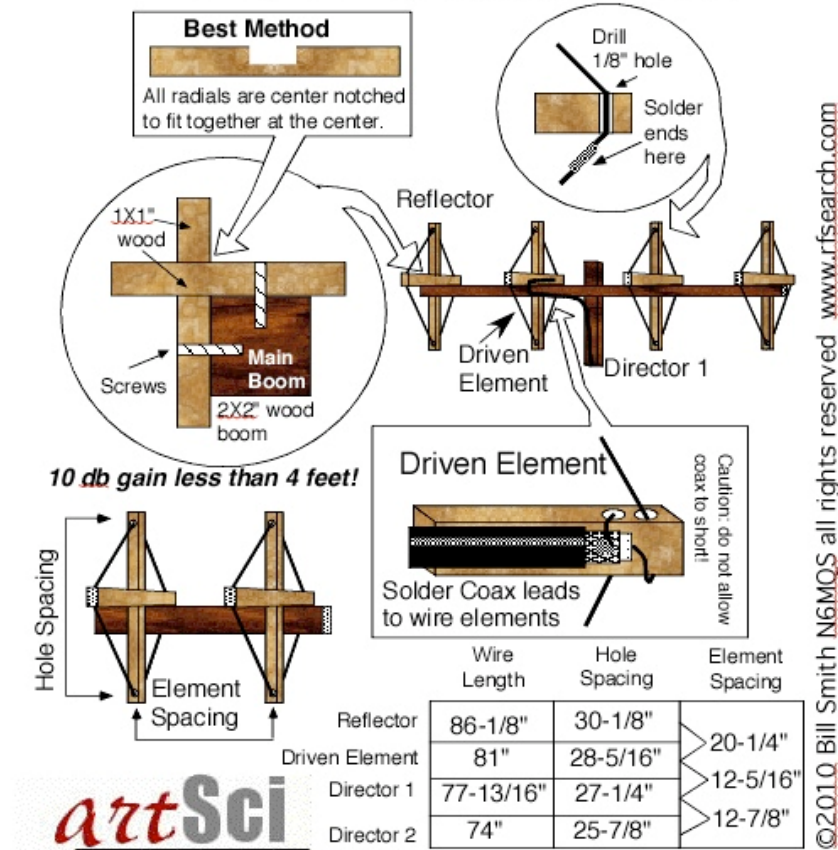


<http://www.artscipub.com/simpleton/simpquad.asp>

<http://www.repeater-builder.com/antenna/pdf/2m-quad-wa9gdz.pdf>

## 147 MHz 4 Element Quad



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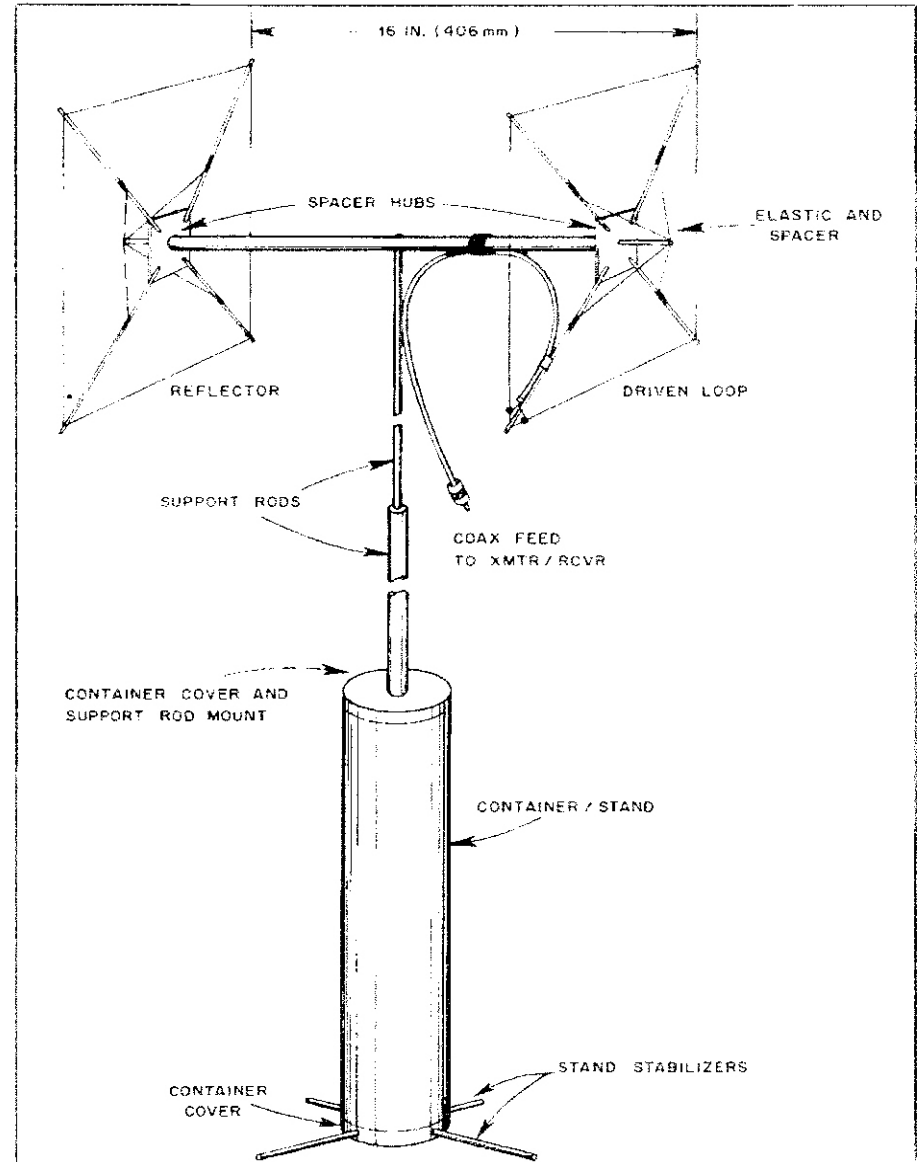
**Hints:** After beam is assembled, find the balance point and drill holes for U bracket.

