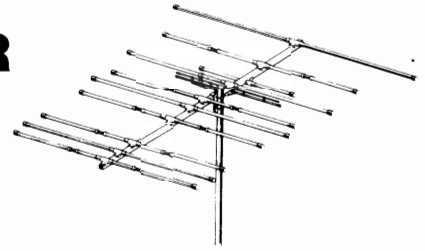




STINGER A-62

FINCO STINGER AMATEUR BAND RADIO ANTENNA INSTRUCTION MANUAL



DESCRIPTION

The model Stinger A-62 is a truly remarkable combination 6 and 2 meter beam designed for optimum performance on both bands yet only requiring ONE transmission line. This is accomplished through the use of exclusive phasing elements to accomplish dual band operation with no sacrifice to either band – NO SWITCHING REQUIRED.

On 2 meters, the A-62 has 6 colinear elements – equivalent to three 1/2 wave 6 element yagis stacked side by side – thus giving outstanding performance. Maximum forward gain is assured on 6 meters through the use of four wide spaced elements.

Heavy wall aluminum tubing is used for all elements plus an exclusive high tensile strength square boom for maximum strength and ease of assembly.

The mounting hardware facilitates either horizontal or vertical mounting for repeater accessive or general coverage work.

SPECIFICATIONS

ELECTRICAL

Forward Gain	6 meters 9.5 dB
	2 meters 12.0 dB
Front-to-Back Ratio	6 meters 19 dB
	2 meters 22 dB
V.S.W.R. (6 & 2 meter)	1.1:1
Half Power Beam Width	40° to 55°
Bandwidth	6 meters 50 to 54 MHz
	2 meters 144 to 148 MHz
Impedance	50 ohms
Matching System	Adjustable Gamma

MECHANICAL

Boom Length	10.0 ft.
Longest Element	10 ft.
Turning Radius	6.7 ft.
Maximum Surface Area	4.48 sq. ft.
Wind Load at 80 mph	43 lbs.
Weight	13.8 lbs.

WARNING!

The following steps will include assembly and installation. Survey your installation site NOW to preclude your antenna or support from coming in contact with overhead powerlines. FAILURE TO EXERCISE THIS CAUTION CAN CAUSE ELECTROCUTION.

ASSEMBLY

BOOM ASSEMBLY – Referring to Figure 1, select the 48” and 72” pieces of square boom stock. Locate the 8” x 1-1/8” round boom splice.

NOTE that on one end of the two pieces of boom material, the dimension from the end of the boom to the center of the first hole is 1” (Figure 1A). These ends will be the splice joint ends.

Assemble the two pieces of boom using the 8” x 1-1/8” round splice joint being sure to align the holes. Fasten the splice using 1/4-20 x 1-3/4” hex head bolts, 1/4” lockwashers, and 1/4-20 hex nuts. Securely tighten the hardware.

Temporarily lay the assembled boom aside.

ELEMENT ASSEMBLY

REFLECTOR ELEMENTS (R1) – Referring to Figures 2 and 3 locate the 1/2” O.D. x 36” long piece of element having the pre-assembled “element to boom brackets.” Locate the two pieces of 3/8” O.D. x 46” tubing. Insert the pieces of 3/8” O.D. x 46” tubing into the ends of the 1/2” O.D. tubing – being sure to align the elements holes. Fasten the 3/8” O.D. x 46” tubing using 8-32 x 1/4” self tapping machine screws. This element will be the first reflector element (R1 on Figure 3).

REFLECTOR ELEMENT (R2) – Locate the 1/2” O.D. x 27” long piece of element having the pre-assembled “element to

