
4. Remove the PCB fuses and replace with 100 ohm 5 watt resistors. Connect a multimeter that is set to the 20 volt scale across the positive rail 100 ohm resistor.
5. Check that the power supply connections are correct one last time and switch on. If the multimeter reading goes off-scale, turn off immediately and find the problem. Check also the 100 ohm 5 watt resistors; they may have gone open cct.
6. If everything seems ok adjust VR2 to set the output stage bias current, by measuring the voltage across the positive rail resistor. Adjust for a reading of 4 volts per output FET pair. I.e. For a 6 FET board set for a voltage of 12 volts. This equates to a bias current of 40mA per FET pair or 120 mA total. For the 12 FET board set for a voltage of 24 volts.
7. If everything seems ok, check the output offset voltage and adjust VR1 to achieve an offset of less than 10 mV. You will need to wait briefly between adjustments for the offset to settle.
8. All being well switch off, back off the bias control trimmer (VR2) and replace the 100 ohm resistors with 10 ohm 1 watt resistors. Switch on again and re-adjust VR2 to get 0.4 volts per FET pair.
9. Switch off, remove the resistors and put the fuses back in. Switch on, re-check the offset voltage and adjust with VR1 if necessary.

The amp module is ready, connect the input and output and enjoy.