Horizontal or Vertical polarization is changed by feeding the driven element from side or bottom.  
Use side feed for Vertical polarization!

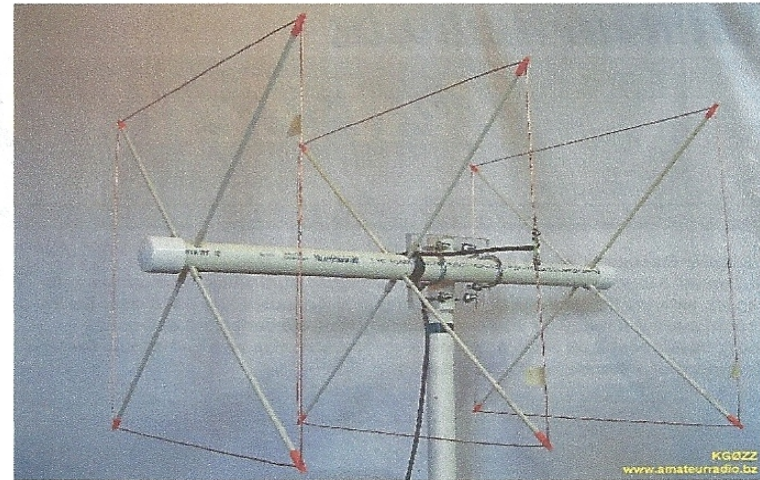
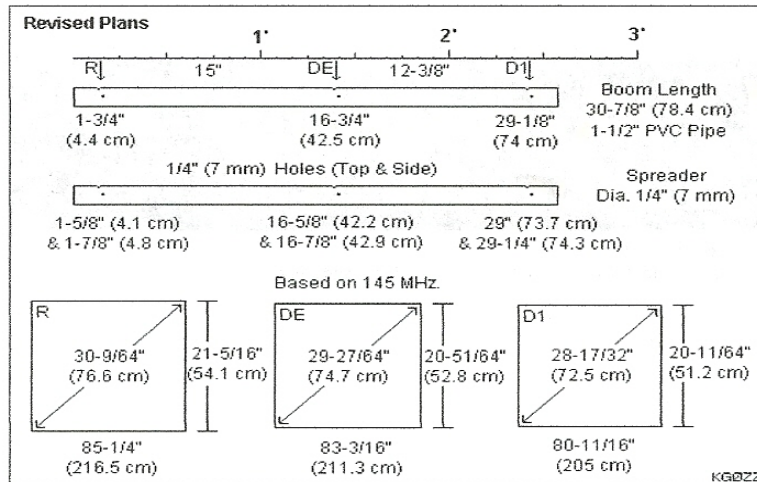
The center conductor of the coax will travel around the driven element wire and short to the coax shield!! All Quads do this.

### Parts List

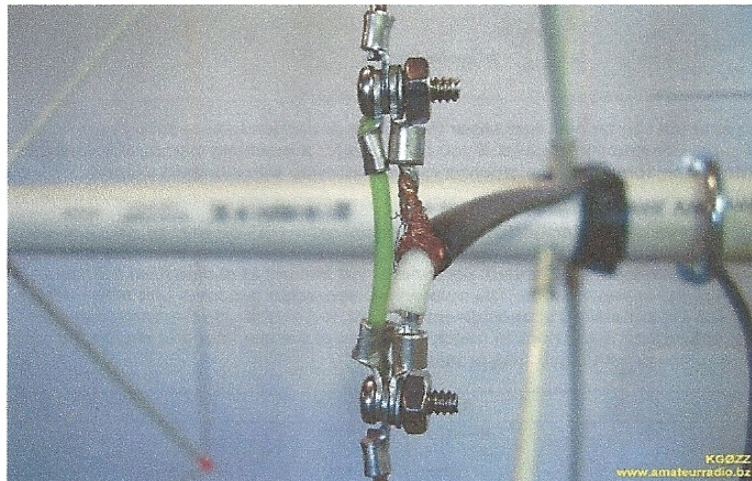
- 1 - 2" X 2" X 48" wood
- 8 - 1" X 1" X 36" wood
- 1 - 2" U clamp with nuts and washers
- 8 - 1.5" wood screws
- 30 feet of 14 gauge wire
- Coax cable



[http://www.amateurradio.bz/2m\\_backpack\\_quad\\_antenna.html](http://www.amateurradio.bz/2m_backpack_quad_antenna.html)



When calculating the length to cut the spreaders deduct  $3/32$ " (about 2 mm) for the 14 gauge stranded bare copper wire, and deduct the distance needed for the two nocks, from the total calculated spreader length. If the spreader is slightly too long then use a rasp to file down one end of the rod taking care not to file too much off at a time. Keep each pair of spreaders the same length.



[Click here to watch a video about how to make this cable.](#)

#### Parts

- 1-1/4" (40 mm) or 1-1/2" (50 mm) PVC pipe, 30-7/8" (78.4 cm) long.
- 2 each 1-1/4" (40 mm) or 1-1/2" (50 mm) PVC pipe caps.
- 3 each 5' (1.5 m) lengths of 1/4" (7 mm) fiberglass rods.
- 2 each #6 x 32 x 3/8" (10 mm) Machine screws.
- 2 each #6 x 32 nuts.
- 2 each #6 Split or internal tooth lock washers.
- 6 each #6 Crimp-on ring connectors.
- 2 each Uninsulated crimp-on butt end connectors.
- 3/8" O.D. x 1/4" I.D. (7 mm I.D.) x 1' (25 cm) Clear vinyl tubing.
- 12 each 1/4" (7 mm) Plastic kite nocks. [See related video.](#)
- 1 Piece of .080 weed trimmer string, 2" (50 mm) long.
- At least 21' (6.4 m) of 14 gauge stranded copper antenna wire.
- Mast mount clamp and hardware.

