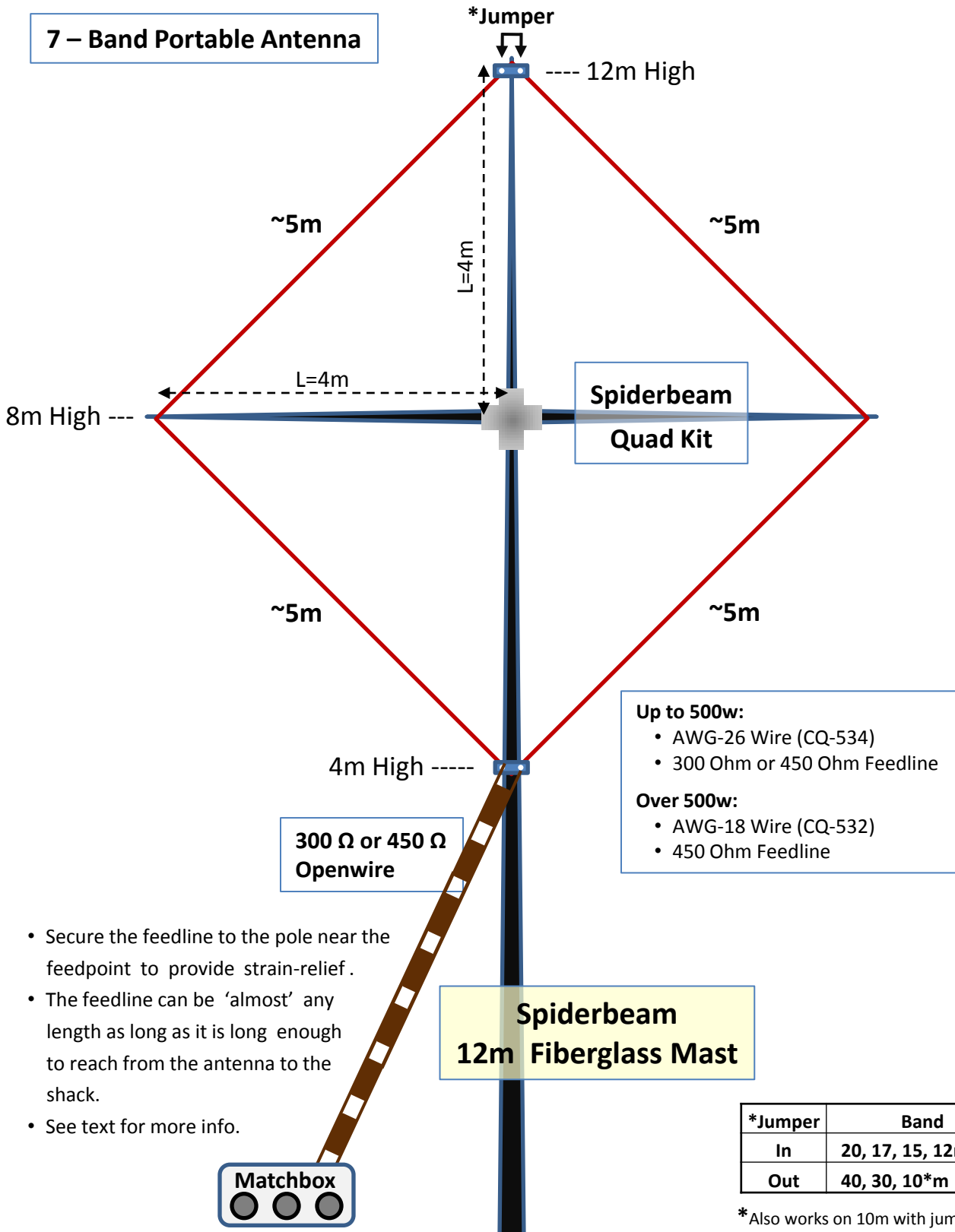


# Mono – Loop Quad

A Vertically Oriented, Horizontally Polarized Loop



- Secure the feedline to the pole near the feedpoint to provide strain-relief .
- The feedline can be 'almost' any length as long as it is long enough to reach from the antenna to the shack.
- See text for more info.

