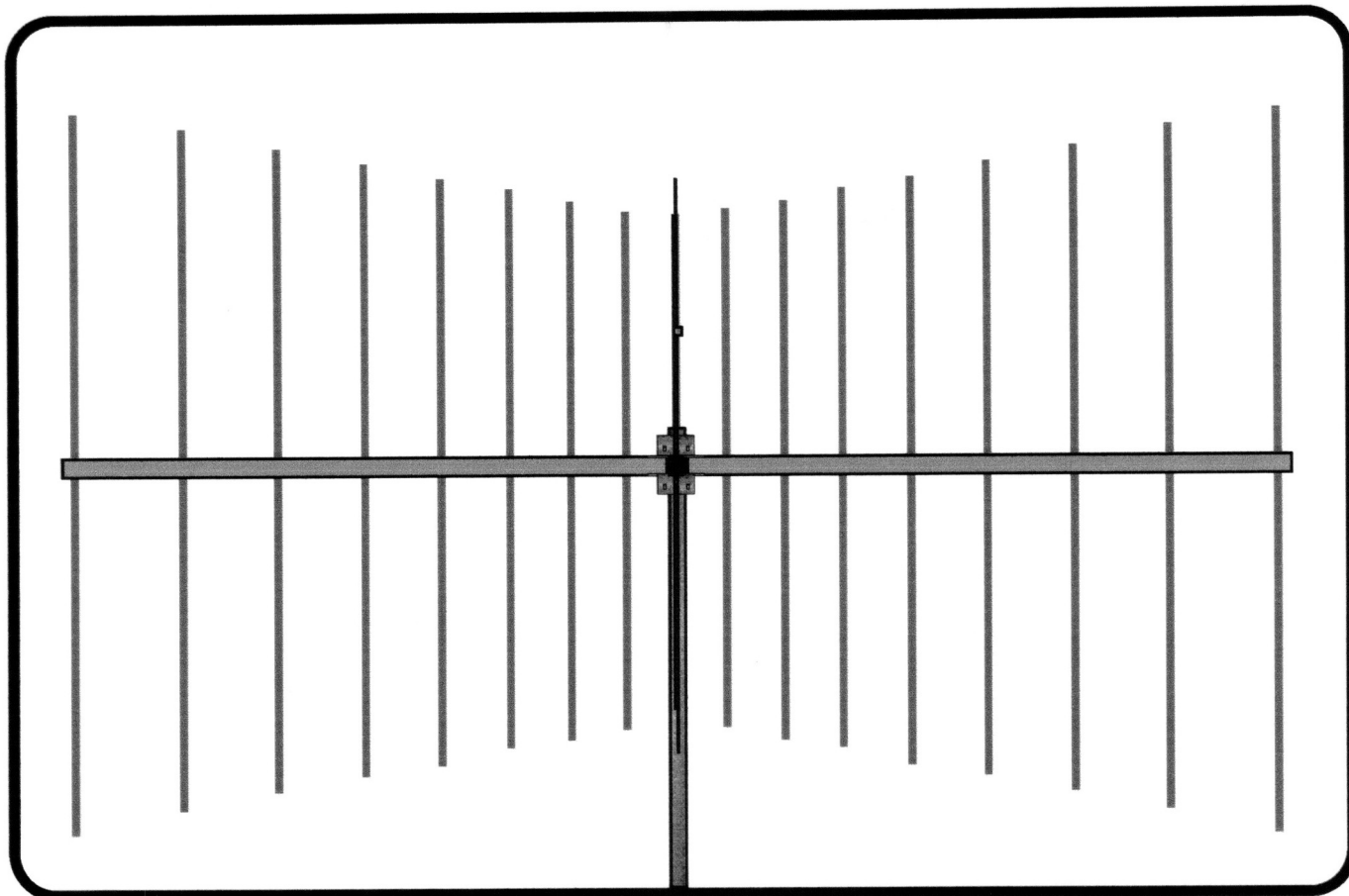




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Corner Reflector for 146 MHz