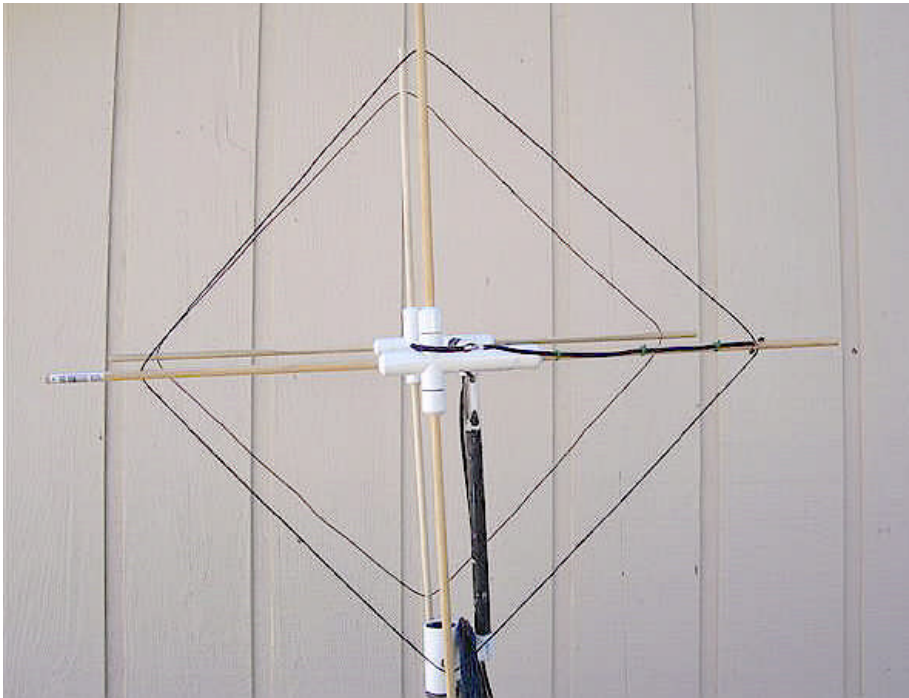
#### Telescoping Masts

[www.wenzlau.com](http://www.wenzlau.com)

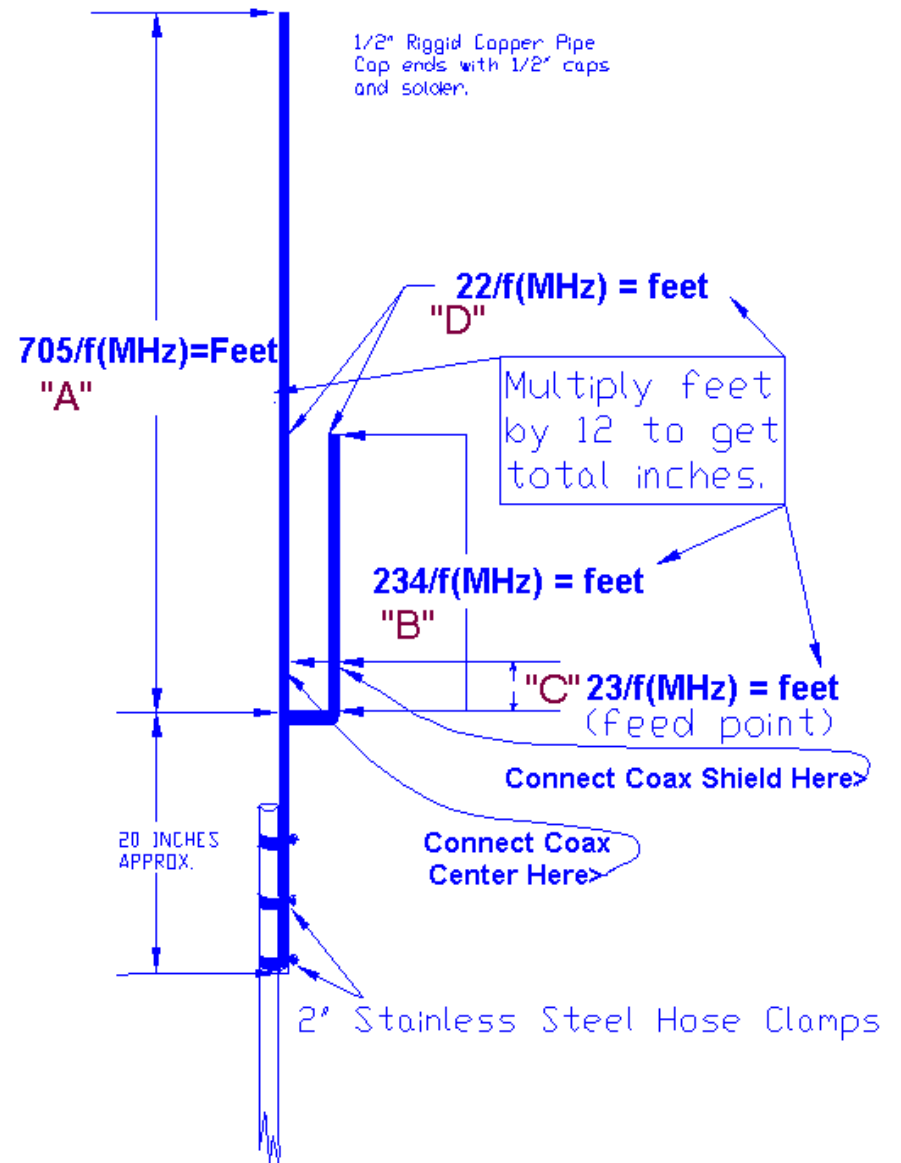
Masts, Towers, Trailers - GSA Sales 10' to 110', US Military Qualified