NOTE: Use Symmetrical Matchbox or Asymmetrical Matchbox with 1:1 or 4:1 Current Balun.

## Basic Description:

The mono loop antenna described here is an efficient horizontally polarized multi-band Antenna that requires just one elevated pole and can be easily erected by one person in a few minutes.

**For 30 and 40m** you will need to open the loop at the top. You may use a removable jumper. You may construct a banana plug/jack system, or simply leave two short stubs of wire hanging down, which can be easily spliced together when working the higher bands. If you don't plan to work 30/40m, just build a closed loop. If you do use a jumper, try 10m both ways to see which way works best for you.

Changing the jumper is best accomplished by lowering the bottom 2 or 3 sections, then simply tilting the entire loop over. With a little practice, this can be accomplished in just a couple of minutes.

## Antenna Tuner (Matchbox):

For low power levels (200w or less), most any matchbox will work if configured properly.

NOTE: Built-In auto-tuners in transceivers often do not have sufficient matching range to work.

**Symmetrical Matchboxes** are the better choice, but often difficult to find. The only known low power symmetrical matchbox currently on the market is the MFJ-974 family of tuners.

Most matchboxes currently on the market are **Asymmetrical Matchboxes**. You will need a balun for working with this type of matchbox, but most modern matchboxes include a built-in balun. If your matchbox is older and does not have a balun, simply use an external balun with a very short piece of coax between the balun and the matchbox.

**BALUN:** You should use a good quality current balun for this application. It may be either a 1:1 current balun or a 4:1 current balun. The balun should be located as close to the tuner as possible.

**IF YOU FAIL TO FIND A GOOD MATCH ON ONE OR MORE BANDS**, which sometimes happens with certain lengths of feedline, don't worry. It is easy to fix the problem. Simply add  $1/8 \lambda$  of feedline for the band causing the problem . . . . . See chart →  
Please choose your band and add the extra feedline length [shown here in either Meters or Feet]. This is not a critical length.

BND	M	Ft.	BND	M	Ft.	BND	M	Ft.
40m	4.86	16.0	17m	1.89	6.2	10m	1.21	4.0
30m	3.40	11.1	15m	1.63	5.3			
20m	2.43	8.0	12m	1.38	4.5			

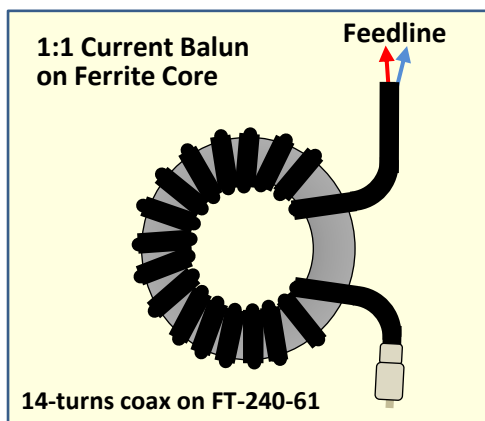


### Simple Home-Brew 1:1 Current Baluns

← 1:1 Guanella Balun consisting of 14 turns of coax on a large PVC pipe (ca. 15 – 20cm dia.). 6mm nylon rope spaces the turns.

#### Coax used:

- ← RG-58 for up to 300w →
- ← RG-142 for higher power →
- ← or RG-213



## Source of Components:

- 12m Pole: [http://www.spiderbeam.com/product\\_info.php?info=p3](http://www.spiderbeam.com/product_info.php?info=p3)
- Quad Kit: [http://www.spiderbeam.com/product\\_info.php?info=p225](http://www.spiderbeam.com/product_info.php?info=p225)
- Wire: [http://www.spiderbeam.com/product\\_info.php?info=p241](http://www.spiderbeam.com/product_info.php?info=p241)
- Openwire: <http://www.hari-ham.com/skeshop/zubehoer/antennendraht.php>
- 1:1 Balun: [http://www.spiderbeam.com/product\\_info.php?info=p192](http://www.spiderbeam.com/product_info.php?info=p192)
- 4:1 Balun: [http://www.wimo.com/cgi-bin/verteiler.pl?url=kelemen-antennas\\_e.html](http://www.wimo.com/cgi-bin/verteiler.pl?url=kelemen-antennas_e.html)