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Model
CR146

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Model CR146 Parts List

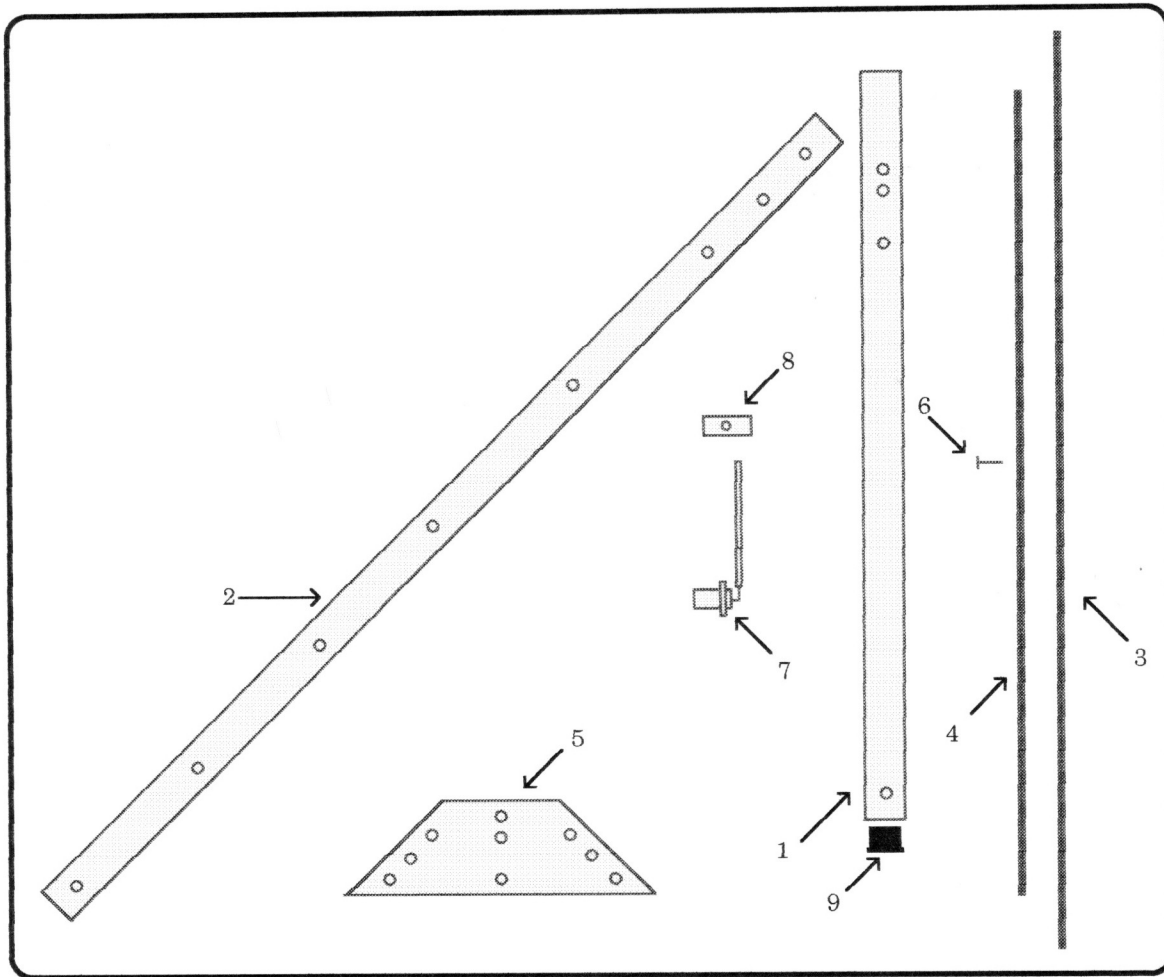


Fig #	Part Number	Part Description	Qty Req.	Price Each
1	CR146 01	Center Boom 1" x 32.5"	1	\$18.00
2	CR146 02	Reflector Boom 1" x 48"	2	\$22.00
3	CR146 03	Reflector Element 1/4" x 48"	17	\$6.25
4	146S03	Driven Element 1/4" x 39.5"	1	\$6.00
5	CR146 05	Assembly Plate (trapezoid shaped 2" x 3" x 3/16" angle)	2	\$15.00
6	146S06	4-40 x 3/4" Stainless Screw	18	\$.50
7	146S07	Gamma Match Assembly	1	\$9.00
8	146S08	Shorting Bar Assembly	1	\$12.00
9	146S09	Plastic End caps for Booms	6	\$0.25
n/a		1/4-20 x 1.75" Stainless bolts with nuts and lock washers	6	\$1.00
n/a		U-bolts, lock washers & nuts	2	\$5.00
n/a		U-channels with holes for u-bolts.	2	\$2.00

Assembly Instructions

Tools Required: #1 Philips screw driver and 2 @ 7/16" wrenches.

