

hy-gain®

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LC-160Q

160 Meter Loading Coil Kit
for 18 HT Hy-Tower

INSTRUCTION MANUAL

General Description

The LC160Q was designed as an accessory item for the 18HT "Hy-Tower" antenna. It is easy to install and adds the ability to have an antenna that operates efficiently on 160 meters.

Theory of Operation

The loading coil simply adds base inductance to the antenna making it's electrical length 1/4 wave length on 160 meters.

SWR and Feedline

The SWR on 160 meters can be as low as 1:1 with good ground conductivity if care is taken to select the proper tap on the coil for your particular installation. The feedline for the 18HT is not altered in any way.

Operation

The LC160Q is simple to operate. When the induction clip is tapped to the 80 meter point, the 18HT operates normally switching from 80 thru 10 meters automatically. When the induction clip is placed at the 160 meter tap, the antenna is resonant on 160 meters. The switching can be done with a relay if you wish.

Step-By-Step Installation of the LC160Q Coil

1. Assemble LC160Q coil as shown in Figure 1.
2. Remove the 80 meter wire from the 18HT at eyebolt.
3. Hook up rope to lower insulator hole as shown in Figure 1.

4. Loop the 80 meter wire around upper insulator 1/4 bolt with solder lug. (Coil is now supported in series with 80 meter wire.)
5. Loop and secure the upper coil lead to this same bolt.

NOTE: The top wire goes through the hole in the insulator making electrical contact with the wire coming from the tower. The bottom wire does not make electrical contact as it goes through the hole that the center wire is attached. (see Fig. 13, page 13 of manual.)

6. Cut the 80 meter wire just long enough to fit into sleeve of lug. (Solder in place.)
7. Attach clip wire to base as shown.
8. For normal operation, this shorting wire should be clipped to the top of the coil.
9. For operation on the lower portion of 80 meters, the induction clip should be clipped to the third (3rd) turn counting from the top. This will be determined by testing at your QTH for the lowest SWR.

For operation on 160 meters, the induction clip should be clipped between 35 to 40 turns from the top. Again, this will be determined by testing for the lowest SWR at your QTH.

Maximum Power

150 Watts average on 160 meters, (300 PEP), for 1 KW average power we recommend the MK-160A.

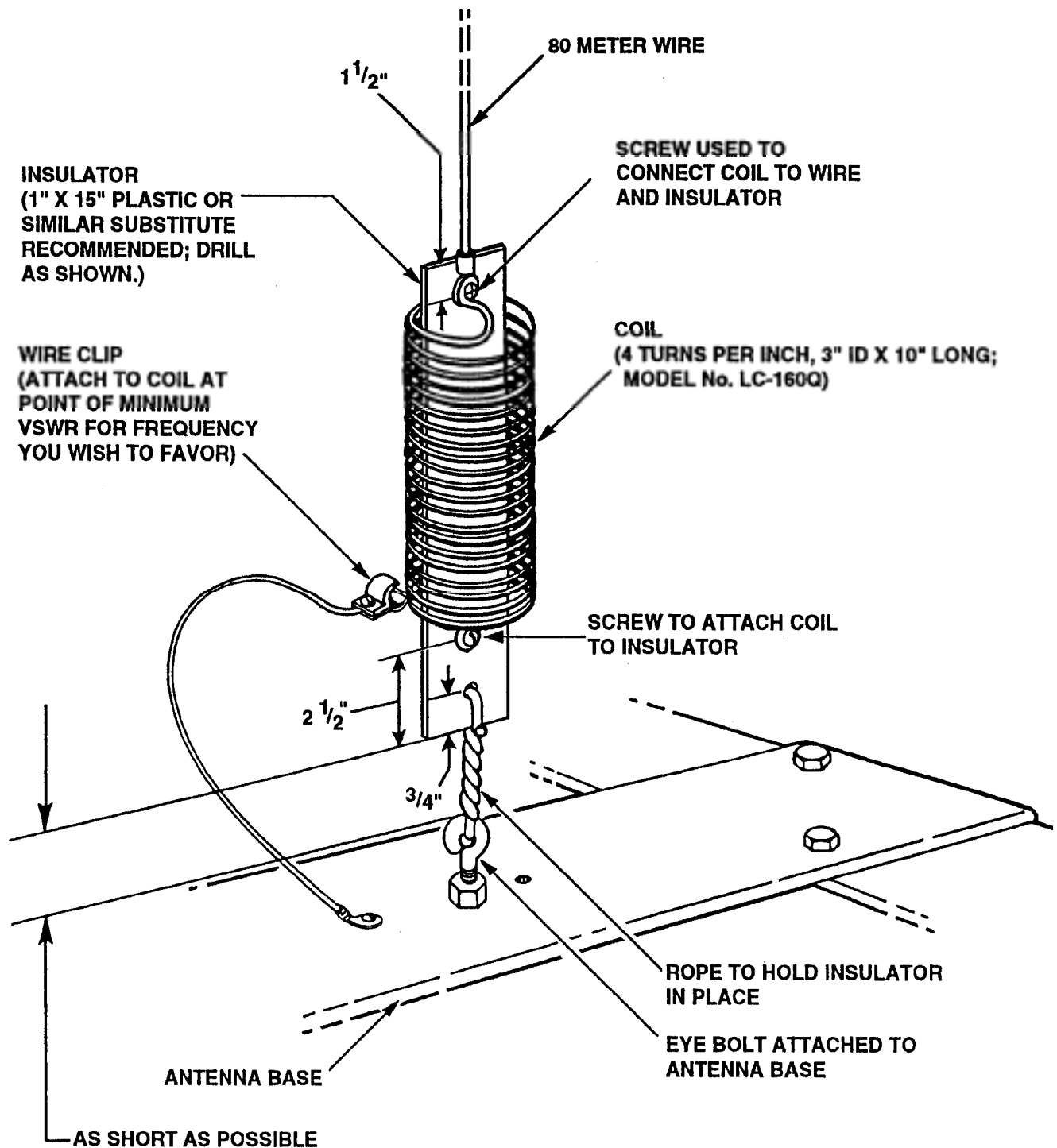


Figure 1
LC160Q Coil

Part No.	Description	Qty
723440	Loading Coil	1
878608	Parts Pack	1
470078	Insulator	1
502958	Screw, 1/4-20 x 1", Hex head	3
554099	Nut, 1/4-20, Hex head	3
562961	Lock washer, 1/4", Internal	3
872817	Inductor Clip/wire assembly	1
677556	Ring Lug, 1/4", 12-10	4