ENDFEDZ
EFT-MTR
40M/30M/20M END FED DIPOLE

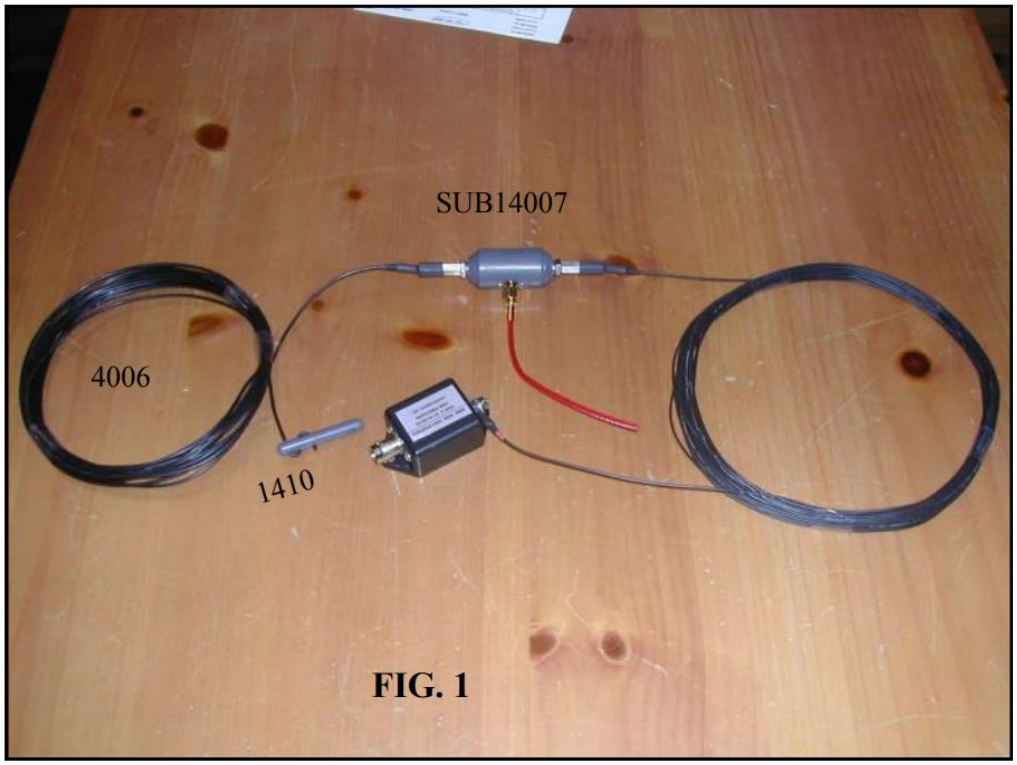


FIG. 1

ASSEMBLY

1. This antenna is essentially a half wave dipole (full wave on 20M) 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. This EndFedz is a little different than our previous designs in that it requires the user to remove an SMA connector at the end of the 30M resonator to enable just 30M or keep the SMA installed for 40 and 20M.

   Because of the broad bandwidth of the antenna, it is unlikely that it will require tuning in the vast majority of deployments. This is particularly true of 30M where the band is very narrow. Once 30M acceptable VSWR is observed (typically below 1.5:1 **with the SMA connector unscrewed/removed as in Fig. 3**), move on to checking 40 and 20M.

5. Install the SMA connector (FIG. 2). With the antenna deployed in the clear check 40M and 20M best VSWR. If it is below the band, remove 1" of wire and recheck. 40M and 20M will both move up in the band together.

6. Repeat trimming in 1" until you are satisfied with 40m and 20M VSWR.

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. 4.

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.

