

# Bushcomm Amateur "TA" series instructions

## Centre feed point

The photo on the right shows the starting point for the antenna assembly, the two thimbles mounted on the centre feed plate. To begin, slightly open the gap of the thimble and attach as shown. Making sure end gaps are then closed and thimbles move freely.



Thread the steel wire with SO-239 from the front securing the SO-239 temporarily with one screw.



Add a ferrule to the wire (moving it down to the rear of the SO-239) then thread through centre feed plate and around the thimble from the rear to the front. Align the wire with thimble guides then thread back through the ferrule. Position the ferrule as tight and close to thimble as possible leaving a good size loop between the thimble and the SO-239. TIP: hold the ferrule in your crimper and pull both wires as tight as possible for a neater finish.

Repeat above steps with the eyelet side and secure the eyelet to one of the three remaining SO-239 mounting holes. Add last two nut, washer and screw sets to the remaining two SO-239 holes.



## Insulator ends

Place a ferrule on the wire and then feed through the insulator doubling back and feeding through the ferrule. Pull it tight to the insulator but DO NOT crimp.

Position the steel cable clamps as shown.



## Tuning the antenna

At this point measure both radiating wires from the thimbles to the insulator and adjust the cable clamps so both sides are equal. This will be slightly longer than what is required for the resonant frequency of approximately 14mhz.

Attach mounting rope to the insulators. At this time tighten the steel clamps and raise the antenna to your preferred mounting point (straight or inverted “V”)

If you have an antenna analyser find the resonant point and shorten radiators until the VSWR is good at your desired centre frequency point. If using a VSWR meter make small adjustments and check frequently.

TIP: Any loose wire dangling in thin air will change the VSWER if you cut it off. Keep loose ends clamped to the main radiators.

Once the antenna is tuned you can crimp the ferrule. The cable clamp can be left on and extra wire can remain.

Congratulations, your new Bushcomm antenna is ready to go!

## Amateur frequency bands verses physical antenna length

Longer antennas can be retuned to higher frequencies by shortening the antenna length, eg: 80 to 40 metres or 40 to 20 metres. Following is the approximate measurements as reference.

BAND	METRES	FEET
160 metres	79.2	260 feet
80 metres	38.4	126 feet
40 metres	20.1	66 feet
30 metres	14.0	46 feet
20 metres	10.0	33 feet
17 metres	7.9	26 feet
15 metres	6.7	22 feet
12 metres	5.8	19 feet
10 metres	5.0	16.5 feet