Fig. 1

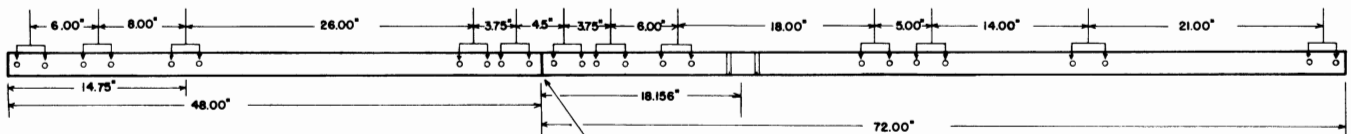


Fig. 1A

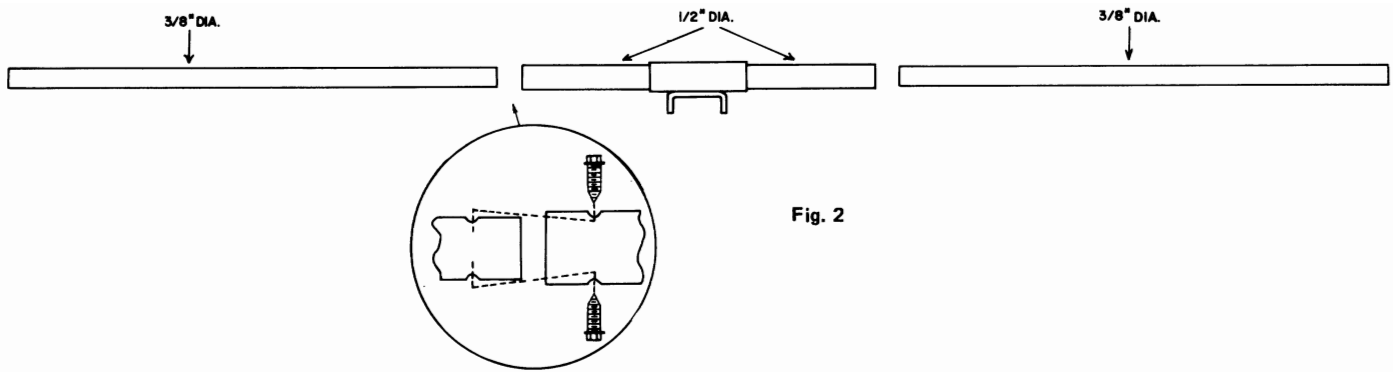


Fig. 2

boom bracket." Locate two pieces of 3/8" O.D. x 45-1/4" long pieces of tubing with fiberglass insulator. Referring to Figure 2, insert the pieces of 3/8" O.D. x 45-1/4" tubing into the ends of the 1/2" O.D. tubing — being sure to align the element holes. Fasten the 3/8" O.D. x 45-1/4" tubing using 8-32 x 1/4" self tapping machine screws. This element will be the second reflector element (R2 on Figure 3).

DRIVEN ELEMENT (DE) — Locate the 1/2" O.D. x 36" long piece of element having the pre-assembled "element to boom bracket". Locate two pieces of 3/8" O.D. x 42" long pieces of tubing. Referring to Figure 2, insert the pieces of 3/8" O.D. x 42" tubing into the ends of the 1/2" O.D. tubing — being sure to align the element holes. Fasten the 3/8" O.D. x 42" tubing using 8-32 x 1/4" self tapping machine screws. This element will be the driven element (DE on Figure 3).

DIRECTOR ELEMENTS (D1, D3, D4, D6) — Locate four 1/2" O.D. x 27" long pieces of element having the pre-assembled "element to boom mounting brackets." Locate eight pieces of 3/8" O.D. x 38-1/4" long pieces of tubing with fiber-

glass insulators. Referring to Figure 2 insert the pieces of 3/8" O.D. x 38-1/4" tubing into the ends of the 1/2" O.D. tubing — being sure to align the element holes. Fasten the 3/8" O.D. x 38-1/4" tubing using 8-32 x 1/4" self tapping machine screws. These elements will be the first, third, fourth and sixth director elements (D1, D3, D4, D6 on Figure 3).

DIRECTOR ELEMENT (D2) — Locate the 1/2" O.D. x 36" long piece of element having the pre-assembled "element to boom brackets." Locate two pieces of 3/8" O.D. x 38" long pieces of tubing. Referring to Figure 2, insert the pieces of 3/8" O.D. x 38" tubing into the ends of the 1/2" O.D. tubing — being sure to align the element holes. Fasten the 3/8" O.D. x 38" tubing using 8-32 x 1/4" self tapping machine screws. This element will be the second director (D2 on Figure 3).

DIRECTOR ELEMENT (D5) — Locate the 1/2" O.D. x 36" long piece of element having the pre-assembled "element to boom brackets." Locate the two pieces of 3/8" O.D. x 37" long pieces of tubing. Referring to Figure 2, insert the pieces of 3/8" O.D. x 37" tubing into the ends of the 1/2" O.D. tub-

