

## **Red 5 Precision Stereo Power Amplifier**

A Precision Stereo Power amplifier, of unusual design, with 2 x 250WRMS continuous rating into 8ohms and a stunning peak capability of over 800W with extremely low distortion and wide bandwidth.

Standby LED indicates that the mains power is connected to the IEC mains inlet plug on the rear of the amplifier and that the amplifier is not switched On .

Mains switch - this is an illuminated push switch . Push to start the amplifier . It will take a little time before the mains switch LED cluster lights up , when lit this indicates that the power supply sections of the amplifier are running correctly and up to full voltage .

After the power supply sections are running the amplifier will then open for operation , when it is stable for full operation the Operation LED will light . This will also take a little time ; in total approximately 15 to 20 seconds from pressing the Mains switch .

Please allow at least one hour of operation for the best possible performance of the amplifier , and several hours if the amplifier has been in transit or stored in a cold environment .

To switch the amplifier off press the Mains switch again . The amplifier will revert to Standby mode over a period of a few seconds , the LEDs will indicate the status of the amplifier .

The Red 5 has several protection systems which monitor the operation and performance of the amplifier. The protection systems sense over current, short circuit, over temperature and unsafe DC conditions. Should any condition develop which might damage the amplifier, the protection system will switch the amplifier back to Standby mode. To reset the amplifier after it has shut down, switch the amplifier off using the Mains switch, wait at least one minute before switching on again. If the fault condition continues the amplifier will shut down again, without causing damage.

The protection systems take account of the short peaks which occur in music, by allowing short term overloads within the limits of the circuits, however if long term overload begins then the systems will protect the amplifier. Although these protection systems are comprehensive, all the sensing is done without any components in the audio path.

Dynamically coupled power rails ensure that the power supplies operate as a truly balanced system, thereby preventing ground loop modulation.

The output stages run in class A/B mode, with a sliding bias arrangement.

All driver stages are pure class A with custom manufactured Mosfets at the outputs.

The output circuits have a very low inductance, allowing the Red 5 to get the best out of “difficult” speakers.

### **Specifications**

Continuous output	250W RMS into 8 Ohms (THD < 0.05%) 400W RMS into 2 Ohms (THD < 0.05%)
Dynamic Headroom	300W into 8 Ohms 520W into 4 Ohms, at 1kHz 20 cycles on, 180 cycles off
Peak Pulse Output	75V pk for 8ms burst, equivalent to 800Wpk into 2 Ohms
Output Z	0.03 Ohms and 2.6uH
Frequency Response	1Hz – 39kHz (-1dB) 1Hz – 75kHz (-3dB)

Signal to Noise	Better than $-105\text{dB}$ (A weighted at $2/3$ full power)
Gain	$33\text{dB}$
Slew Rate	$>70\text{V}/\mu\text{S}$ measured with $1\text{kHz}$ $20\text{Vpk}$ square wave
Channel separation	$>95\text{dB}$ un-weighted
Input Sensitivity	$1\text{V}$ for maximum rated output
Input Z Balanced	$100\text{Kohm}$ and $22\text{pF}$