

5-ELEMENT BEAM

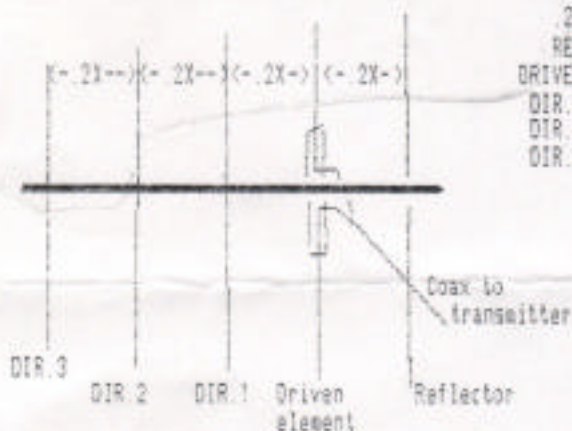
GET A BROOM STICK OR A ROUND RAIL FOR STEPS OR A 2" BY 2" BOARD OR A 1" DOWEL. I WOULD GET ABOUT 7' IN LENGTH.

NEXT FIND A BUNCH COAT HANGERS OR #12 OR #16 GAUGE WIRE AND STRAIGHTEN IT OUT. NOTE THAT THE DIRECTORS AND REFLECTORS ARE ALL OF THE "PARASITIC" VARIETY. THAT IS THEY ARE CONTINUOUS AND MAY BE CUT TO THEIR PROPER LENGTH AT THIS TIME. NOW DRIVEN ELEMENT CAN BE MADE. THE DRIVEN ELEMENT NEEDS TO BE SEPARATED IN THE CENTER IN ORDER TO FEED WITH COAX.

NEXT CUT A PIECE OF PINE ABOUT 12" TO 15" LONG AND 3" WIDE. SECURE THE DRIVEN ELEMENTS HAVES TO THIS PIECE OF WOOD. I CUT A SMALL GROVE ON BOTH SIDES FOR THE ELEMENTS TO FIT IN. SECURE TO WOOD WITH TIE WRAPS OR CABLE WRAPS OR EPOXY BLUE. AT THIS POINT, COAX CAN BE ATTACHED BY SOLDERING TO THE ELEMENT, SHIELD ON ONE SIDE OF ELEMENT AND CENTER WIRE ON OTHER SIDE.

NOW ALL ELEMENTS ARE MADE UP, MOUNT THEM TO BOOM. SIMPLY DRILL A TIGHT FITTING HOLE INTO THE BOOM AND SLIDE THE ELEMENT INTO IT. EPOXY OR A NAIL MAY BE NECESSARY TO SECURE THE ELEMENT. NOW DRILL HOLES INTO THE RECTANGULAR WOOD BLOCK AND ONE ALSO ONE THROUGH THE BOOM WHERE THE ELEMENT SHOULD GO. SECURE THE BLOCK AND ELEMENT ASSEMBLY TO THE BOOM WITH A COUPLE SCREWS OR BOLTS AND NUTS. NOW PUT A COUPLE GOOD COATS OF VARNISH ON THE WOOD PARTS.

NOW CHECK THE SWR, TO TUNE SWR BY SNIPPING SHORT OR ADDING WIRE TO THE DRIVEN ELEMENT.



TABLE

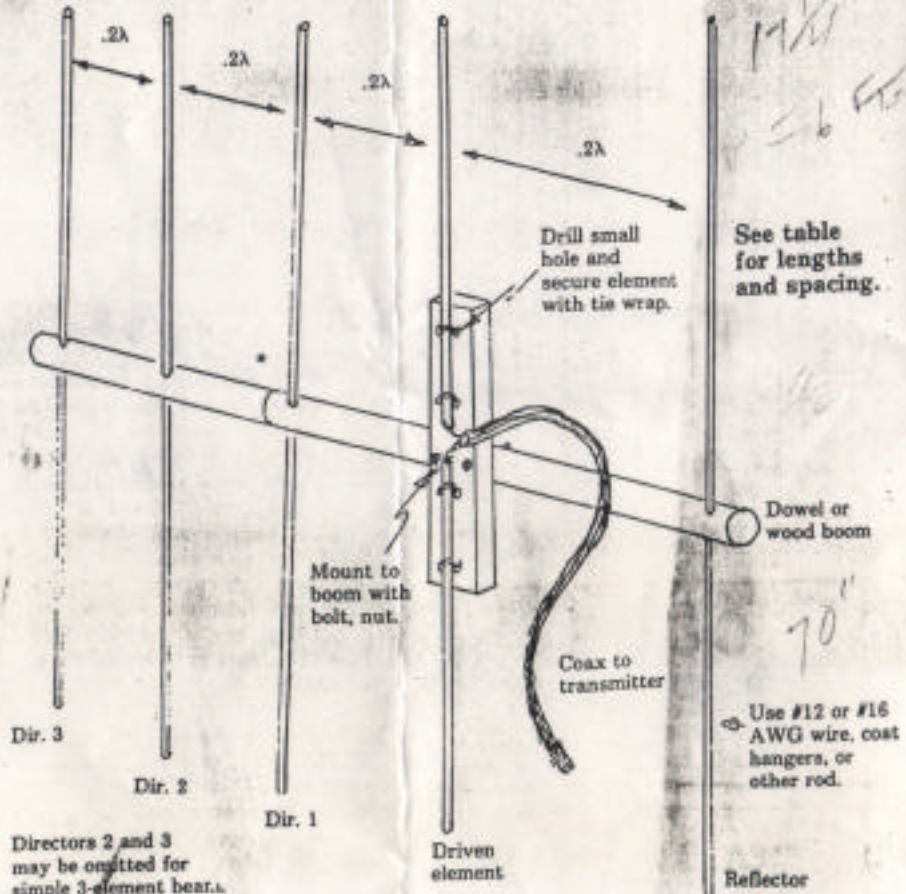
2X	16 3/8"
REF	3' 4"
DRIVEN	3' 3/16"
DIR. 1	3' 7/8"
DIR. 2	3' 11/16"
DIR. 3	3' 7/8"

Ref 40'
Driven

Dir 1 - 36 7/8
← 2 - 36 11/16
← 3 - 36 7/8

V.A.V.

Figure 1 - Simple VHF beam



Directors 2 and 3 may be omitted for simple 3-element beam.

*For 5-element beam, may be necessary to splice wood boom pieces together.