

ENDFEDZ EF-40/30 40M/30M END FED DIPOLE

PARTS LIST

PART NO.	QTY	DESCRIPTION
SUB14005	1	40/30 METER EF MATCHBOX
SUB1001	1	30M RADIATOR 44' 6"
1409	1	END INSULATOR
14417	1	#10 SPLIT RING LOCKWASHER
2814	1	#10 STAINLESS HEX NUT
2815	2	#10 STAINLESS FLATWASHER
32767	1	SHIPPING BOX
4030	1	EF-40/30 MANUAL
SUB1002	1	30M TRAP W/ HARDWARE
SUB7019	1	109" 40M TIP ASSEMBLY
1411	1	THUMB NUT 10-32



ASSEMBLY

1. This antenna is essentially a half wave dipole 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. 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 30M. Most likely this point will be too low requiring you to shorten the antenna. This is done at the matchbox end. You might try clipping off the radiator at 1” intervals. After each cutting, restrip the wire and attach it to the matchbox between the 2 #10 flatwashers. When the correct length has been found, slide the 2 pieces of supplied shrink over the wire and solder the wire to the supplied lug. Next, shrink the small piece of tubing while it is butted up against the lug. Position the large shrink tube over the barrel of the lug and shrink it in place. Less desirable methods would be to simply secure the bared wire between the two flatwashers– preferably first tinning the wire to prevent it from fraying. **This is probably not suitable for a permanent installation. Tighten the #10 hardware just enough to compress the lockwashers.**

6. Again suspend the antenna and look at 40 M resonance. It should be below the 40M band– tune by trimming the 109” 40M tip (SUB7019) attached to the end insulator. Each inch will raise resonance by approximately 15 KHz .

7. Once you are satisfied with the overall length of the radiator, lace the end of the wire through the end insulator as shown in Fig. 1.

8. Take the time to tune the antenna– no tuner is required nor should one be used. Maximum efficiency and absolute minimum feedline radiation will occur when the antenna is tuned as in the steps above.

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

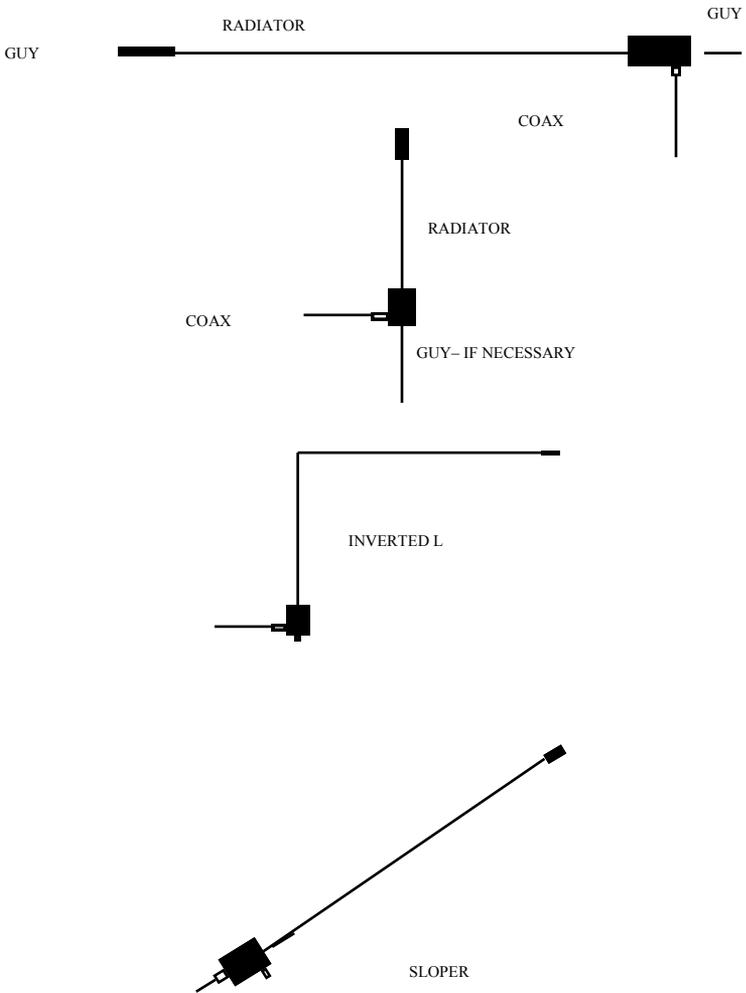
9. Fig. 3 illustrates some mounting ideas.

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

11. The 10-32 thumb nut (1411) is supplied to facilitate changing radiators in the field. Do not use the lockwasher when using the thumb nut.



Fig. 1





SPECIFICATIONS

Polarity:	Depends on mounting configuration
Design Z:	50 Ohms
V.S.W.R. Bandwidth 30M:	500KHz 1.5:1
V.S.W.R. Bandwidth 40M:	140KHz 2.0:1
Power Handling:	25W CW/SSB
Weight:	0.5 lbs
Length:	54'
Hardware:	Stainless Steel
Connector:	Silver/Teflon SO-239
Radiator	#18 black poly coated copper clad

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