

NOTE

THE COMPRESSION CLAMPS USED IN THIS ANTENNA ARE A UNIVERSAL DEVICE AND ARE USED IN MANY VARIED APPLICATIONS. DEPENDING UPON THE APPLICATION, THE SCREW HEAD MAY OR MAY NOT CONTACT THE LOCKWASHER OR CLAMP BODY. DO NOT OVER TIGHTEN THE CLAMPS IN AN ATTEMPT TO CONTACT THE CLAMP BODY WITH THE SCREW HEAD. TO DO SO MAY RESULT IN CLAMP FAILURE OR TUBE FAILURE CAUSED BY PUNCTURE. PLACE FRONT EDGE OF COMPRESSION CLAMP ON FRONT EDGE OF TUBING WITH SCREW HEAD 180° FROM SLOT.

INSTRUCTION MANUAL
for
Model 204BA (394)
20 Meter 4 Element Beam

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SECTION 1

GENERAL DESCRIPTION

General The Hy-Gain Model 204BA is an optimum spaced, 4 element, 20 meter beam. It is equipped with Hy-Gain's Exclusive Beta Match which insures maximum transfer of electrical energy from the feedline to the antenna. The Model 204BA is designed to fit a 1 5/8" O.D. mast and can be rotated with a heavy duty TV rotator.

Specifications

ELECTRICAL:
Input Impedance..... 52 ohms
Gain..... 9.7 db min
Front-to-Back Ratio..... 25 db

Maximum Power Input..... 1 kW AM
VSWR at Resonance..... Less than 1.2:1
Lightning Protection..... DC ground

MECHANICAL:
Boom Length..... 26 feet
Boom Diameter..... 2"
Longest Element..... 36' 6"
Maximum Wind Survival..... 80 mph
Net Weight..... 38 lbs
Accept Mast..... 1 1/4 to 2 3/4" OD
Wind Surface Area..... 3.9 sq. ft.
Wind Load (80 mph)..... 100 lbs

SECTION 2

INSTALLATION

Before leaping head long into the assembly of this antenna, take a moment to read this paragraph. The Model 204BA is a fairly large antenna and requires some consideration as to how you are going to get it to the top of the tower. To help you with this problem we have furnished you with three methods and it is best that you consider which you are going to use now, as it will determine how you put the antenna together.

Method #1 Completely assemble the antenna on the ground, then hoist it into position using the set-up as shown in Figure #1.

Method #2 The guy wire method (Figure #2) is a simple inexpensive way of installing the antenna. Guy the antenna as shown in the illustration and pull it into position. This method requires you to make two boom cradles as shown in the detailed drawing.

Method #3 The last method is to assemble the antenna on the ground in halves, then hoist each half up the tower and assemble in the boom to mast bracket on the

tower, as shown in Figure #3.

All tubing supplied with the Model 204BA is taper swaged (tapered) and slotted. It is held in place with full circumference clamps. Make all measurements as accurate as possible using the dimensions given in this manual. If this is done you will gain optimum results from your antenna.

Assembly of the Boom

() Select the cast aluminum brackets, boom-to-bracket clamp and casting-to-boom bracket and loosely assemble as shown in Figure 4. The bracket must be loose in order to finish the assembly of the boom.

() Select the two center boom sections and slip the unswaged (untapered) end of each into the boom-to-mast bracket. Line up the holes in the boom with the holes in the bracket and secure as shown in Figure 4.



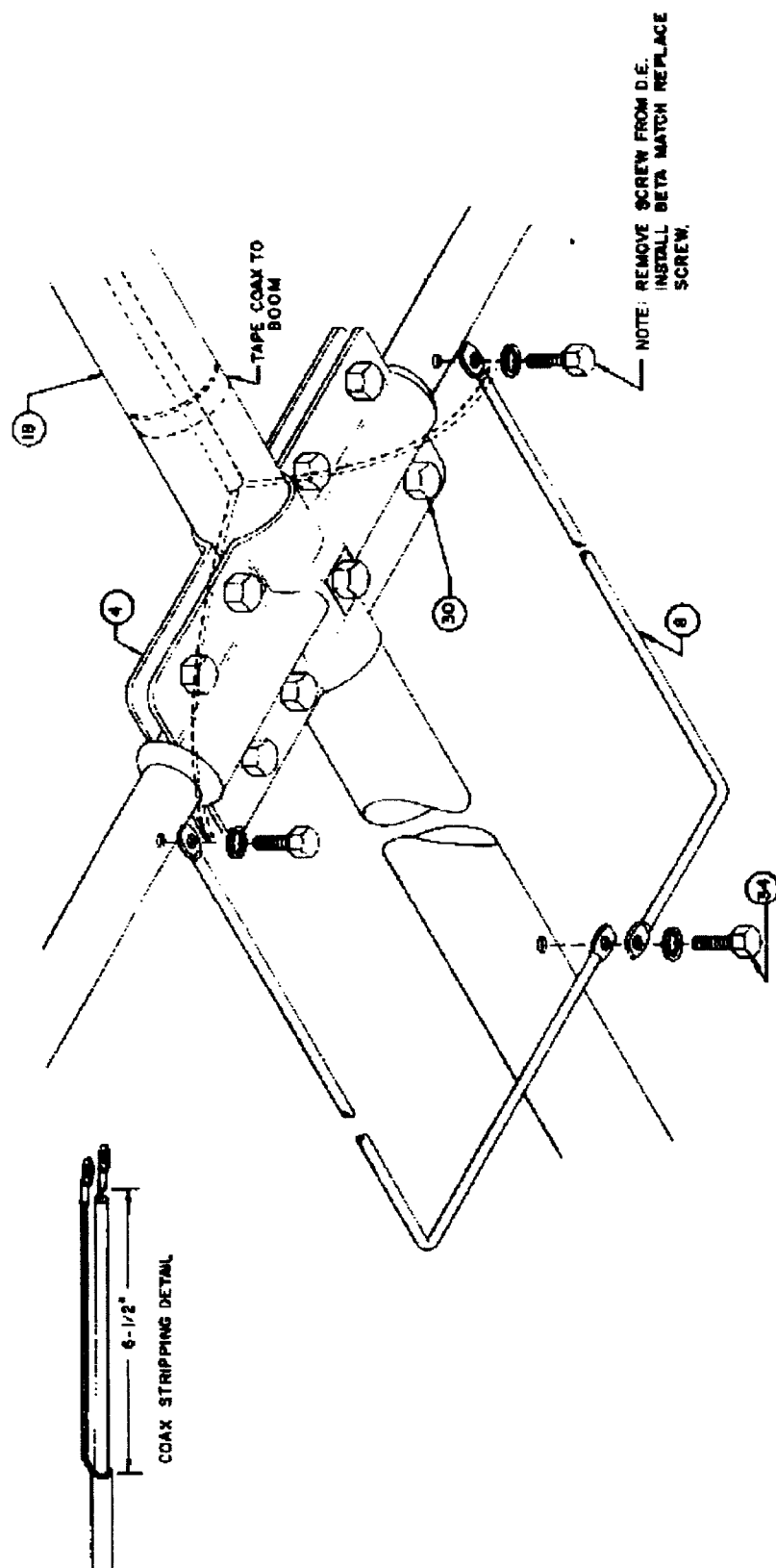


FIGURE 8
BETA MATCH
AND COAX