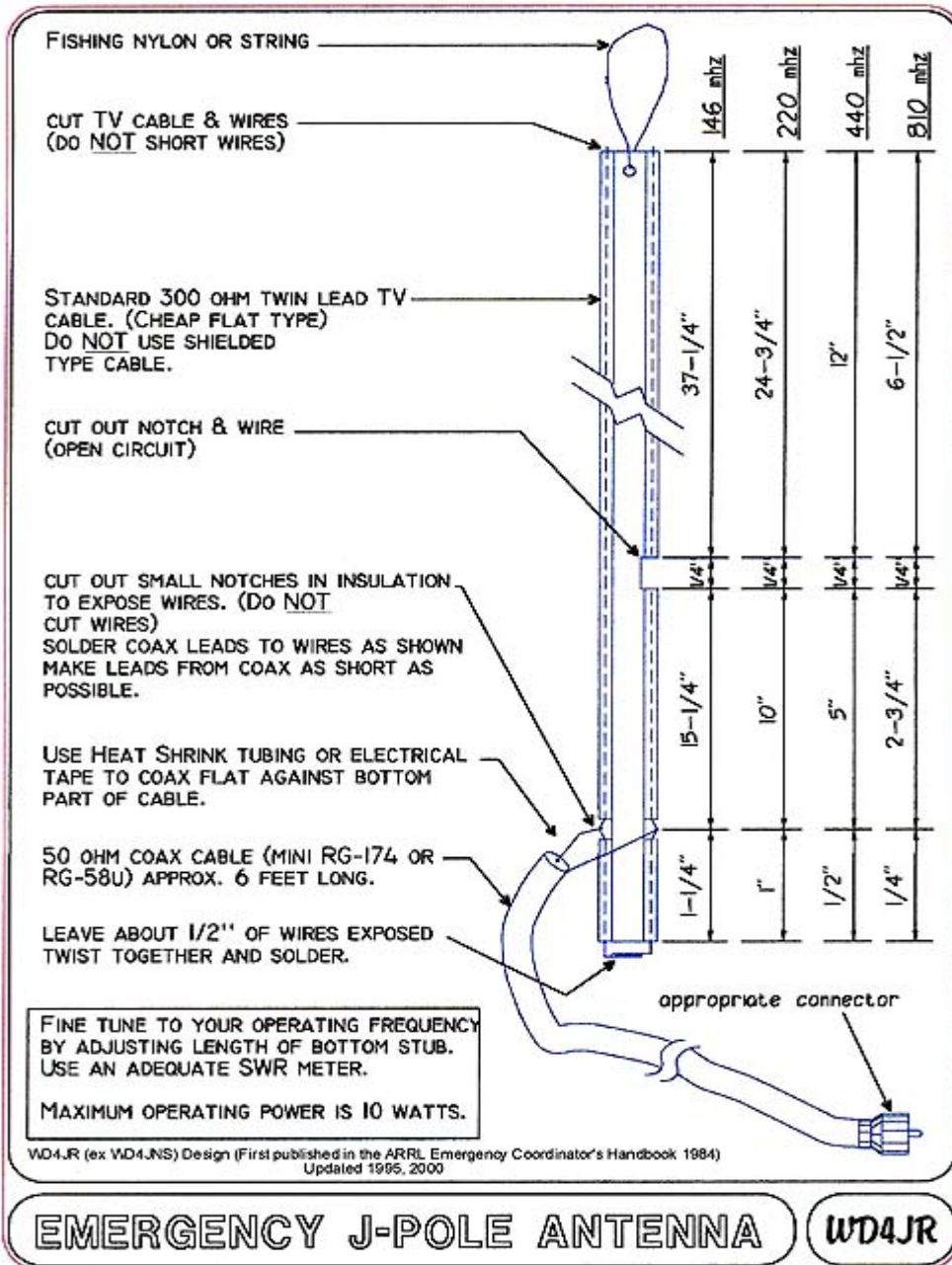
<http://www.hamuniverse.com/k4mmg2mquad.html>



<http://www.hamuniverse.com/jpole.html>



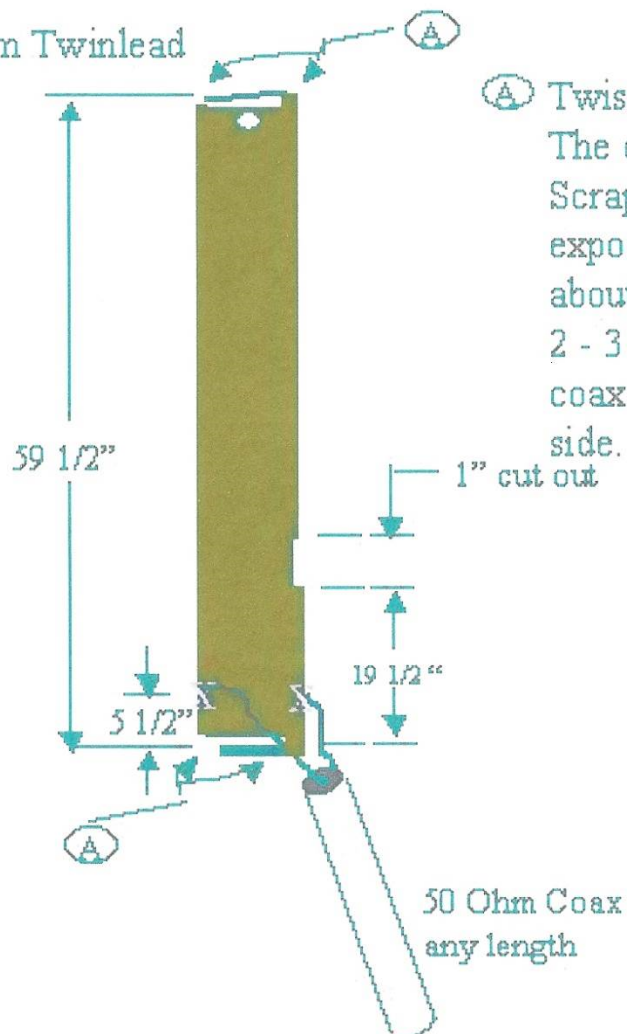
<http://www2.fiu.edu/orgs/w4ehw/j-pole-plans.html>



