

Yagi Low Cost Coat Hanger Antenna

<https://xwarn.net/2022/01/04/joe-leggio-wb2hol-tape-measure-antenna/>

http://theleggios.net/wb2hol/projects/rdf/tape_bm.htm

Materials List:

Hairpin match: 5 inch wire

Driven Element: 2 pieces, 17 - 3/4 inches long
Reflector: 1 piece, 41 3/8 inches long
Director: 1 piece, 35 1/8 inches long
PVC Pipe 24 inches, optional 45 or 90 elbow, 5-6 inch piece for handle, clip for radio
Tape Holders: 3 pieces, 3d printed tape holders, hot glue to PVC per spacing on diagram
Coax Assy 1 each, with proper end for your radio;

Assembly:

Measure on PVC as shown in diagram, place middle of 3d printed part over mark, then measure space between centers as shown on diagram, hotglue in place;

Sand the inside edges of tape for driven elements and apply solder “tinning” for coax and hairpin match;

Attach tape measure driven elements “numbers” down on to the 3d printed holder, fix one in solid place and tape. Solder one side of the coax and one side of the hairpin to that element

Attach the second driven element and solder coax and hairpin match to that element;, but leave electrical tape a bit loose so you can adjust spacing to get low SWR;

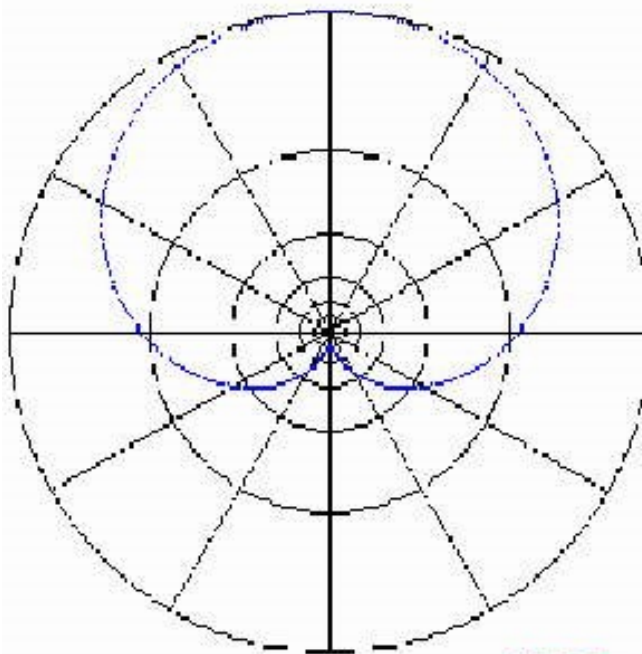
Attach Reflector to 3d printed holder;

Attach Director to 3d printed holder;

now use the VNA or MFJ antenna tester to the unit to adjust hairpin and edriven element for lowest SWR, then tape down element firmly.

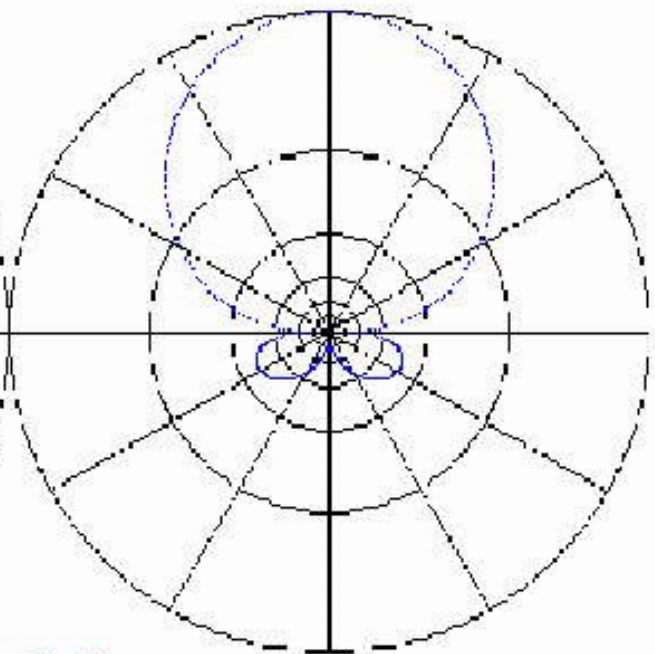
Attach 3d printed end protectors to make the antenna safe!

Attach Coax to radio and try to find the best signal to noise match on transmitter;



H - PATTERN

10 DB per Division



E - PATTERN