

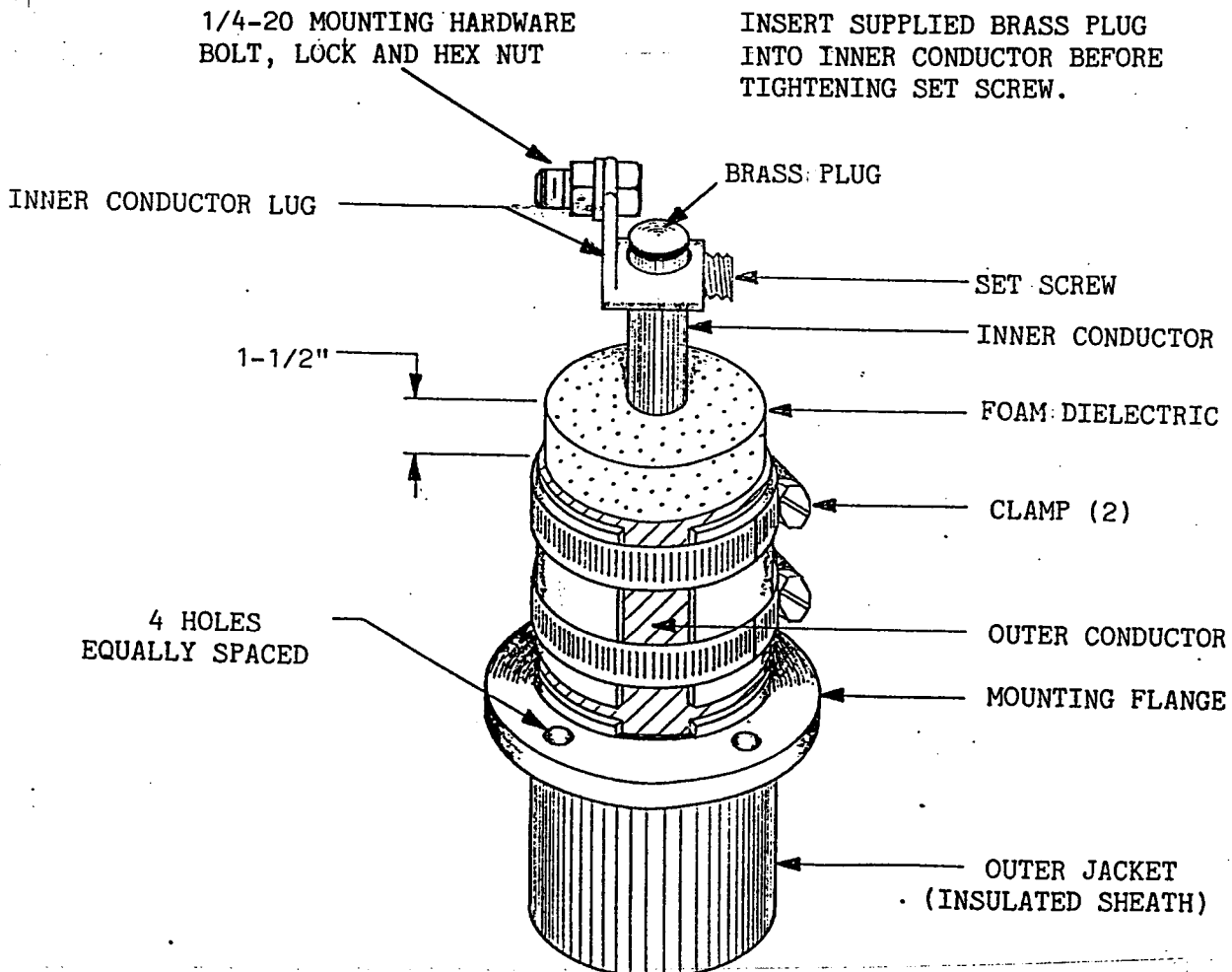
**INSTALLATION INSTRUCTIONS  
FOR LINE TERMINATING UNIT  
MANUFACTURED BY KINTRONIC LABS., INC.**

**STEP 1: Mounting of Weatherproof Housing on Vertical Uprights**

The line terminating unit (LTU) is designed to be mounted on two vertical uprights at a distance of 3-6 feet from the base of the tower. Two 1/2" diameter holes extend from the back wall of the housing for mounting the housing to two wooden or metal uprights. Three-inch diameter metal pipe or 4" x 4" wood post is recommended. The length should be such that the floor of the box is approximately 3 feet above ground level. Holes for the uprights should be dug 3-4 feet deep. The vertical uprights, having been attached to the housing, should then be placed in the holes. The housing should be leveled after which concrete should be used to fill the holes.