**EMERGENCY J-POLE ANTENNA**

**WD4JR**

300 ohm Twinlead




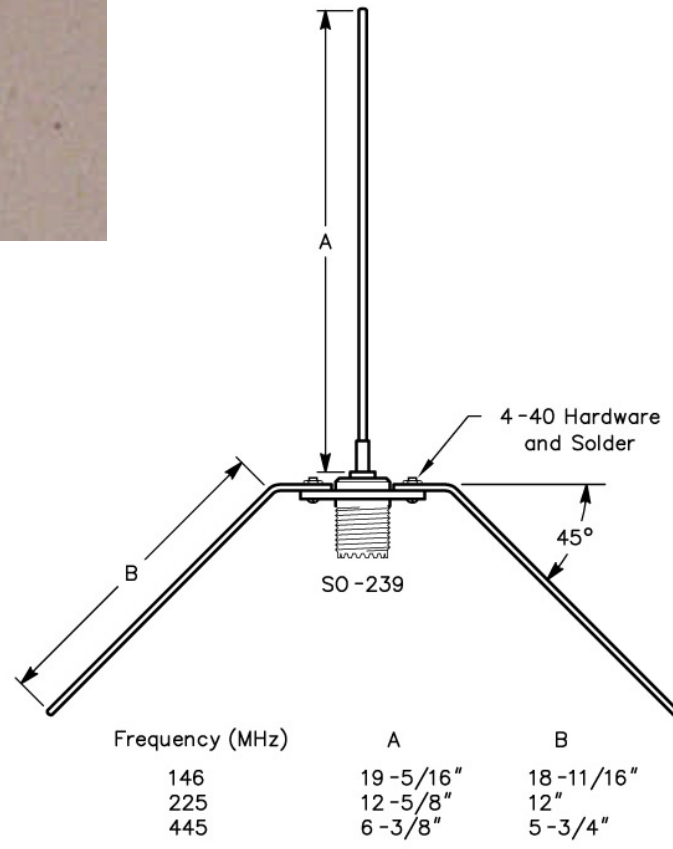
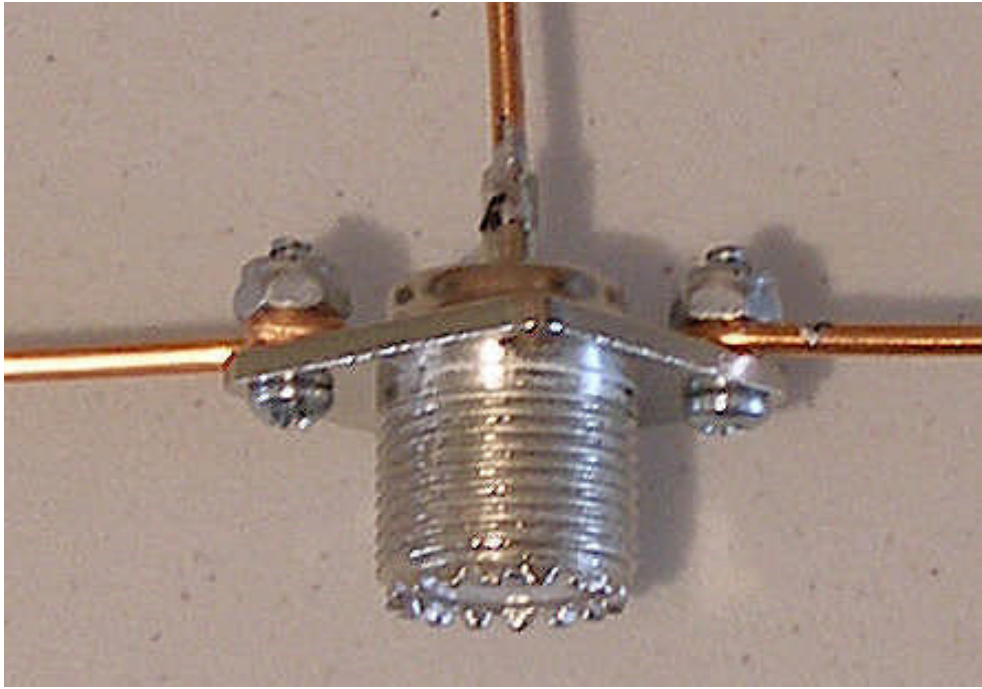
- (A) Twist together and solder the wires at both ends of the twinlead. The coax is connected at a point 5 1/2 inches up from the bottom. Scrape the insulation off the Twinlead and solder the coax to the exposed wire. Tape the connections and along the twinlead for about 2 - 3 inches. This will act as a strain relief taking the weight of the coax off the wire connection. Connect the shield to the 19 1/2 inch side. Connect center conductor to the 59 1/2 inch side.

NOTES:

1. RG-174 coax can be used for runs not longer than about 10 Ft.
2. RG-58 A/U can be used for longer runs
3. Hang antenna away from other objects.
4. Attach a weight to the bottom to keep twinlead straight otherwise large swings in SWR will be observed.

Install appropriate connector for your radio at the other end of Coax (BNC, SMA, PL-259, etc.)

<b>DISTRICT 24 DOUGLAS &amp; ELBERT COUNTIES, COLORADO</b>	
	
<b>2 METER - ROLL-UP</b>	
<b>J-POLE ANTENNA (300 OHM TWINLEAD)</b>	
Drawn By: K8VQC	Date: 12 September, 19



# DUAL BAND J-POLE 144/440Mhz

Original Plans By: Allen Lowe (NØIMW)

Simple to create yet effective 144/440 Mhz Antenna.

