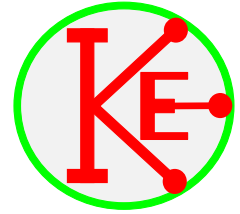


Aerial panel.



Specification

4mm input sockets for aerial and earth.

50Ω BNC socket

100Ω variable attenuator for rf signal

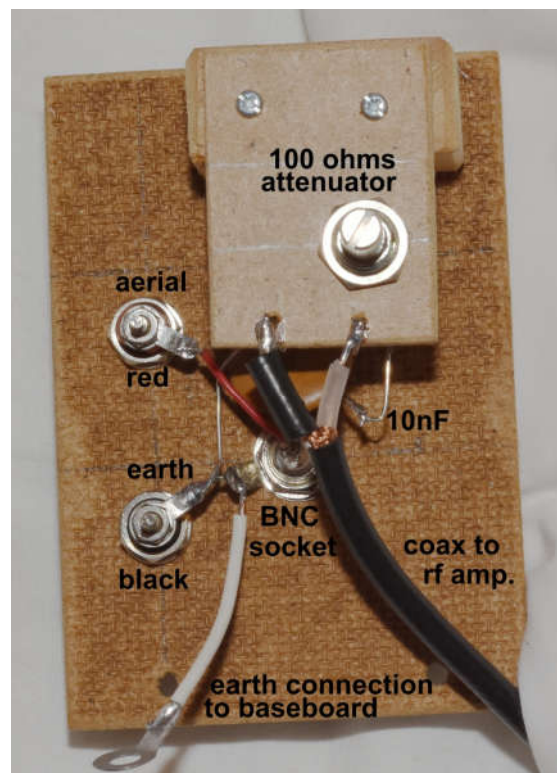
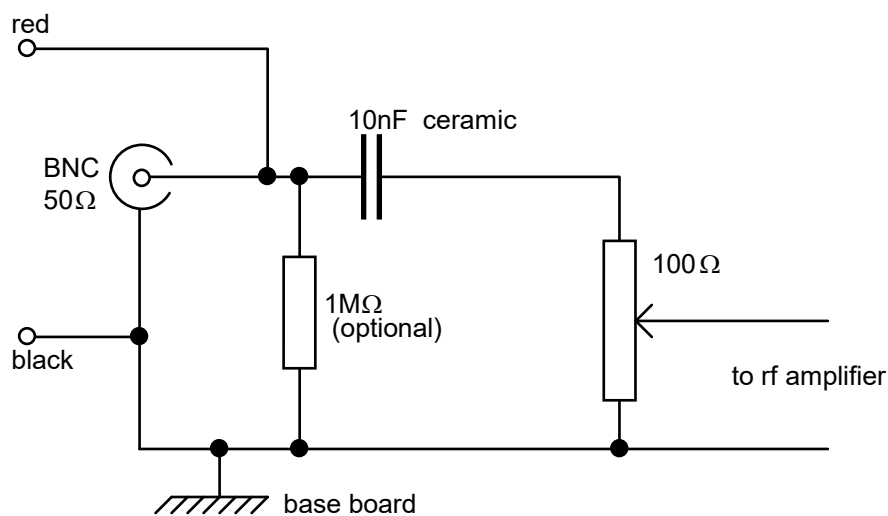
This panel becomes essential as the radio subsystem progresses.

The panel has a 4mm socket for the aerial and a similar one for the connection to earth.

A 50Ω BNC socket is also included for when the aerial system impedance is matched to the radio system.

An attenuator is also included to prevent strong radio signals from overloading the rf amplifier.

This consists of a 100Ω non-inductive carbon (or cermet) tracked potentiometer.



The circuit was directly wired onto the panel, with the potentiometer being supported 2cm away from the panel by a wooden block and a small piece of hardboard.

The connections to the coaxial cable are simple small holes drilled through the hardboard.

The 10nF ceramic capacitor prevents damage to the attenuator (and rf amplifier) in the event of any direct voltage being connected to the aerial terminal. The capacitor should be a ceramic plate type as these have a very low self inductance. This capacitor should also have quite a high voltage rating as static electricity can build up on an external aerial system.

The optional 1M Ω resistor should be fitted when an external aerial is directly connected to the aerial terminal. 1M Ω is a sufficiently large value to not affect the properties of the aerial system but it will allow any static electricity to 'leak' to earth.

(The 1M Ω resistor is not included in the photograph above because there is one elsewhere on the external aerial system used for testing purposes.)

The photograph below shows the aerial panel installed into the radio system.

The attenuator potentiometer spindle is extended using a piece of 6mm wooden dowl and it is attached using a piece of heat shrink tubing, though 'Gaffer tape' was also found to be suitable in earlier experiments.

The 6mm dowl can be seen passing through the mounting bush of an old dismantled potentiometer which is attached to the waveband panel.

Normal control knobs will fit well onto the wooden dowl.

