

## FM Broadcast Band RF Power Amplifier 100 Watts



### Specifications:

|                            |                                   |
|----------------------------|-----------------------------------|
| Maximum Power Output       | 100 Watts RMS                     |
| RF input for 100W output   | 5 Watts. (max input)              |
| Harmonic Filter on output. |                                   |
| Power requirement          | 110 - 240V ac Mains Supply        |
| Cooling                    | Forced Air Fans                   |
| Size                       | 220mm wide, 250mm deep, 90mm high |
| Weight                     | 2.5 kilos                         |





This RF amplifier is designed to operate on the FM Broadcast Band, 88 to 108MHz. The amplifier is wideband, and requires up to 5 Watts drive to give full 100 Watts output. Less input reduces the output, so therefore with 2.5 Watts drive the output level is 50W. It can safely be operated at any output level. The amplifier utilises a Switch Mode Power supply of 24V DC at up to 10 Amps capability. The amplifier does not have any SWR or short-load protection. It does however have a mains fuse. This does make the design a lot cheaper.

#### Operation.

The RF driver unit is used to tune the aerial for minimum SWR at the operating frequency. This means that when the power amplifier is inserted, it can be rest assured that the match to the aerial is good. If the match to the aerial. Is poor it could damage the output transistors of this amplifier.

For setup, insert SWR meter between RF Driver unit and aerial. Adjust aerial (length) for minimum loss (SWR reflected power). Now insert the amplifier in-place of the SWR meter, or better still, fit amplifier after the driver and before the SWR meter. That way you can monitor the reflected power from the aerial.