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250 Watt ERP FM Transmission System

The equipment in this system will allow you to broadcast to a distance of 35km, depending on the height of the antenna, and the terrain of the surrounding area.

Transmission Equipment

- 1 100 Watt FM Transmitter
- 1 5/8 Ground Plane Antenna
- 1 RG 213 50 Ohm Antenna Cable (60m)
- 5 PL 259 Connectors
- 1 Lightning Protection (includes ground cable and copper tube)
- 1 SWR / Power Meter
- 1 Dummy Load
- 1 Power Strip
- Tools (Toolkit, Multimeter, Soldering Iron, Tape, Cable Ties etc.)

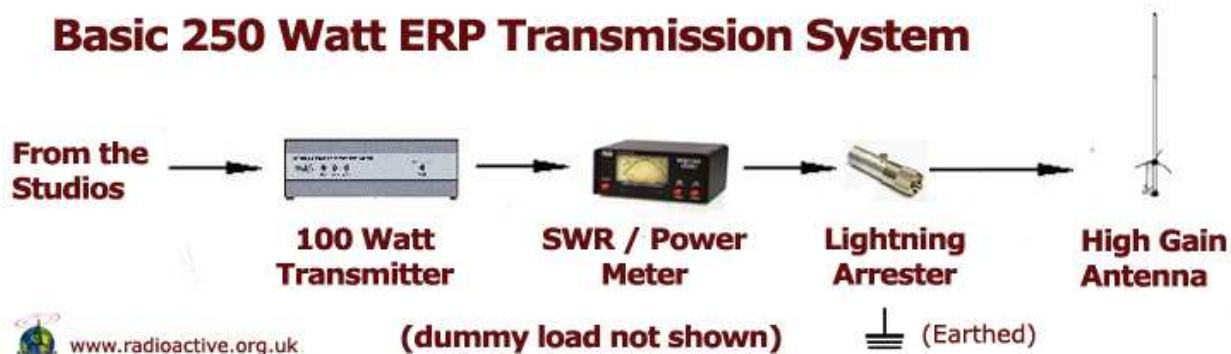
TOTAL: (excl. shipping and customs) **£1400**

The following items are not supplied but are required and should be sourced locally:

- Radio Studios
- Antenna Tower / Mast
- Voltage Regulator
- Copper Grounding Cable and 4' Copper Tube for Lightning Protection

ERP stands for **Effective Radiated Power**. This refers to the actual power of the signal being broadcast from the antenna. ERP is a combination of the power of the transmitter (in this case 100 Watts) plus the gain of the antenna (in this case 4.8dB) minus the power lost through the cable between the transmitter and the antenna.

Basic 250 Watt ERP Transmission System



250 Watt ERP FM Transmission Package Equipment Details

100 Watt FM Transmitter

The transmitter is the heart of the transmission system. Connecting this 100 Watt Transmitter with a 3.7dB gain Antenna will provide on average of 250 Watts ERP. The transmitter can be supplied as mono or stereo. A mono transmitter will generally give you a clearer signal and go a little further. But a stereo transmitter gives you a stereo signal. The price is the same, so the choice is yours.

SWR/Power Meter

SWR stands for "Standing Wave Ratio". It is a measurement of the efficiency of the transmission system. This device measures the SWR and power of the system.

RG 213 or RG8 50 Ohm Coaxial Antenna Cable (40m)

It is important to choose the right cable, as a lot of power can be lost with the wrong cable. It is used to connect the transmitter, swr meter, lightning arrestor and antenna.

Lightning Protection

This consists of a small lightning arrestor, fitted between the antenna and SWR Meter. It should be connected to a copper cable feeding to a copper rod buried into the earth.

Half-Wave Stacked Dipole Antenna

This antenna gives a boost of 4.8dB to the power of the signal being broadcast. With loss from cables included, this will equate to an ERP of 250 Watts when connected to a 100 Watt transmitter. It must be attached to a metal pole with a diameter of 25-50cm and be placed as high as possible, to cover as large an area as possible.

RG 213 or RG8 50 Ohm Coaxial Antenna Cable (40m)

It is important to choose the right cable, as a lot of power can be lost with the wrong cable. This cable is used to connect the transmitter, swr meter, lightning arrestor and antenna.



PL259 Connectors

These radio frequency connectors go at each end of the antenna cable.



Dummy Load

A dummy load is used to test the transmitter without connecting it to an antenna. A transmitter should NEVER be switched on without being connected to a load, which under normal circumstances would be an antenna. If it is switched on without a load, it can burn out. So if a transmitter needs to be tested, but for any reason cannot be connected to the antenna, then a dummy load is used.

