

Simple /P HF dipoles.

By G8MNY

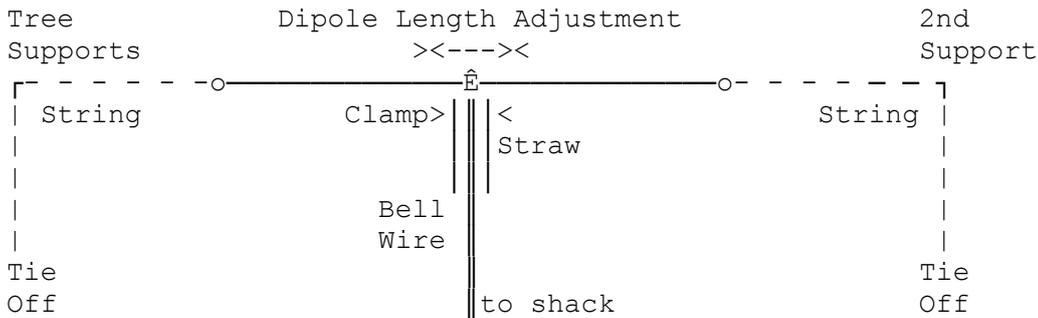
(Aug 13)

(8 Bit ASCII graphics use code page 437 or 850, Terminal Font)

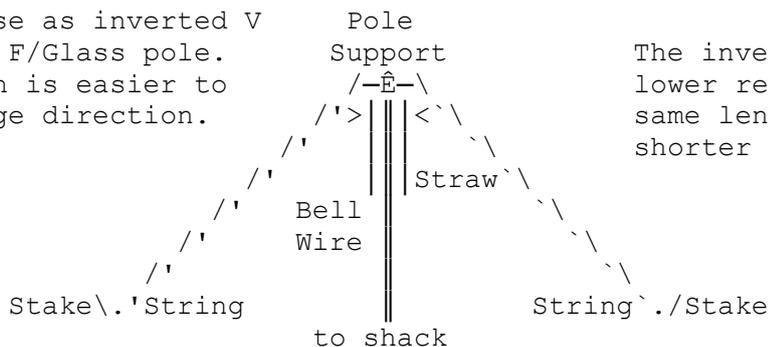
At a local club meeting, I was trying to explain how to make a simple /P aerial for /P 40m+15m (or any band) dipole without the need for an ATU.

AERIAL

The design uses simple bell wire (LS wire) that is approximately 70Ω as the balanced feeder & the same wire split to make up the dipole.



Or use as inverted V on a F/Glass pole. Which is easier to change direction.

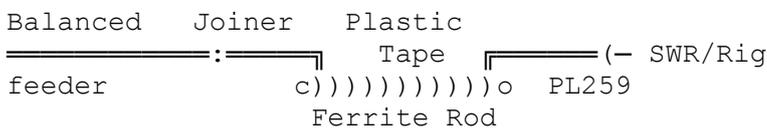


The inverted "V" will be lower resonance than the same length at height, so shorter wire length needed.

The 30cms lightweight plastic drinking straw or other tube, over the feeder keeps the split feeder together & allows you 60cm of overall length adjustment without any wire cutting. The clamp is any strong screw cable clamp (from a mains plug) & is used to stop the feeder splinting anymore with the dipole tension.

THE BALUN

This is placed at the rig end....



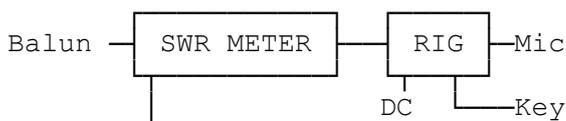
Cut the feeder to a suitable length, as a whole roll is fairly lossy.

Wind the Rig end lead of the bell wire 20 turns around a ferrite rod from a MW radio (or 10 turns on a medium sized ferrite ring). Tape it on firmly to provide some protection against damaging the ferrite. Collect to a PL259 plug. Pass one of the stripped wires through one of the outer case holes, while at the same time push the other one through the centre pin. Be careful that the heat does not damage the wire insulation when soldering up.

Put a joiner (2 way block) on the balanced end, so there is no excuse to throwing the ferrite balun around when /P.

TESTING

With a Tx



Or With a Rx only



Put aerial up.

- 1/ With a Tx check SWR at the bands edges, or a Noise bridge & a Rx check the match over the frequencies wanted. Determine if the aerial needs to be shortened or lengthened.
- 2/ Lower middle of aerial & adjust the feeder clamp to give more or less dipole length & re-clamp out back up & re-tension dipole if needed.
- 3/ Redo 1 until the aerial is optimised. This should then be about right for most /P sites at that frequency.

IN USE

The fine tuning length will easily allow the dipole to be resonated for either CW or SSB ends of the bands, & permit the increase in length if the aerial is very high or reduced if too much ground capacitance with a low aerial/objects.

The SWR matched is usually better than 1.5:1 on a 50Ω system.

To keep the feeder balanced @ 70Ω try to keep it off the ground (long grass OK) or large metal objects.

This design is not too strong that it will pull roofs off etc in a storm!
 It is not too heavy to put up put your own!
 It is an ideal throw together/away aerial.

See my TECH bul on "Coiled Choke Balun for HF".

Why Don't U send an interesting bul?

73 de G8MNY @ GB7CIP