



HyEndFedAntenna

Thank you for purchasing the 200 Watt

HyEndFed multiband 80-40-20-(15)-10 meters band antenna.

This is an antenna with minimum “handling” and maximum performance'!

Description:

The HyEndFed multiband Antenna is an antenna for 5 bands 80, 40, 20, 15 and 10 meters amateur band.

The antenna can be seen as a dipole except that the feed point is placed at the end (or beginning) of the wire. This allows for more flexible placement options than a dipole. A dipole has three physical points to consider. The ends and the supply line. It is a resonant antenna. There is no grounding or counterpoise needed.

Because for 80 meters the antenna is shortened the bandwidth limited and will need a tuner to cover the whole 80 meter band. For the entire 15 meter band will need a tuner.

Placement:

Hang as freely as possible. The two reasons:

- 1) the radiation pattern is optimal.
- 2) close by objects affects the SWR.

If the SWR mismatch is within 1:2 and the transmitter is not reducing power due a to high SWR, the advice is, not using the tuner. The losses in the tuner are often higher than in the coax.

The antenna can me mounted horizontal, vertical, sloper, L, Inverted L Inverted Vee etc. Each suspension method gives a different radiation pattern.

The HyEndFed antenna is a great solution for a house in the middle of a row where the shack is in the attic. The feed point lies close to the shack and the wire can be stretched in the back yard. The advantage is that the antenna is clear of the house and therefore less interference from their own home pick up. An antenna over the roof from the front to the back yard gives more interference in both transmit and receive.

The antenna is a complete half wave for 40 meters till the coil. The wire portion between the matchbox and the coil. is active for 40,20,15 and 10 and aligned After the coil is only active for 80 meters. The 80 meter band can be tuned by shortening at the tip. At 80 meters, the resonance frequency range is between 3600 kHz and 3700 kHz depending on the position. Shortening by aprox 1 cm will raise the resonance about 60kHz. So be very careful. Its is critical.

The antenna is designed for 200 watts PEP. The continuous power is much lower and will be around 60 watts. If the antenna is loaded with too much power will increase the SWR. If this happens, reduce power immediately. After some time the SWR back to normal.

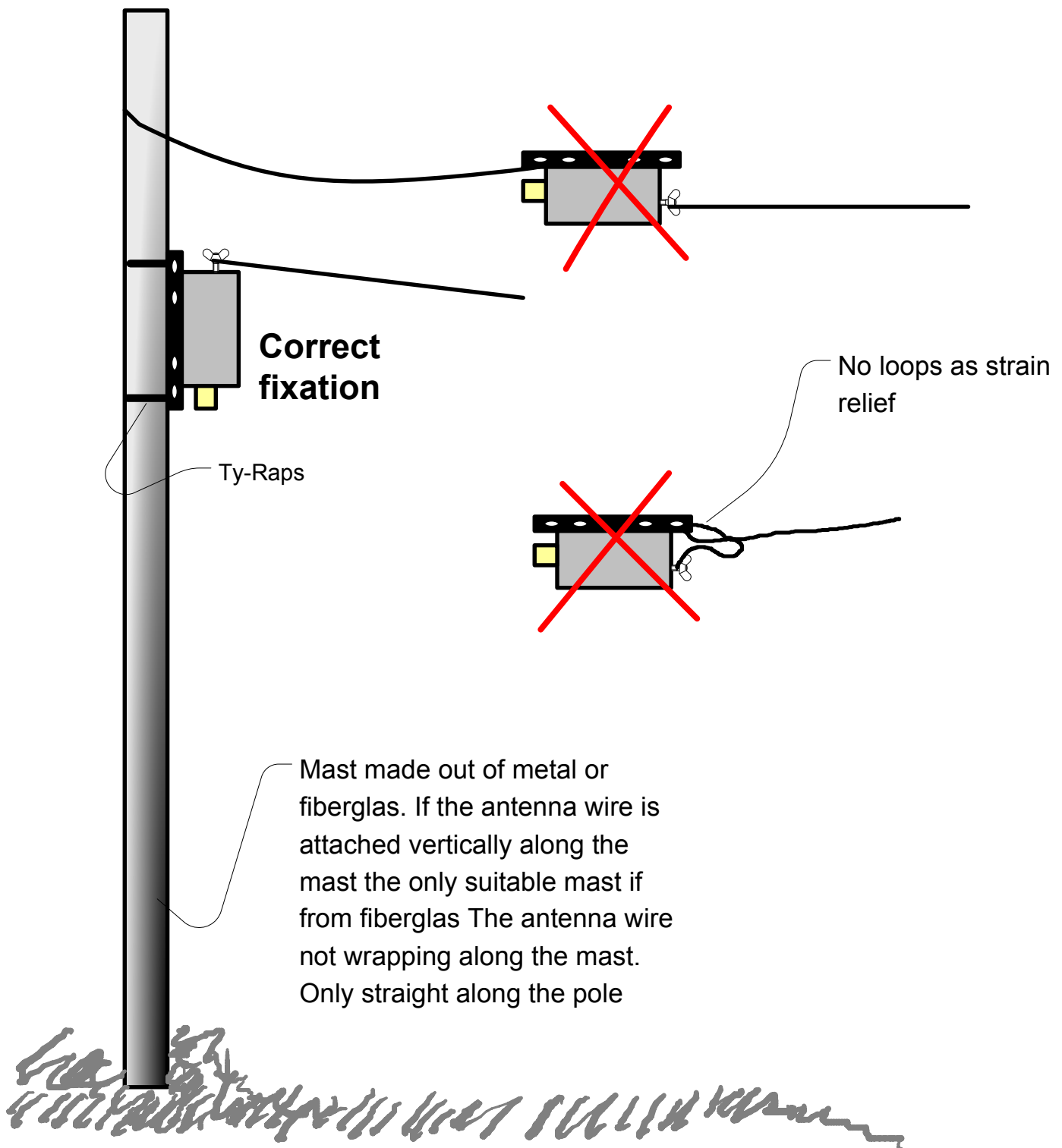
Technical specifications.

