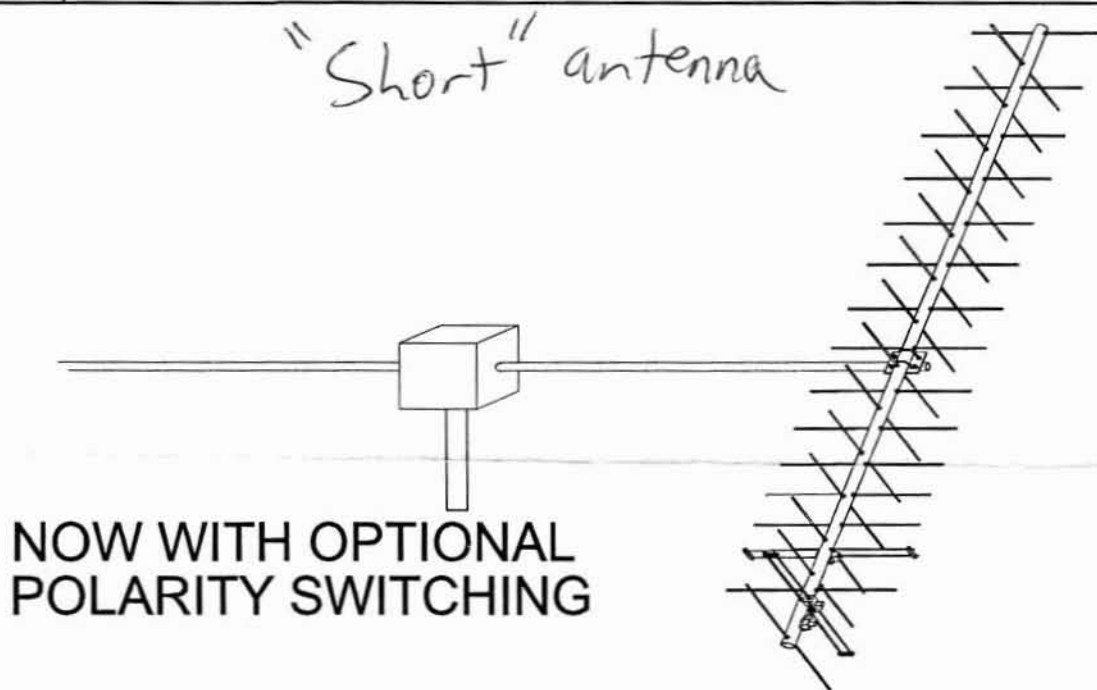




436CP30 Circular Polarized Yagi

Rev. 8-21-01



SPECIFICATIONS

Model Number	436CP30
Frequency Range	432-440 MHz
Gain	14.15 dBdc
Beamwidth.....	30° circular
Polarity	Circular RHC or LHC
Front to Back.....	22 dB Typical
Ellipticity	1.5 dB Typical
VSWR	1.6:1 Max
Feed Impedance.....	50 Ω , Unbalanced
Stacking Distance	51 inches
Connector	'N' Female
Power Handling	600 Watts
Boom Length / Dia.....	117 Inches / 1" Dia
Parasitic Elements.....	28, 3/16" Rod
Wind Area	1 sq ft.
Mast Size.....	1-1/2- 2 Inch
Weight / Shipping Weight	5 lbs / 7 lbs UPS

FEATURES

The 436-CP30 is a practical sized, yet high performance circular polarized antenna with a remarkably clean pattern. The pattern is important in order to match the antenna's noise temperature with modern low noise preamps. This antenna is ideal for satellite work but is also excellent for terrestrial uses like ATV, repeater operation, and long haul tropo DX.

The CNC machined driven element module is O-ring sealed and weather tight for low maintenance and long-term peak performance. Internal connections are encapsulated in a space-age silicone gel that seals out moisture and improves power handling. The 3/16" 6061-T6 rod elements are centered to minimize interaction and maintain good ellipticity. Insulators are UV stabilized and locked in place with stainless keepers. Rugged construction, uncompromising performance for the boomlength: that's the M² 436CP30!

TOOL REQUIRED FOR ASSEMBLY: screwdriver, 11/32 nut driver or wrench, 7/16" and 1/2" socket or end wrenches, measuring tape.

1. Assemble the boom using 8-32 X 1-1/4 screws and locknuts to join sections. Sections may be swaged to each other or use 7/8" internal splice sections.