1. Unwrap all parts.
2. Remove strapping tape from ends of reflector booms.
3. Remove one of the black plastic end caps from each reflector boom.
4. Remove elements from within reflector booms.
5. Replace black plastic end caps on reflector booms.
6. Open the #4-40 x $\frac{3}{4}$ " screws. Screw these into the center of each reflector element with your fingers before inserting the element into the boom. This is to ensure that all the elements are threaded properly and the screws start easy. Remove screws from elements.

Reflector Booms Assembly

7. Insert a reflector element in a $\frac{1}{4}$ " hole in a reflector boom. Fix the element in place by inserting a 4-40 x $\frac{3}{4}$ " screw through the small hole in the side of the boom and screwing it into the element as shown. When screw is snug, turn $\frac{1}{4}$ turn more only. (See Assembled Reflector Boom for element layout).
8. Repeat step 7 for all reflector elements in both reflector booms.

Center Boom Assembly

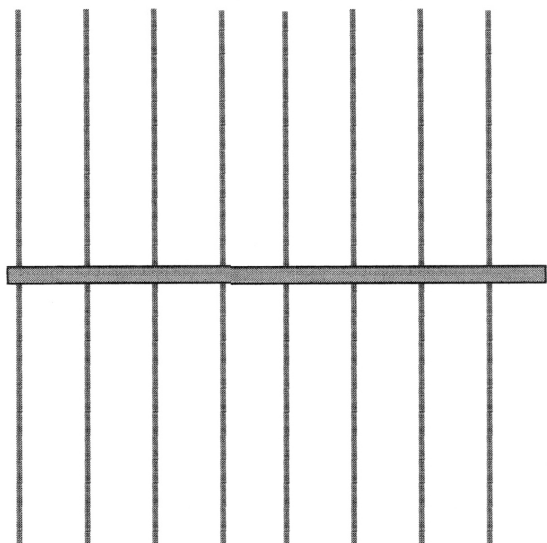
9. Remove the connector from the center boom (4 screws). Turn the connector 90 degrees and reinstall with the copper rod sticking out through the rubber grommet in the boom.
10. Insert driven element in a $\frac{1}{4}$ " hole in center boom. Fix the element in place by inserting a 4-40 x $\frac{3}{4}$ " screw through the small hole in the side of the boom and screwing it into the element as shown. When screw is snug, turn $\frac{1}{4}$ turn more only.
11. Insert a reflector element in a $\frac{1}{4}$ " hole in the center boom. Fix the element in place by inserting a 4-40 x $\frac{3}{4}$ " screw through the small hole in the side of the boom and screwing it into the element as shown. When screw is snug, turn $\frac{1}{4}$ turn more only.

Gamma Match Assembly

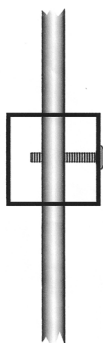
12. Slide gamma match plastic tube over the copper rod and insert the plastic tube through the rubber grommet at least $\frac{1}{8}$ ".
13. Slide the aluminum gamma match tube over the plastic tube.
14. Loosen the screw on the shorting bar and slide the shorting bar over the driven element and aluminum tubes. Position the shorting bar and aluminum tube as shown in the Gamma Match Setting figure.

Main Assembly

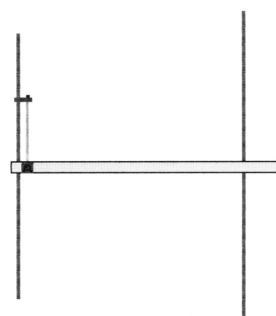
15. Ensure that the reflector booms have the element securing screws on the outside of the boom.
16. Ensure the gamma match stub is up on the center boom.
17. This is easier with some extra hands to help. Slide the assembly plates (top & bottom) over the all the rear reflector elements simultaneously.
18. Bolt the assembly plates together using $\frac{1}{4}$ -20 x 1 $\frac{3}{4}$ " bolts.