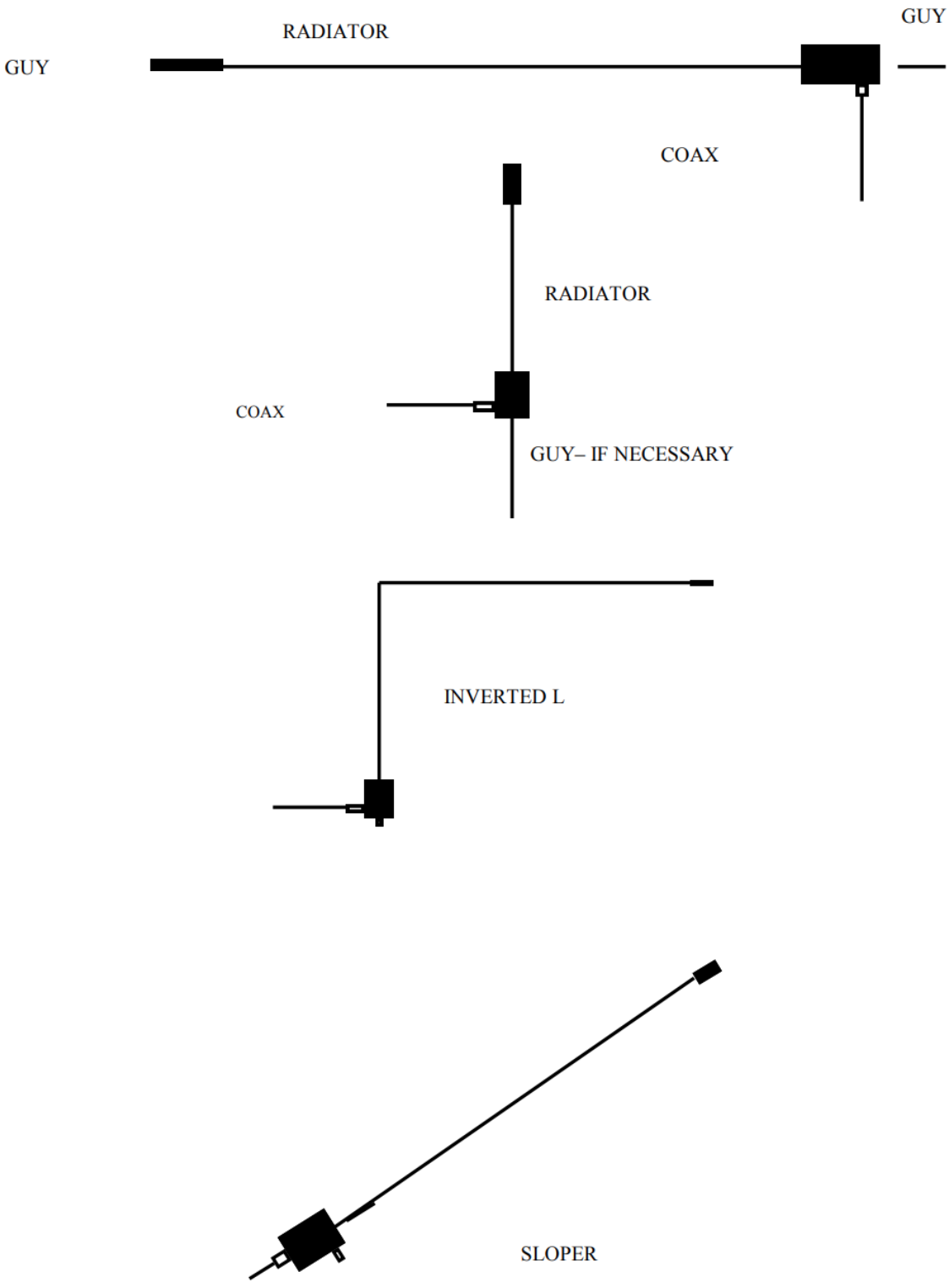
10. If the antenna is repeatedly deployed, take the time to neatly coil the radiator wire each time the antenna is taken down– avoiding kinks.

11. Ignore the pigtail hanging down from the SMA connector as shown in pictures. This was a piece of plastic that LNR Precision used to attach to the SMA shorting cap so you could see it easier. We are shipping the antenna with a pre-fabricated SMA shorting cap that's included in a separate bag and does not include the plastic pigtail. It's not a resonant part of the antenna.

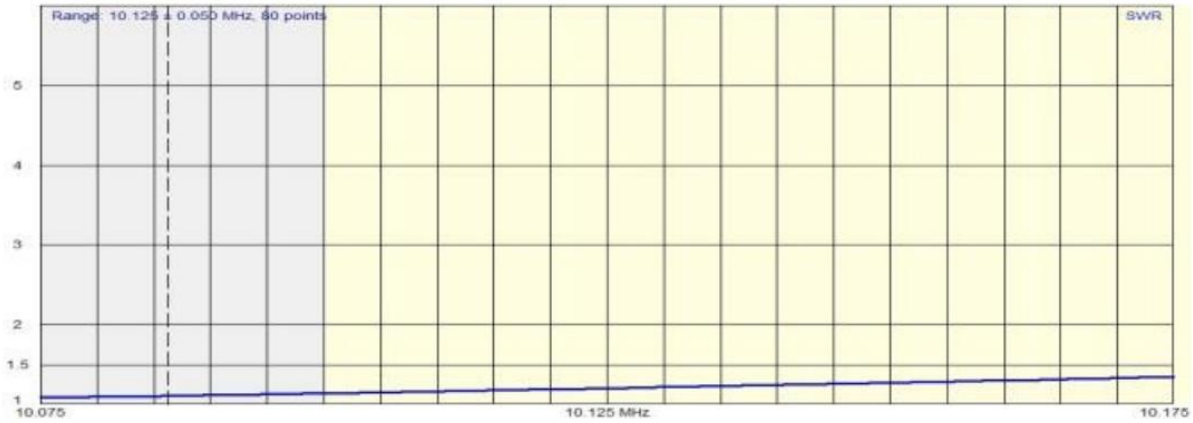
FIG. 2 SMA INSTALLED FOR 40M &20M OPERATION