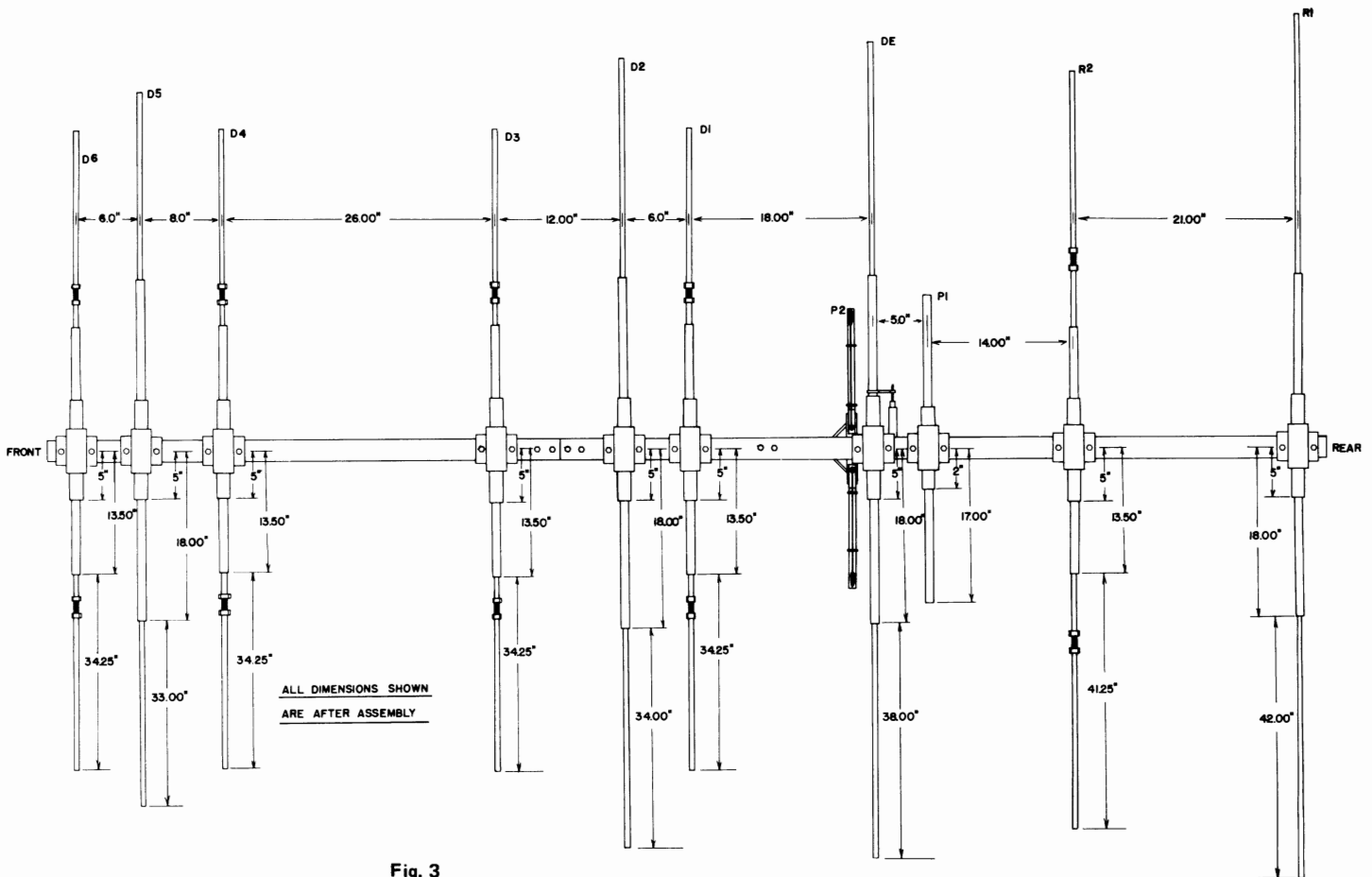


Fig. 3

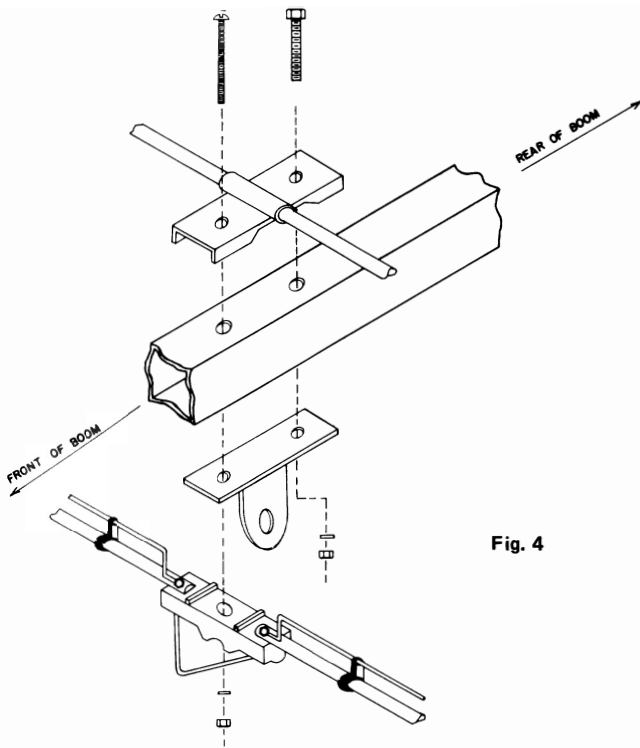


Fig. 4

ing, being sure to align the element holes. Fasten the 3/8" O.D. x 37" tubing using 8-32 x 1/4" self tapping machine screws. This element will be the fifth director element (D5 on Figure 3).

ELEMENT TO BOOM ASSEMBLY – Referring to Figures 1 and 3 for element placement and position, assemble the reflectors (R1 and R2) phasing stub (P1) and directors (D1, D2, D3, D4, D5 and D6) as shown. Use two 1/4-20 x 1-3/4" bolts, 1/4" lockwashers and 1/4-20 hex nuts for each element.

As shown in Figure 4, mount the driven element (DE), gamma arm mounting bracket and phasing stub (P2) to the boom using a 1/4-20 x 1-3/4" hex head bolt, 1/4" lockwasher, 1/4-20 hex nut at the rear bracket hole, and a 10-32 x 2-1/2" round head machine screw, # 10 external tooth lockwasher and a 10-32 hex nut at the front bracket hole.

GAMMA MATCH ASSEMBLY – Locate the gamma arm assembly. Securely fasten the threaded connector end using the 5/8" I.D. internal lockwasher and the 5/8-24 hex nut to the gamma arm mounting bracket.