Frequency:	80, 40 , 20, 15 en 10 meter amateurband.
SWR band width	80m 100 KHz < 1:2,0 > 1:1,0 40m 200 KHz < 1:1,5 > 1:1,0 20m 350 KHz < 1:2.0 > 1:1,5 15m 450 KHz < 1:1,5 > 1:3,0 10m 1Mhz < 1:1,5 > 1:2,0
Maximum power	200 Watt PEP
Length	23 meter
Used Materials	Stainless Steel, Nylon, Teflon SO239, box: ABS, IP65 Antenna wire: CU hard, 40kg breaking force End insulator: Polycarbonate UV resistant

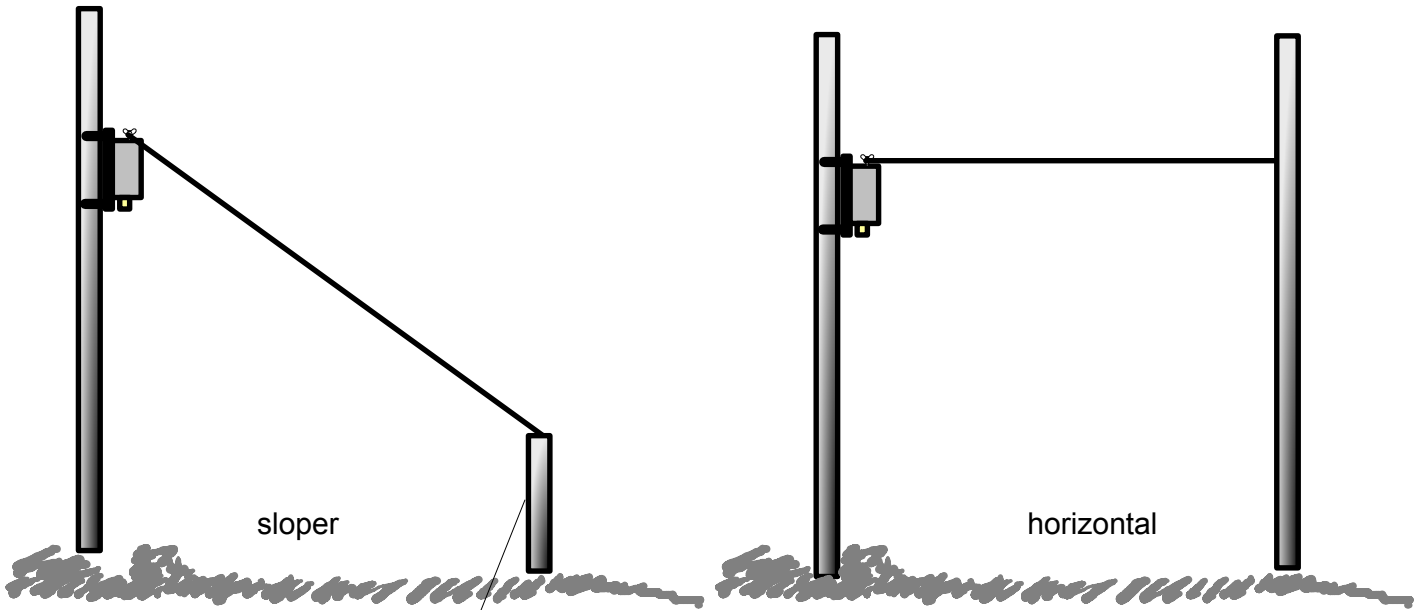
We wish you a lot of DX .

