

Radio Astronomy Supplies

APPLICATION NOTE 3

DIPOLE ANTENNA

The antenna most used for shortwave applications is, the Half Wave Dipole. This antenna is simple and very economical to construct.

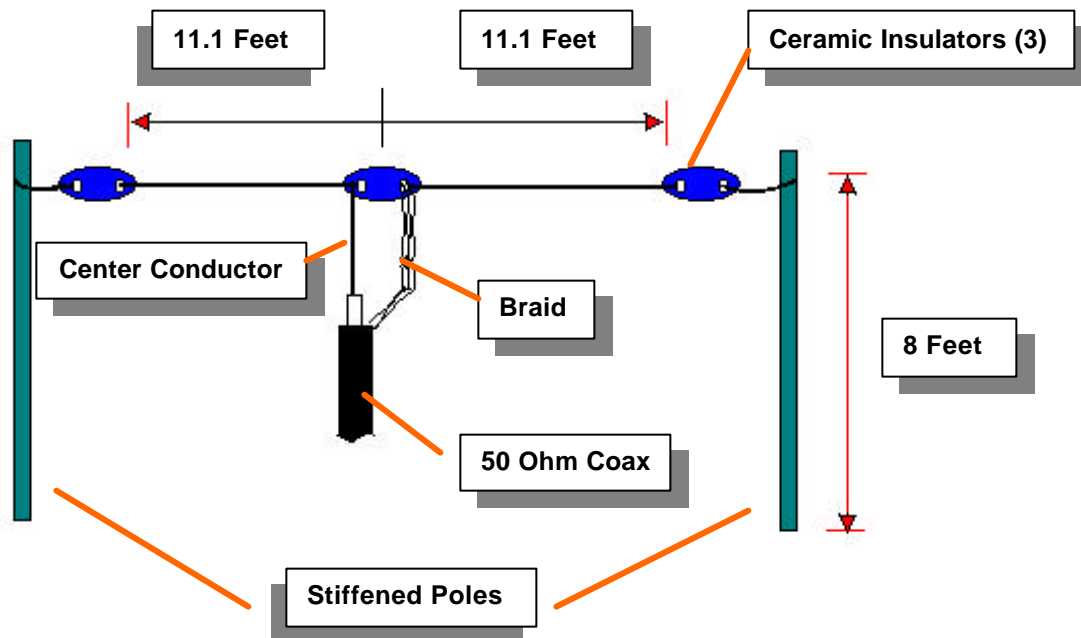
For radio astronomy purposes, we will talk briefly about the formula used for designing this simple antenna as well as, an example and a diagram.

Lets say you were most interested in doing Jupiter or Solar observations. The frequency you have chosen is 21 MHz.

The following formula used is shown here:

$$F \text{ (frequency)} = 468 \text{ divided by the frequency in MHz} \quad f = \frac{468}{\text{MHz}}$$

Frequency of 21 MHz *divided by* 468 = 22.2 (Feet)



Note: Antenna wire should be 18 gauge copperweld or solid wire.

Further Information:

For further information on Antennas, refer to *the ARRL Antenna Handbook* and *Antennas* by Dr. John Kraus.