**STEP 2: Attachment of Transmission Line to Input**

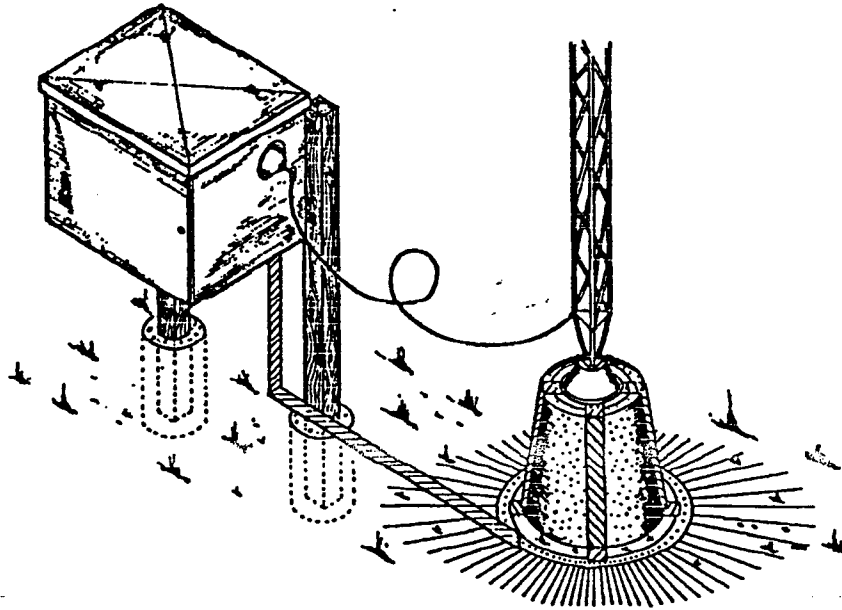
The input to the LTU is on the bottom of the housing and is designed to accept the foam coaxial cable. The figure below illustrates the attachment of the cable clamp the end of the cable.



## INSTALLATION INSTRUCTIONS FOR LTU (CONTINUED)

### STEP 3: Attachment of LTU Output to Tower

The output of the LTU is terminated in a bowl insulator assemble. A piece of copper tubing should be used to interconnect the stud of the bowl insulator to the tower. Copper tubing size should be selected in accordance with the value of the base current as follows: (1) 0-30 Amp. 3/8" O.D.; (2) 30-40 Amp. 1/2" O.D.; (3) 40-50 Amp. 5/8" O.D.; (4) 50-60 Amp. 3/4" O.D. It is recommended that a single 9-1/2" diameter turn be put in the tubing between the LTU and the tower. (SEE ILLUSTRATION BELOW) This coil also provides additional lightning protection.



### STEP 4: Attachment of LTU Ground to Tower System

The bracket located on the bottom of the LTU housing is designed to accept a copper ground strap, which should then be attached to the tower ground system.

### STEP 5: LTU Network Adjustment

Typically the LTU will have been pre-tuned for the theoretical base impedance of the tower. Hence an Operating Impedance Bridge (OIB) should be inserted at the input J-Plug. With RF power applied, the impedance should read  $50+j0$ . To reduce the reactance to zero, adjust the input coil. To adjust the resistance to 50 Ohms, adjust the Output and shunt coils. Factory engineering personnel should be contacted if this approach does not yield suitable results.

### STEP 6: Horn Gap Adjustment

- A. Set gap to an initial spacing of 1/2 inch.
- B. Insert a 1 KHz audio tone into the transmitter. Apply 100% modulation. Verify that no arcing occurs. If arcing does occur, increase the gap by 1/8 inch with the transmitter off. Turn transmitter on with 100% modulated tone and recheck for arcs. Continue this procedure until the maximum spacing at which the arc gap breaks down has been determined.
- C. Increase the gap spacing another 1/8 inch beyond the maximum spacing at which a breakdown occurs with the transmitter at 100% modulation. Secure the gap electrodes after this condition has been reached.