ENDFEDZ
EFT-40/20
20M/40M END FED DIPOLE

ASSEMBLY

1. This antenna is essentially a half wave dipole on 40 meters and full wave radiator on 20 meters with one important difference– the feedline is at the end of the antenna. The antenna is suspended at its ends by the two included end insulators– one of which is integral to the matchbox.

2. In order to have the least possible influence on the antenna, insulated lines are recommended for attachment to the insulators. The antenna may be suspended horizontally, vertically or sloping. Portable operation is easily accomplished by suspending the far end from a tree limb and letting the matchbox hang just above the ground.

3. The antenna has been used from hotel rooms by hanging the matchbox end just outside the window and letting the far end hang, or preferably pulling it away from the building with a guy attached to the end insulator.

TAKE THE TIME TO PROPERLY TUNE THE ANTENNA

4. Unroll the antenna in a straight line beginning with the end insulator line.

5. Tuning is most easily accomplished by using an antenna analyzer attached to the far end of the coaxial cable that will be used with the antenna. Alternatively, of course, a suitable VSWR meter may be employed. This should be done at the lowest power setting that yields reliable VSWR readings. With the antenna **in its operating position**, look at the frequency of lowest VSWR on 40 meters. Most likely this point will be too low requiring you to shorten the antenna. This is done at the end insulator end but shortening in small increments – 2" or less. Instead of cutting the wire, you may opt to feed the wire through the end insulator and securely wrap it a few turns around the main wire and secure with tape. Make sure to leave at least an inch of the tip hanging loose or it will radiate against itself. Remember, initially, it is unimportant WHAT the VSWR is in the 40 meter band, but rather you must establish WHERE the VSWR is the lowest.

6. Again suspend the antenna and look at 20 meter resonance. Unless you intend to only work SSB (no data or CW), the lowest VSWR point is likely too high in the band.

7. Securely plug the 20 meter stub into the socket at the center of the 40 meter radiator. Make certain it is fully seated. See figures 3 & 4 later in this manual.

8. Redeploy the antenna and again observe the frequency of the lowest VSWR on 20 meters – it should have dropped significantly. Repeatedly trim (or better to feed and wrap back along itself) the 20 meter stub until the VSWR is centered in the portion of the 20 meter band that you will be using. This stub will have no effect on 40 meter tuning. You **MUST** tune 40 meters first though as it does affect 20 meters.

   NOTE: If one or both ends use a tree for support, make sure to strain relieve the antenna with a pulley, weight or bungey if this is a temporary installation. **NO ANTENNA can hold up to the thousands of pounds of force exerted by a moving tree**.

9. Figure 1 illustrates some mounting ideas.

10. If the antenna is repeatedly deployed, take the time to neatly coil the radiator wire each time the antenna is taken down, avoiding any kinks.

