

K W Electronics Ltd

SPECIFICATIONS AND INSTRUCTIONS

KW MULTI-BAND DOUBLET ANTENNA KIT

The G8KW Multi-band wire doublet has been specially designed to meet the requirements of those who desire operation on any of the HF bands and have only limited space available for antenna erection.

The antenna consists of a centre fed doublet with a 108' top and utilizes two resonant traps, one on either side of the feeder point and 65' apart. Between each trap and each end of the antenna is a length of wire 21'6" long. Each trap consists of a high 'Q' inductance, a capacitor specially designed to withstand high voltage, high circulating RF current, and is resonant on 7.1 MHz. The tensile strength of these traps has been tested to 350 lbs. and they are impregnated to withstand extreme weather conditions.

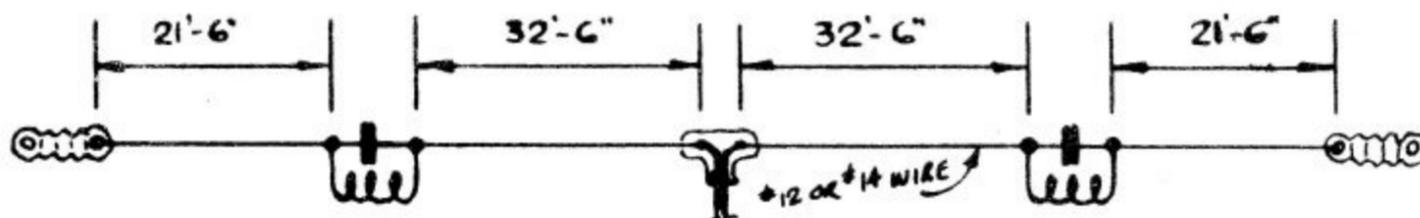
The traps act as insulators on 40 meters (7 MHz). On 80 meters (3.5 - 4.0 MHz) the traps act as loading inductorances giving an electrical half-wave length on 80 meters. On frequencies higher than 7 MHz the traps act as series capacitors. By selecting the proper L-C ratio for the traps the antenna is made resonant on each of the amateur bands from 80 meters to 10 meters as shown in Table.1. On 160 meters, the antenna may be used as a top loaded Marconi by joining the inner/and outer feeder connections together and loading against ground.

TABLE 1

10 meters:	7 half-wave top	40 meters:	half-wave dipole
15 meters:	5 half-wave top	80 meters:	half-wave dipole
20 meters:	3 half-wave top		

The aerial will produce polar diagrams in accordance with patterns which may be found in hand books associated with the various resonant lengths indicated above. It will therefore be appreciated that on 40 and 80 meters the radiation will be at right angles on either side of the direction of the wire, whilst on 10 meters, four major lobes will occur at approximately 20° either side of the wire. With the aerial suitably orientated, good directivity can be obtained on 10, 15 and 20 meters with each major lobe giving more effective gain than a dipole. It has been found that good results may be obtained even if it is necessary to bend the antenna top to suit any particular location. This will, of course, distort the polar diagram in some respects.

DOUBLET DIMENSIONS



SUGGESTED METHOD OF ASSEMBLY