Locate the 1/4" rod clamp and the 1/2" tube clamp. Referring to Figure 5, place the 1/4" rod clamp on the 1/4" rod on the gamma arm assembly and the 1/2" tube clamp on the 1/2" driven element (DE) in the approximate location shown in Figure 5.

Locate the 2-1/8" x 3/8" shorting strap and using 8-32 x 1/2" slotted screws, # 8 external tooth lockwashers, and 8-32 hex nuts, assemble the shorting strap to the two clamps.

NOTE: This adjustment is critical for proper performance. After installation, if you so desire, you may peak the gamma matching system for best V.S.W.R. at your site location. However, the above pretested factory measurements generally will give the lowest V.S.W.R. and best match to 50 ohm coaxial cable.

FINAL ASSEMBLY – Loosely assemble the "U-Bolt" and saddle assembly, referring to Figure 6. Mount the supporting mast to the antenna and tighten the hardware. Install the 1/2" and 3/8" end caps on the elements and the two boom end caps.

NOTE: If you intend to mount the antenna vertically, it is recommended that the mast be assembled to the antenna before the array is mounted on its supporting structure. In some situations you may have to readjust the gamma arm assembly for a lower V.S.W.R. and best match to 50 ohm coaxial cable.

This completes the assembly of your FINCO STINGER A-62.

