



Antenna

This is a simple **J-Pole** antenna replacement for field trips. The antenna is easy to build, without full-scale metal factory. Antenna itself fits in your pocket and it is easy to rise with nylon cord or with light glass-fiber mast. The antenna has similar properties with the traditional J-Pole antenna, however, the band width is narrow, also this type of antenna may not be the best choice for permanent use. The 1/2 wave radiator **L1** is made of insulated flexible wire 1.5mm2 (AWG15). The final frequency is tuned with length L1.

The 1/4 wave transmission line stub **L2** is made of RG-58C/U coaxial. Length L2 is calculated with speed factor of 0.66 for RG-58C/U coaxial. You may check the stub resonance with antenna analyzer, without the L1 radiator connected.

Stub is tapped with the coaxial feed at the distance of **L3** from shorted side of the 1/4 wave stub. Tapping distance is somewhere between 5...15% of L2.

You may solder the parts together and then isolate with hot glue and heat shrink tube... or you may use BNC connectors. In some cases the feed gable may radiate. You may want to cut the coaxial mantel currents with ferrite tubes or air coil of five turns. Remember, however, that the end fed high impedance radiator L1 needs something for the counterpoise.



70 MHz Test Antenna Dimensions

- L1** = 1880 mm, 1/2 wave radiator, antenna tuned to 70.0 MHz.
- L2** = 705 mm, 1/4 wave transmission line stub, 70.0 MHz.
- L3** = 70 mm, coaxial feed point, 10% of L2.

Antenna SWR