Materials Needed (Refer to parts list below)

- 8ft (96in) of 3/8" Aluminum Rod
- 1 5-1/2" of Alumium Angle (1-1/2"X1-1/2"X3/16" THICK)
- 1 SO-239 Female to 3/8"-24 Thread (Available At Radio Shack)
- 4 3/8"-24 Stainless Steel Nuts
- 3 Pliable Vinyl Caps (Optional)

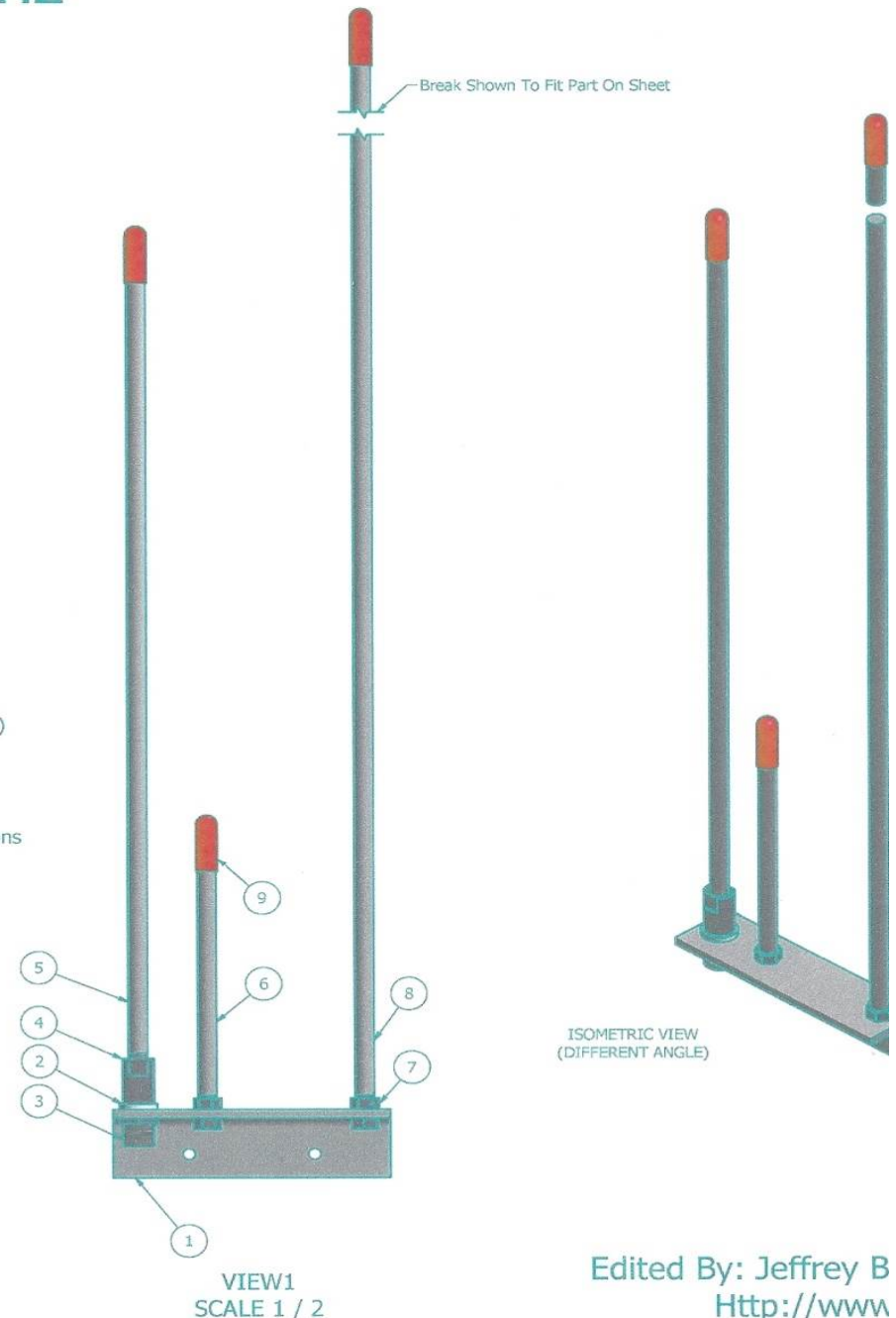
Tools Needed (Basic Version)

- Tape Measure (Vernier/Caliper preferred)
- Marker (Automatic center punch preferred)
- Drill W/ Drills bits (up to 1/2")
- Saw (Hacksaw or Bandsaw with metal blade)
- File And/Or Sandpaper
- 3/8"-24 Tapping Die (With holder)
- 3/8"-24 Tapered Tap (With holder)
- Vise Grips with protective caps (Can use a rag instead of caps)

Instructions (Instructions are not exact, please use good judgement and safety)