73 Ron, PA3RK and Rob, PA3EKE

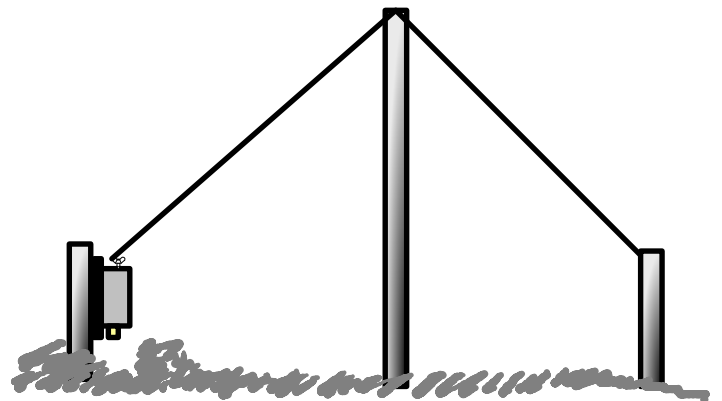
Fixation of the HyEndFed Antenne



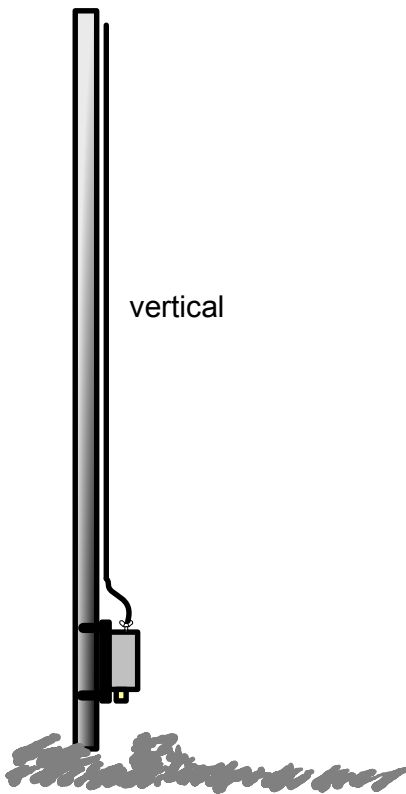
some suggestions for placement



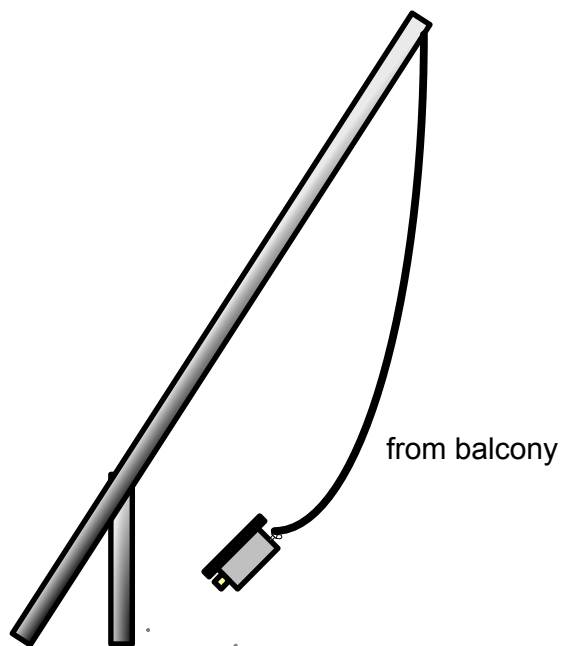
Matchbox also allowed on the low side. It does not matter in terms of operation.



Inverted Vee



vertical



from balcony