

The Handy Yagi - Materials and Construction Notes:

TM Hart - AD1B

Elements:

The 70 cm. elements are 0.125 inch steel rod (1/8th inch) purchased at the local home center.

Cut each director to length and file off any rough edges.

Fasten to the boom by drilling a 1/8th-inch hole. Slide the element into the hole and insure that it is centered. Apply a bead of gel-style super glue to the junction between steel and wood junction top and bottom. Re-glue the elements a second time when the first application is dry.

If an element is not aligned properly, gently twist it into position.

Elements: D1 = 11.75 D2=11.6875 D3=11.625 D4=11.5625
 11 ¾ 11 11/16 11 5/8 11 9/10

Boom:

The boom is a 48-inch long 5/8th-inch dowel. After mounting the handgrip and the handy talkie bracket, mark the position of each element along with ½ inch of extra length at the front. Cut off the remainder.

At the grip end of the boom, drill a tap hole, fill with glue and fasten a screw eye with a 3/8th inch opening. Run a 24-inch shoelace through the screw eye and tie the ends. The shoelace loop is a convenient hanger when the antenna is in storage.

Grip:

Mount a bicycle handle bar grip on the boom. My grip is 5-inches long and 1.25 inches in diameter. To insure a snug fit, wrap the dowel with a layer of duct tape. Squirt construction glue inside the grip and slide it into place. Once the glue is dry, it will not move.

Handy Talkie Mount:

The walkie mount consists of two pieces of 1/8th inch particleboard that are glued together. The bracket is 3.125 inches wide and 3.0 inches high. A notch is cut into the top of the bracket to hold the handy walkie belt clip. The notch is 1.124 inches wide and 1.0 inches high.

Two ¼ inch square spacers are used between the bracket and boom to insure proper clearance for the belt clip.

Paint:

My antenna has two coats of black satin paint. This gives a more professional appearance and prevents the steel elements from rusting.

To simplify painting, cut all antenna parts. Assemble the unit to insure all components fit. Glue the directors in place and allow the glue to dry. Remove the handy talkie bracket and paint the antenna. After the paint dries, attach the bracket.