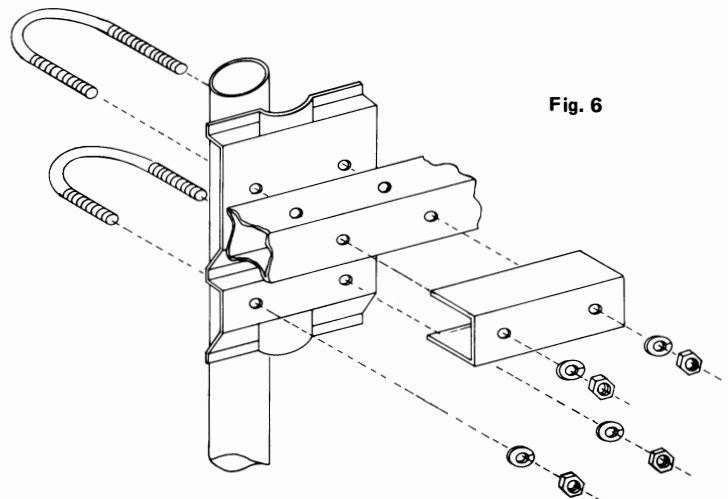


Fig. 6

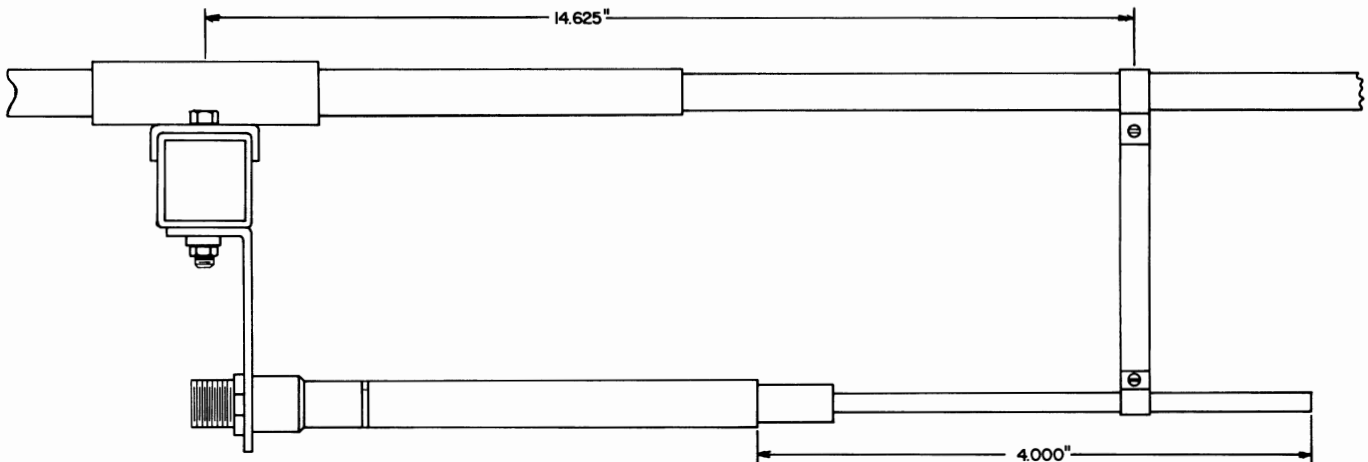


Fig. 5

INSTALLATION

Before installing the antenna on the supporting structure, attach the coaxial feed line to the gamma arm. It is recommended that you weatherproof this connection with neoprene or similar rubber compound substance. This will prevent moisture from deteriorating your antenna performance.

Install your antenna keeping in mind the warning on the front page.

MODEL STINGER A-62 PARTS LIST

QTY.	DESCRIPTION	PART NUMBER	QTY.	DESCRIPTION	PART NUMBER
1	48" x 1-1/4" Square Boom Stock	67230	1	2-3/4" Long U-Bolt	13400
1	72" x 1-1/4" Square Boom Stock	67231	1	4" Long U-Bolt	13401
1	8" x 1-1/8" Round Splice Joint	69620	1	1/4" Rod Clamp	21980
4	1/2" O.D. x 36" Element with Boom Bracket	68728	1	1/2" Tube Clamp	21971
5	1/2" O.D. x 27" Element with Boom Bracket	68729	1	10-32 x 2-1/2" Slotted Round Head Screw	10722
1	1/2" O.D. x 34" Element with Boom Bracket	68730	2	8-32 x 1/2" Slotted Pan Head Screws	10701
1	1/2" O.D. x 34" Element with Boom Insulator and Phasing Rods	68731	23	1/4-20 x 1-3/4" Long Hex Head Bolts	10001
2	3/8" O.D. x 46" Element	68911	36	8-32 x 1/4" Long Self Tapping Machine Screws	10090
2	3/8" O.D. x 42" Element	68912	1	# 10 Internal Tooth Lockwasher	20099
2	3/8" O.D. x 38" Element	68913	2	# 8 External Tooth Lockwashers	20100
2	3/8" O.D. x 37" Element	68914	1	5/8" O.D. x 13/64" I.D. Washer	20086
8	3/8" O.D. x 38-1/4" Element with Insulator	68915	23	1/4" Lockwashers	20101
2	3/8" O.D. x 45-1/4" Element with Insulator	68916	4	5/16" Lockwashers (for U-Bolts)	20102
1	Gamma Arm Assembly	10105	1	5/8" I.D. Internal Tooth Lockwasher	20085
1	Gamma Arm Mounting Bracket	23204	1	10-32 Hex Nut	30103
1	2-1/8" Gamma Arm Shorting Strap	41201	23	1/4-20 Hex Nuts	30101
1	Boom to Mast Mounting Plate	23001	4	5/16-18 Hex Nuts (for U-Bolts)	30102
1	Back-up Plate	23002	2	8-32 Hex Nuts	30100
			1	5/8-24 Hex Nut	13402
			2	1/2" Dia. End Caps	24603
			20	3/8" Dia. End Caps	24600
			2	1-1/4" Sq. End Caps	24561



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