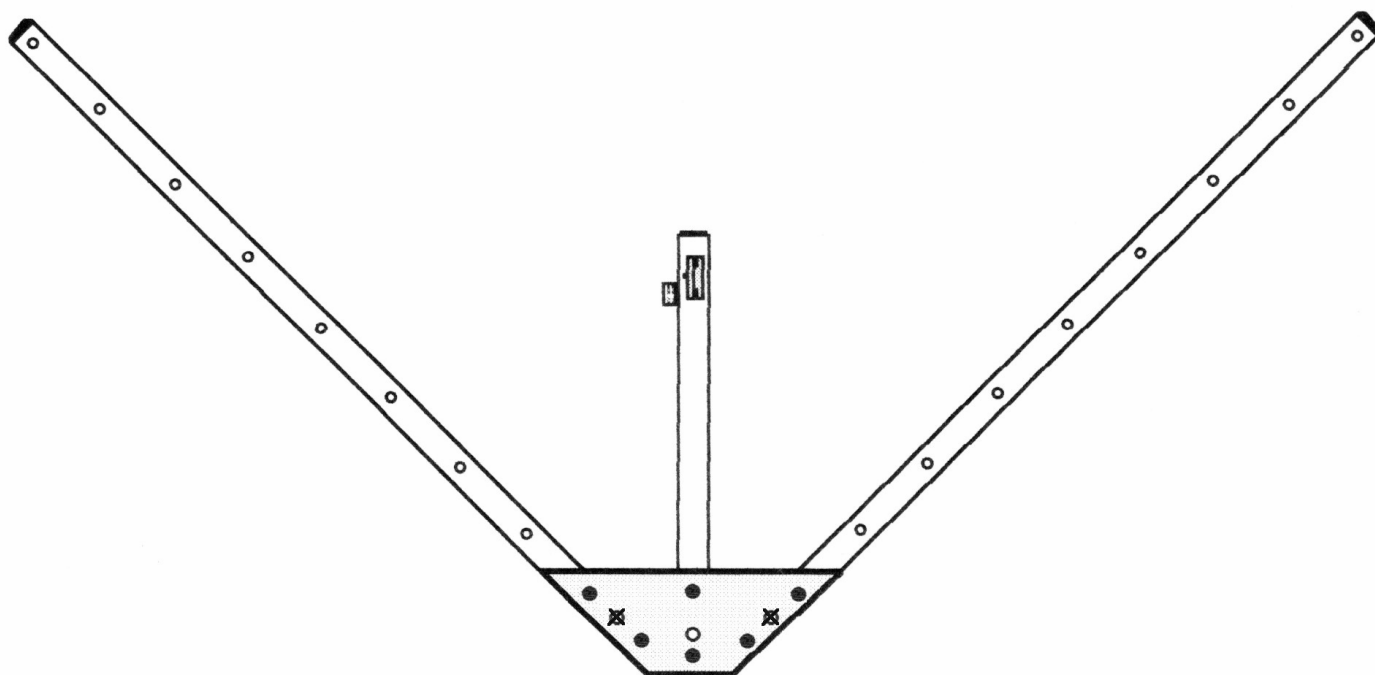
Assembled Reflector Boom



**4-40 x $\frac{3}{4}$ " Screw Holding
Element in Boom**

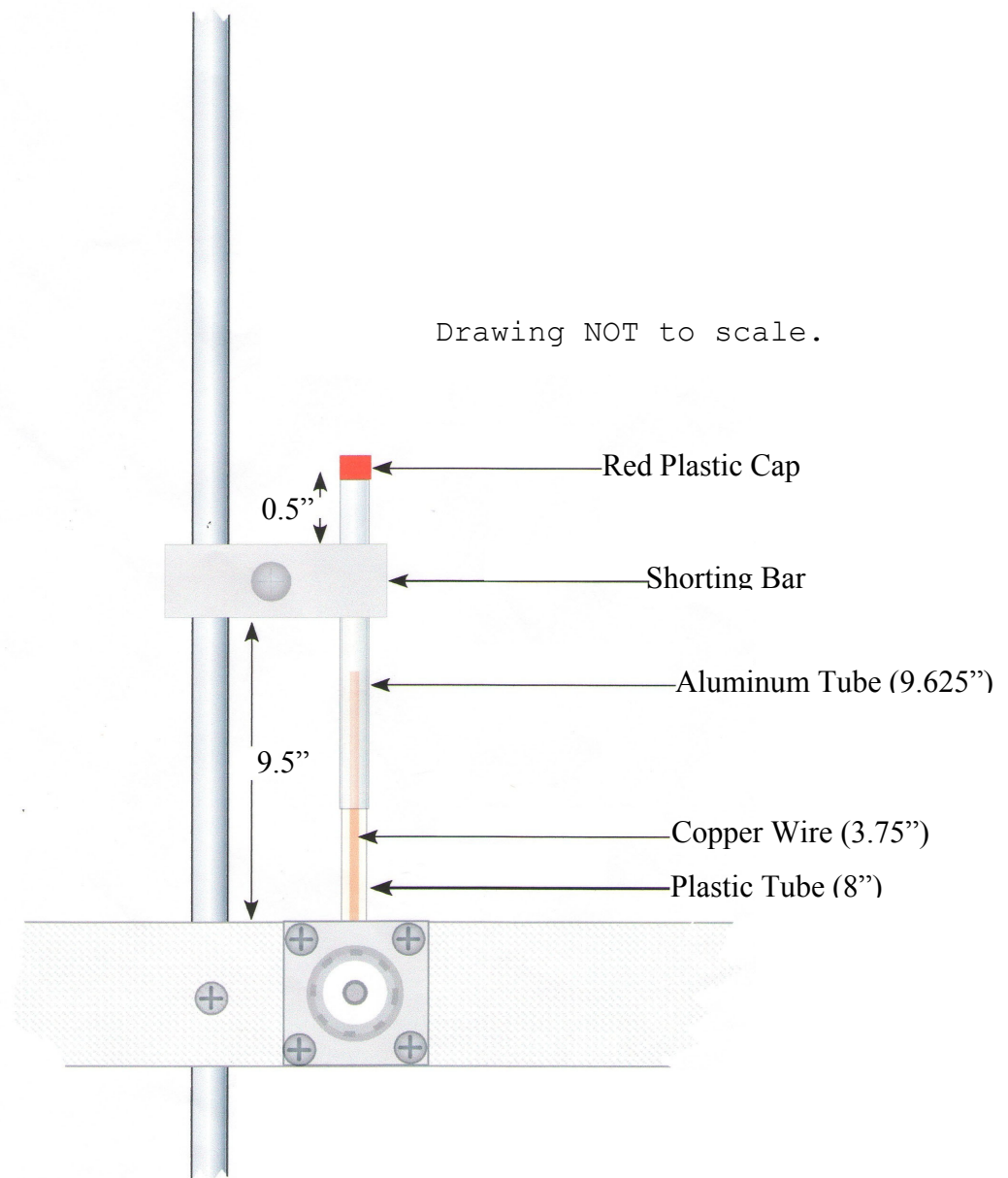


Assembled Center Boom



Assembled Top View (Dark holes have bolts. Light holes have elements. X holes have nothing.)

Gamma Match Setting



CHECKLIST FOR OUR SHIPPING DEPARTMENT

CR146

- ___ SO-239 Connector
- ___ Connector replacement sign.
- ___ 1" x 32.5" Center Boom
- ___ 2 @ 1" x 48" Reflector Booms
- ___ 17 Element holes
- ___ 17 Set screw holes
- ___ Black gromet in boom adjacent to connector hole.
- ___ 6 Black end caps.
- ___ 18 @ #4 - 40 X 3/4" Element Screws (Stainless)
- ___ 4 @ 4-40 x 1/4" connector screws (Stainless)
- ___ Gamma Match Assembly
(8" Plastic – 9.625" Aluminum & 3.75" Copper on SO-239 Connector)
- ___ Solid Shorting Bar Assembly (3 piece)

- ___ 17 Reflector Elements 1/4" X 48"
- ___ Driven Element 1/4" X 39.5"

- ___ 2 Corner Reflector Mounting Brackets (2" x 3" x 3/16" trapezoid shaped)
- ___ 2 U-bolts with nuts and lock washers
- ___ 2 u channel pieces with holes for u-bolts.
- ___ 6 bolts, nuts & lock washers 1/4-20 x 1.75"