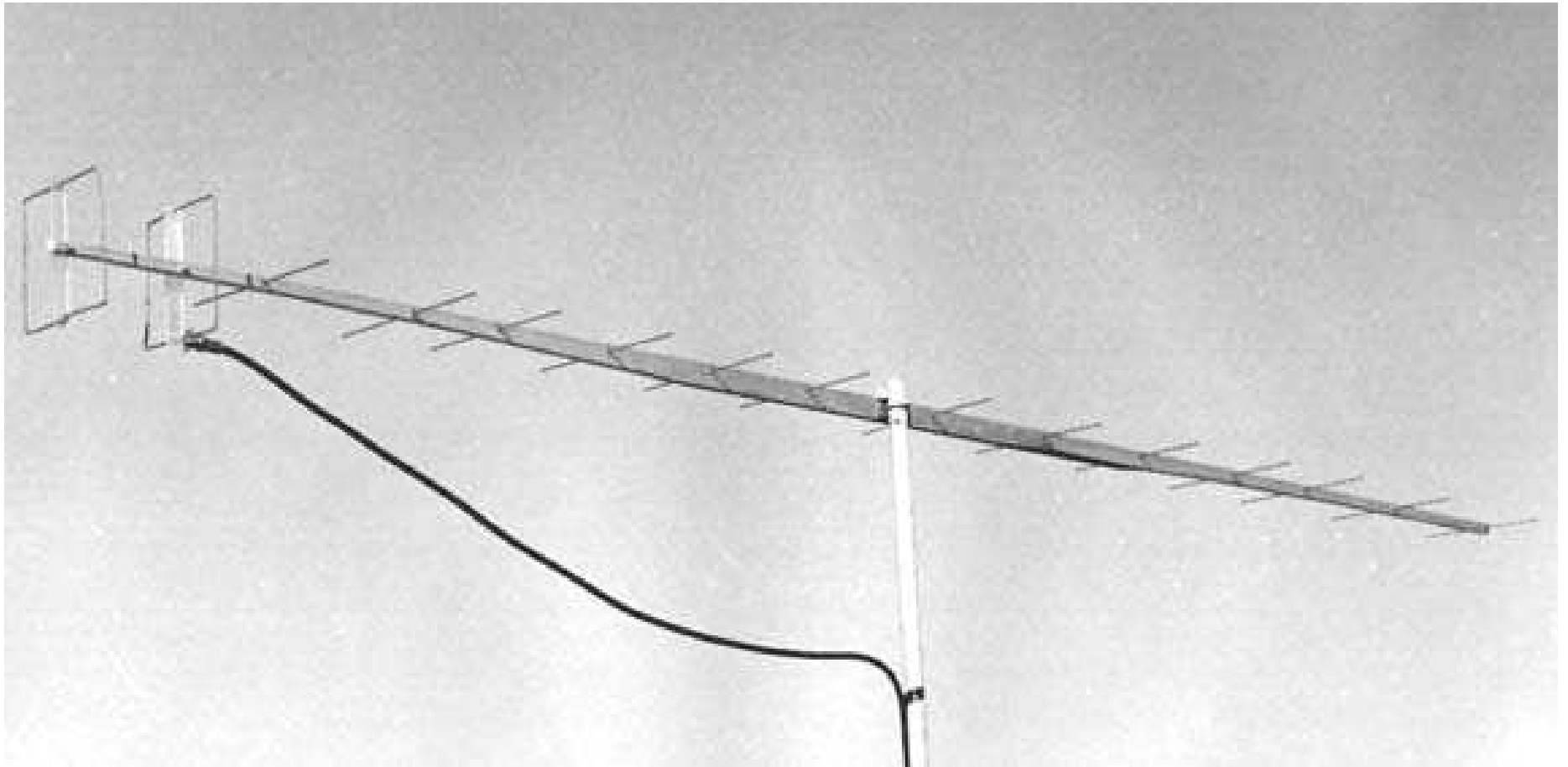
- 1.) Using your measuring device and marking device layout the holes on the angle as shown on page 2.
- 2.) Drill the holes to 1/8" as pilot holes. Then drill to hole sizes listed on page 2.  
If your using a different SO-239 Than what is listed here. please check the dimension of the plastic washer that fits into the angle and check it's size (it might differ from each manufacture)  
If different please change the 1/2" hole to the proper size for the plastic washer to fit snug.
- 3.) Use the 3/8"-24 Tap and thread the two smaller holes in the angle
- 4.) Using the saw cut the aluminum rod to the dimensions of 58", 18-5/8" and 6-3/4" These Dimensions Might vary a little bit depending on the Jam nuts that are being used.
- 5.) Using the threading DIE, Thread the ends of the aluminum rod to around the dimensions listed on page 2. Try not to over make the threads.
- 6.) Using a file/sander to take off any sharp edges or metal burrs.
- 7.) (Optional) Place protective caps over the 3/8" Rods
- 8.) Assemble the antenna to the pictures shown. Maintain lengths of rod to the dimensions shown

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	5-1/2" ALUM ANGLE	1.5X1.5X.188 ALUM ANGLE
2	1	SO-239 SPACER	Plastic Spacer
3	1	SO-239-STUD	UHF W/ 3/8"-24 STUD
4	1	SO-239-COLLAR	3/8"-24 Threaded Coupling
5	1	19-1/4" Alum Rod	3/8" Rd. 19-1/4" Long Alum Rod
6	1	6-1/4" Alum Rod	3/8" Rd. 6-1/4" Long Alum Rod
7	4	3/8" SS NUT	3/8"-24 Stainless Nut



Edited By: Jeffrey B  
[Http://www](http://www)

