

# End-Fed Trap Antenna

## EFT40

40/30/20m

### Technical Data „EFT40“:

- Length 16.3 m / 54 ft
- Connector BNC
- Max Power 30 Watt CW
- V.S.W.R: 40 m:  $\leq 1,9:1$
- V.S.W.R: 30 m:  $\leq 1,8:1$
- V.S.W.R: 20 m:  $\leq 1,7:1$
- Antenna wire with PE jacket made of hard drawn copper  $\varnothing$  ca. 0,3mm<sup>2</sup> (6x0,25mm)
- Amidon/Fair-Rite toroid
- Waterproof housing
- Weight approx 135 g / 5 oz

The EFT40 Antenna is an easy to handle end-fed dipole for 40/30/20m not requiring a tuner. Build as a lambda/2 antenna no counterpoise or radials are needed.

### Mounting:

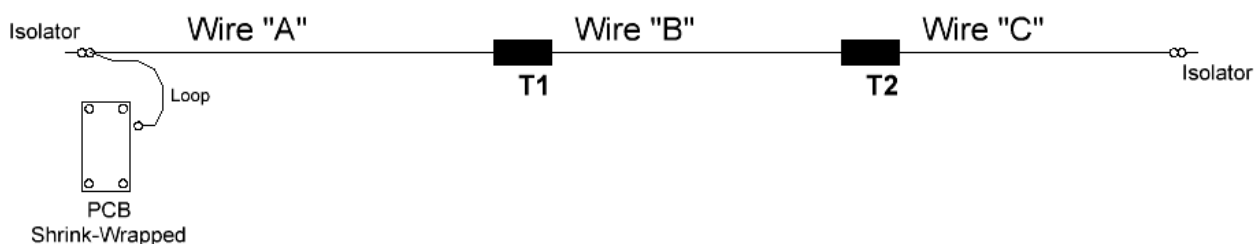
With proper mounting no antenna tuner should be required. The use of a counterpoise or radials is not necessary.

The V.S.W.R. values can vary, based on the environment. The length of 16.3m/54ft is ideal for cramped places.

Please use guy ropes for mounting.

### Tuning:

The antenna is delivered resonant. The resonant frequency is at the beginning of each band and the tuning was done as an Inverted-V with a 10m glass-fibre mast. Normally there should be no tuning required. However, based on influences of the environment, a small adjustment may be needed



## **Ho To Tune:**

Start with the 20m band. Change the length of the antenna wire „A“ between matchbox and first Trap „T1“. Tune your TRX to your preferred frequency, for example 14.060 kHz, and watch the VSWR. Is the resonant frequency below this, you have to shorten this wire. Shortening of the wire should proceed in small steps of approximately 2 cm. The wire loop between the isolator and the shrink-Wrapped PCB can be made longer, or shorter, for small changes of the resonant frequency. For bigger changes the wire must be cut and re-attached to the cable lug.

To change the resonant frequency of the 30m band, part „B“ of the antenna, the wire between the two Traps „T1“ and „T2“, must be changed. Tune your TRX to your preferred frequency for 30m, for example 10.116 kHz, and watch the VSWR. Is the resonant frequency below this, you have to shorten this wire. Don't cut the wire, just pull a small amount of the wire through the holes of the PCB the Trap is made of.

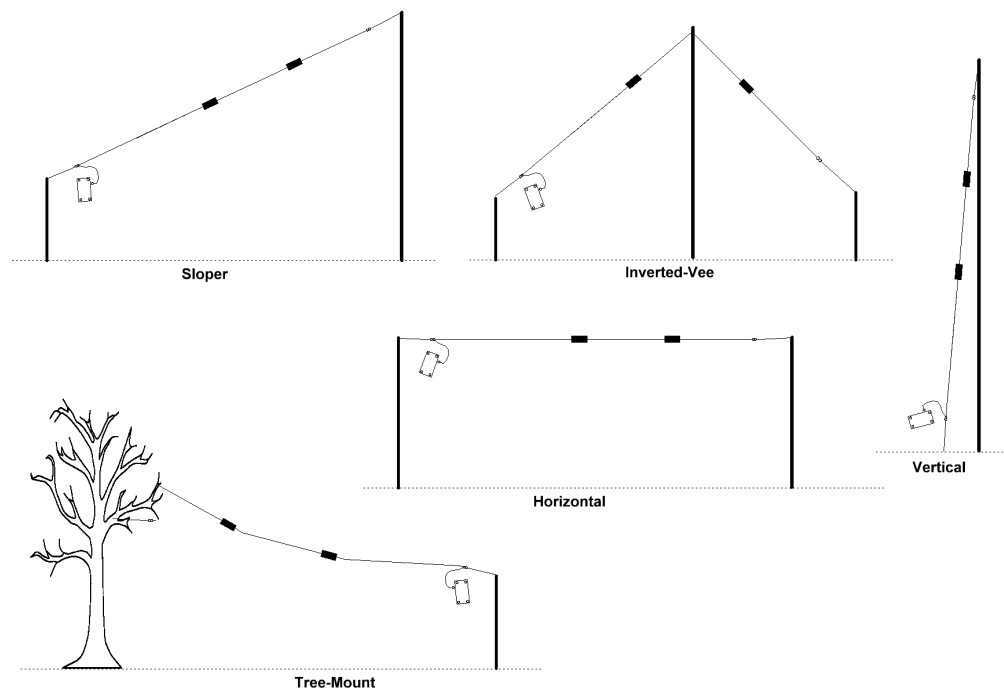
To change the resonant frequency of the 40m band, just change the length of the part „C“. Loosen the clamp and slide the antenna wire through the isolator. Don't cut the wire, just put it along the remaining wire and fixate it with cable tie or tape.

If the wire is not cut the antenna can be tuned for other locations or you can do changes at a later point if needed.

## **Mounting Options:**

You can mount this antenna in several ways:

- Sloper
- Vertical
- Horizontal
- Inverted-Vee



Please contact us if you need any further information or help: „[service@labshack.de](mailto:service@labshack.de)“

Good luck and best DX!