

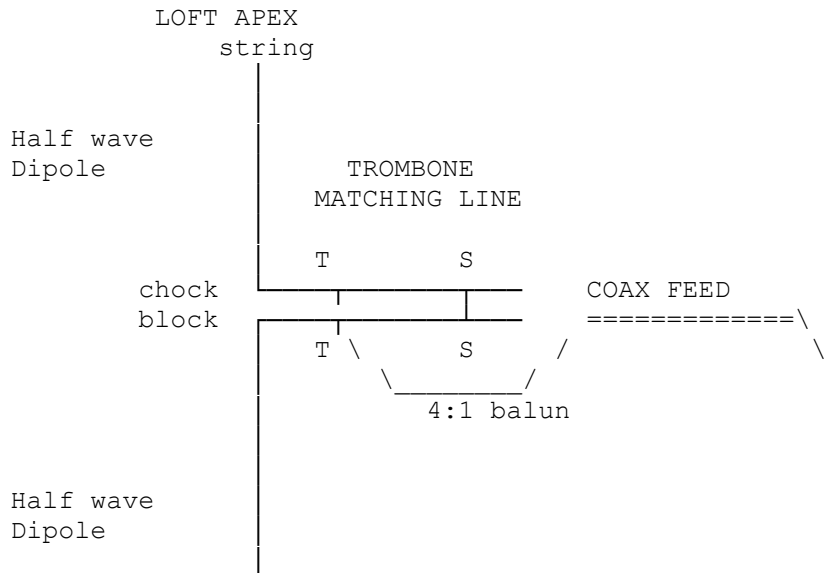
2m Full wave Dipole

By G8MNY

(Updated Mar 07)

(8 Bit ASCII Graphics use Code page 437 or 850)

I have a design for a full wave dipole. It is only suited for loft environments as it is made from 2.5mm bare copper wire hanging from the roof apex, & giving vertical polarisation.



The half waves are both 1M long, & the 2 matching lines are 2cm apart, & are just over a 1/4 wave long. There is a plastic insulator (Chock block) at the dipole feed point (6000Ω). Point S is a sliding "Chock block" connector with a shorting wire link. Point T is another connector but with the 200Ω balanced feed connections.

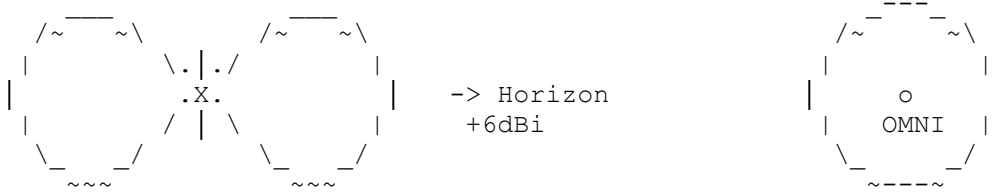
The 50Ω unbalanced coax feed is made into a balanced 200Ω, with the addition of half wave of coax (x velocity factor 0.8 or 0.66). All the coax braids are joined to each other but nothing else. The feeder inner is connected to the start of the half wave 4:1 balun, & the load (chock block line taps) connected across either end of the half wave phase reversing balun coax.



When the line tapping point (impedance) & shorting point (tuning) are adjusted to give a balanced 200Ω the coax will see a good 50Ω load, e.g. 100Ω one side in parallel with a 100Ω seen down the half wave of balun coax.

The advantage of this design is it can always give 1:1 SWR even if the lengths are not quite right, or the aerial is being de-tuned by the roof, & being a symmetrical centre feed system all the power should go out to the horizon.

The feeder must be taken away horizontally to the roof & then down so not interfere with the very tight horizon radiation pattern.



Gain to the horizon is substantially more than slim jims & 5/8 wave aerials.

The design can easily be made into an outdoor version with solid tube for the elements & TV aerial booms for the matching lines with the shorted end clamped to a pole. Other band versions are also quite easy to construct.

Why don't U sent an interesting Bul?

73 De John, G8MNY @ GB7CIP