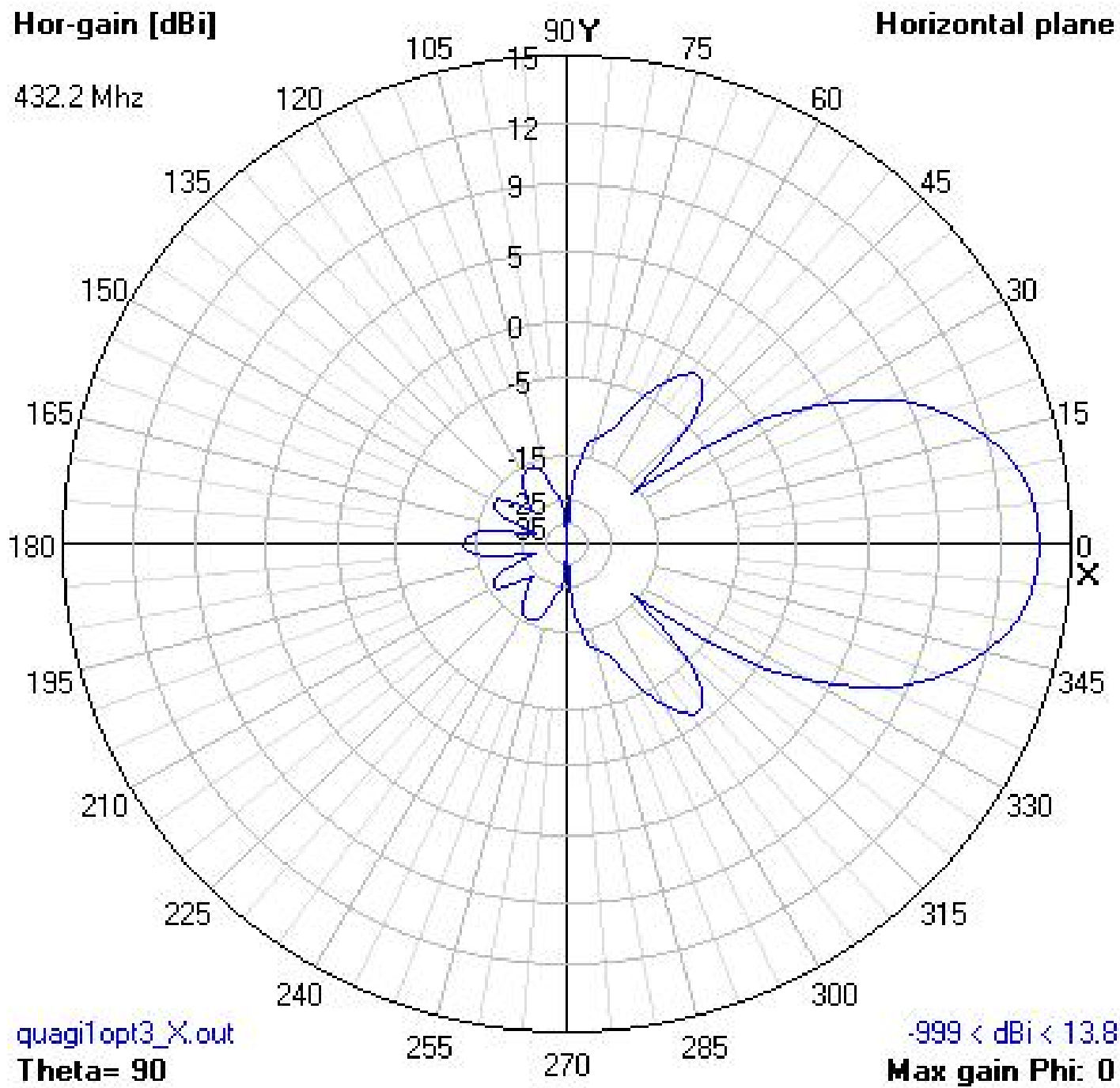




<http://commfaculty.fullerton.edu/woverbeck/quagi.htm>

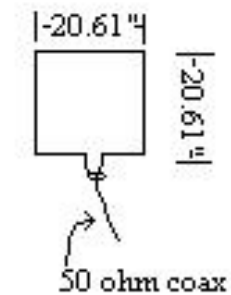
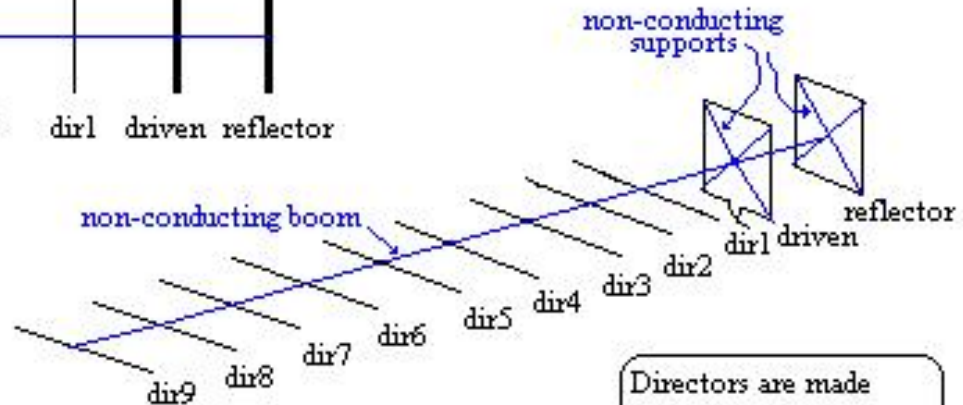
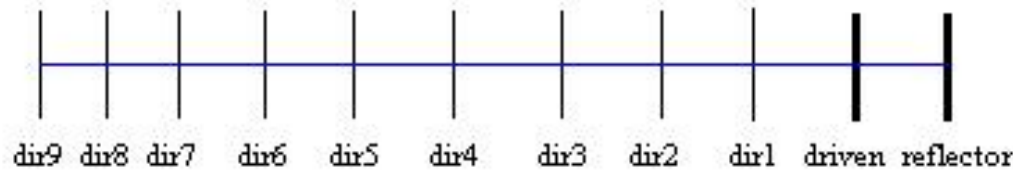
<http://ku4ay.gamersrevenue.com/quagi.html>

<http://www.frontiernet.net/~jgunsett/KZ6ZZ/Quagi.html#0>

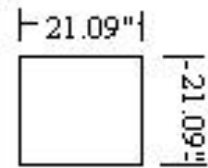


## W5UN Quagi97 Antenna

For non-conducting boom and supports, use sealed wood or fiberglass.



DE - driven el



REF - reflector

driven and reflector loops are formed from #12 AWG, TW insulated solid copper wire. The total wire lengths are:  
 driven: 82.43 inches  
 reflector: 84.37 inches

Directors are made from solid aluminum rods, 3/16" diameter. Refer to the Quagi97 measurement table for length of each element, and spacing between elements.

**Antenna Characteristics: 23' 9"**  
**11 Element Gain: 13.56 dBd at**  
**144.100 Mhz**  
**F/B : 23 dB**

**Stacking:**

**Optimum: E Plane: 13.73'**

**Optimum: H Plane: 12.86'**



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