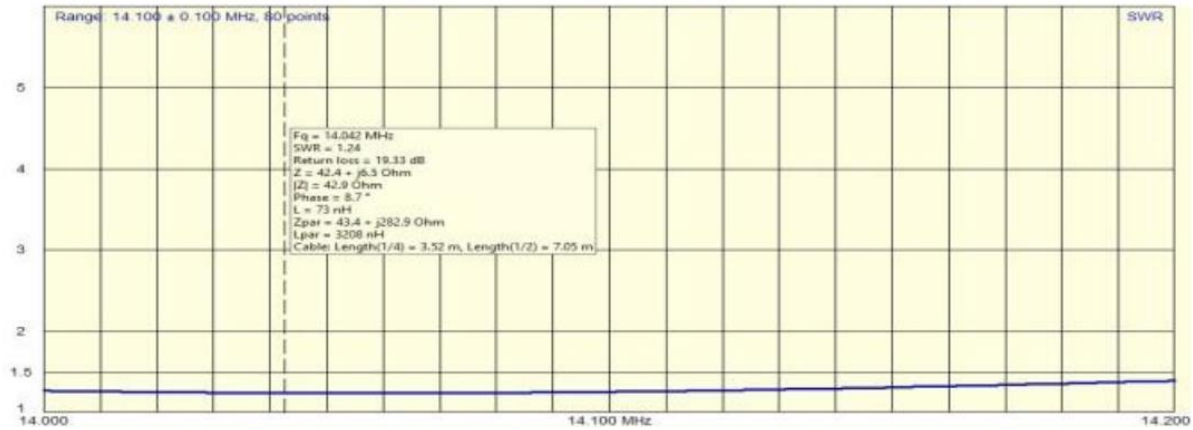
FIG. 3 SMA REMOVED FOR 30M OPERATION

Fig. 4


GUY
RADIATOR
GUY
COAX
RADIATOR
COAX
GUY– IF NECESSARY
INVERTED L
SLOPER


Range: 7.100 ± 0.100 MHz, 80 points
SWR
Fq = 7.008 MHz
SWR = 1.08
Return loss = 28.26 dB
Z = 51.0 + j3.8 Ohm
|Z| = 51.1 Ohm
Phase = 4.2 °
L = 85 nH
Zpar = 51.3 + j691.1 Ohm
Lpar = 15703 nH
Cable: Length(1/4) = 7.06 m, Length(1/2) = 14.12 m
5
4
3
2
1.5
1
7.000
7.100 MHz
7.200


Range: 10.125 ± 0.050 MHz, 80 points
SWR
5
4
3
2
1.5
1
10.075
10.125 MHz
10.175


Range: 14.100 ± 0.100 MHz, 80 points
SWR
Fq = 14.042 MHz
SWR = 1.24
Return loss = 19.33 dB
Z = 42.4 + j6.3 Ohm
|Z| = 42.9 Ohm
Phase = 8.7 °
L = 73 nH
Zpar = 43.4 + j282.9 Ohm
Lpar = 3208 nH
Cable: Length(1/4) = 3.52 m, Length(1/2) = 7.05 m
5
4
3
2
1.5
1
14.000
14.100 MHz
14.200

SPECIFICATIONS

Polarity:	Depends on mounting configuration
Design Z:	50 Ohms
V.S.W.R. Bandwidth 40M:	300 kHz 1.5:1
V.S.W.R. Bandwidth 30M:	350 kHz 1.5:1
V.S.W.R. Bandwidth 20M:	300 kHz 1.5:1
Power Handling:	**25W CW/SSB**
Weight:	4 oz.
Length:	65’
Hardware:	Stainless Steel
Connector:	Silver/Teflon BNC
Radiator	#22 black poly coated copper clad

Par EndFedz
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