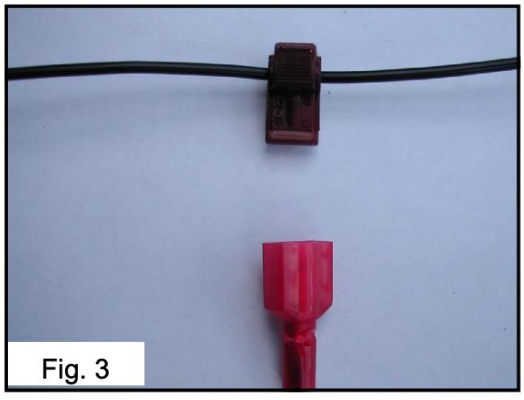


Fig. 3

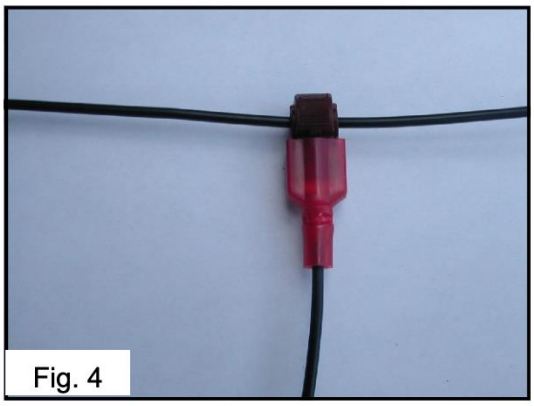
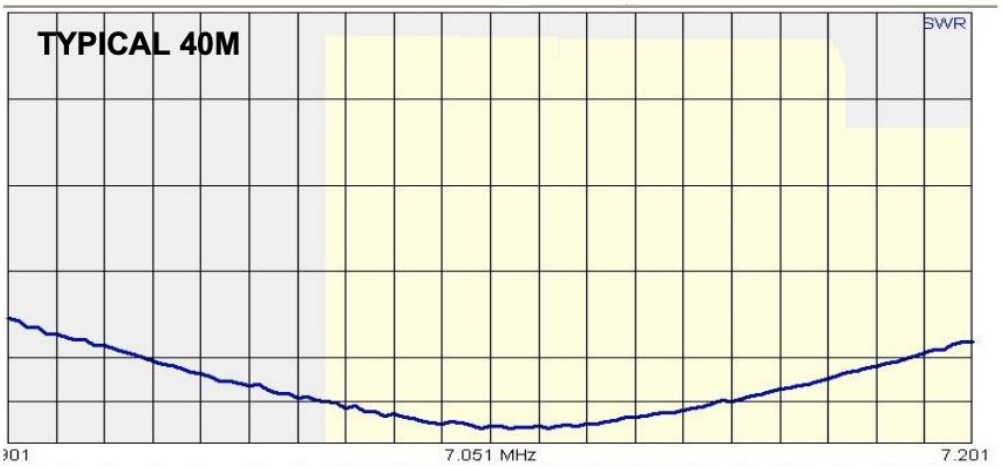
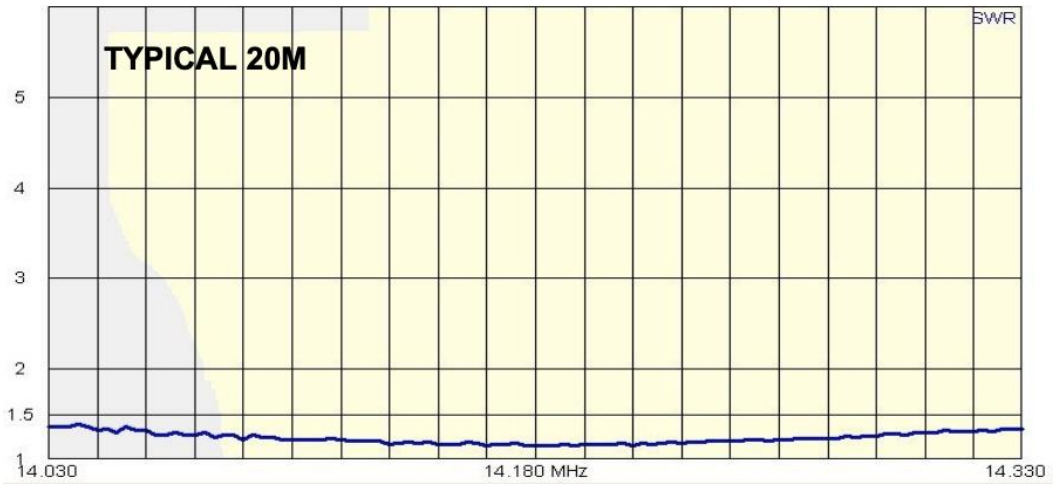
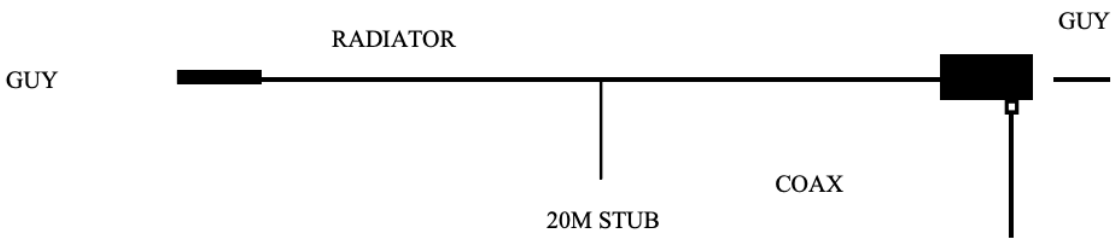
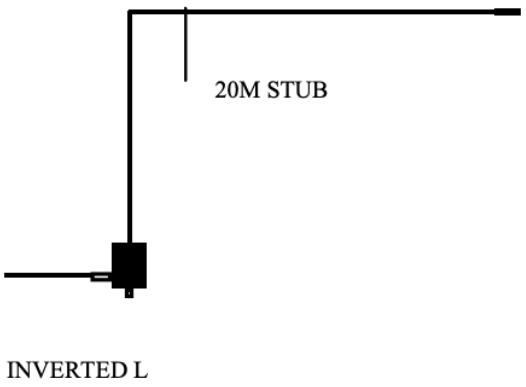


Fig. 4


TYPICAL 40M
SWR
901
7.051 MHz
7.201


TYPICAL 20M
SWR
5
4
3
2
1.5
1
14.030
14.180 MHz
14.330


GUY
RADIATOR
GUY
COAX
20M STUB


20M STUB
INVERTED L

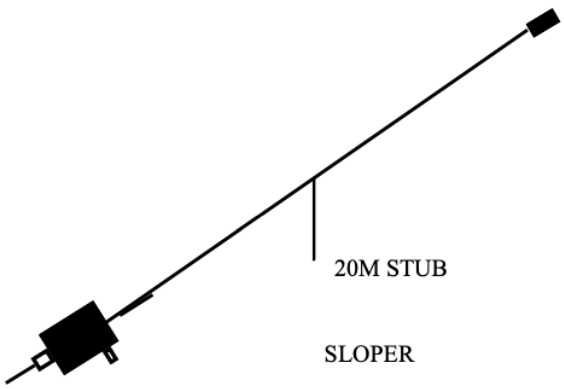

20M STUB
SLOPER

FIG 1.

SPECIFICATIONS

Polarity:	Depends on mounting configuration
Design Z:	50 Ohms
V.S.W.R. Bandwidth 20M:	500 kHz 1.5:1
V.S.W.R. Bandwidth 40M	150 kHz 2.0:1
Power Handling:	**100W CW/SSB, 25W DATA/AM**
Weight:	0.5 lbs.
Length:	66'
Hardware:	Stainless Steel
Connector:	SO-239
Radiator	#18 black poly coated copper clad

EndFedz®

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