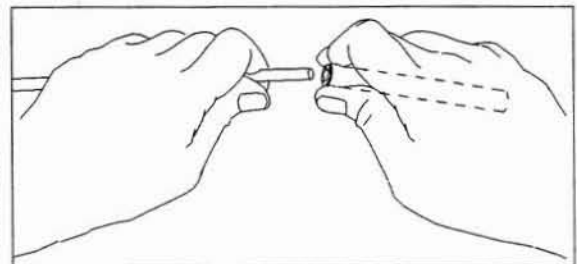
ASSEMBLING THE HORIZONTAL ELEMENTS

2. Lay out the elements by "H" length and position as shown the DIMENSION SHEET. Start with the reflector (longest) element. Balance it on your finger to find rough center and push on a black button insulator to about 1/2" off center. Push the element through the holes 1.937" from the rear of the boom and install the second button, snugging it up into boom. **DO NOT BOTHER CENTERING** the element at this time and **DO NOT INSTALL** the stainless steel shaft retainers yet. It is easier to do it after all the horizontal elements are installed in the boom.
3. Install the 3/16" rod DRIVEN ELEMENT as you did the reflector. Then continue with the installation of the DIRECTORS. *Note that the Director Elements do not consistently diminish in length from rear to front, so pay close attention to length and position.*

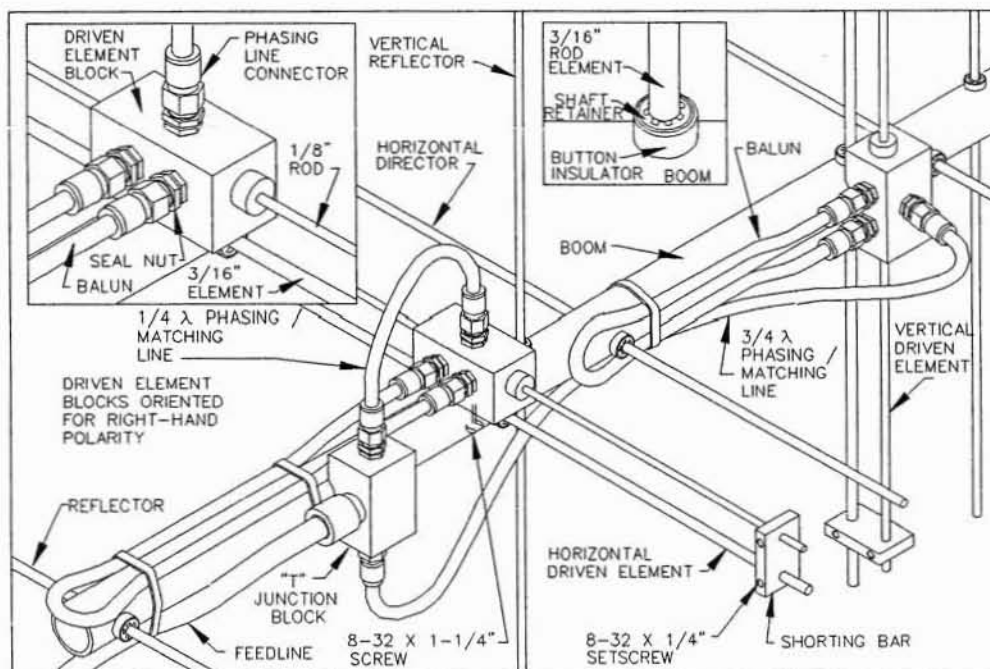
4. Now begin centering the elements. Use a tape measure to EQUALIZE the amount the element sticking out on each side of the boom. Once you have all the elements centered, sight down the element tips from the rear comparing each side. Look for any obvious discrepancies and correct if found.

5. Stainless steel SHAFT RETAINERS lock the elements in place. They should always be used for permanent and long term antenna installations. For portable or temporary use, the button insulators are adequate for holding the elements and the retainers may be left off.

To install the stainless steel SHAFT RETAINERS, use thumb and forefinger to hold the retainer over the end of the PUSH TUBE (3/8" x 3" tube, supplied in the kit), internal fingers on retainer dished into tube. **HOLD THE ELEMENT FIRMLY TO PREVENT IT FROM SLIDING OFF CENTER** and press the retainer onto the element end and continue until retainer butts on insulator button.



Locking pliers, *lightly* clamped up against opposite button insulator will help maintain center reference (if you push the first retainer too far, remove element from boom, push retainer completely off the element, and start over). Install another retainer to the opposite side of the element. Continue installing retainers until all elements are secured.



6. Mount the HORIZONTAL DRIVEN ELEMENT BLOCK / ROD ASSEMBLY to the TOP of the boom using a single 8-32 X 1-1/4" screw. Orient the block with the two balun connectors facing to rear.

7. Install the 8-32 x 1/4" set screws (internal Allen head - tool supplied) into the SHORTING BARS. Slide the bars onto the 1/8" Driven Element Block Rods and the 3/16" driven element rod. **Position the Shorting Bars at 1/8" from the tips of the 3/16" rods.** Align the bars with each

