

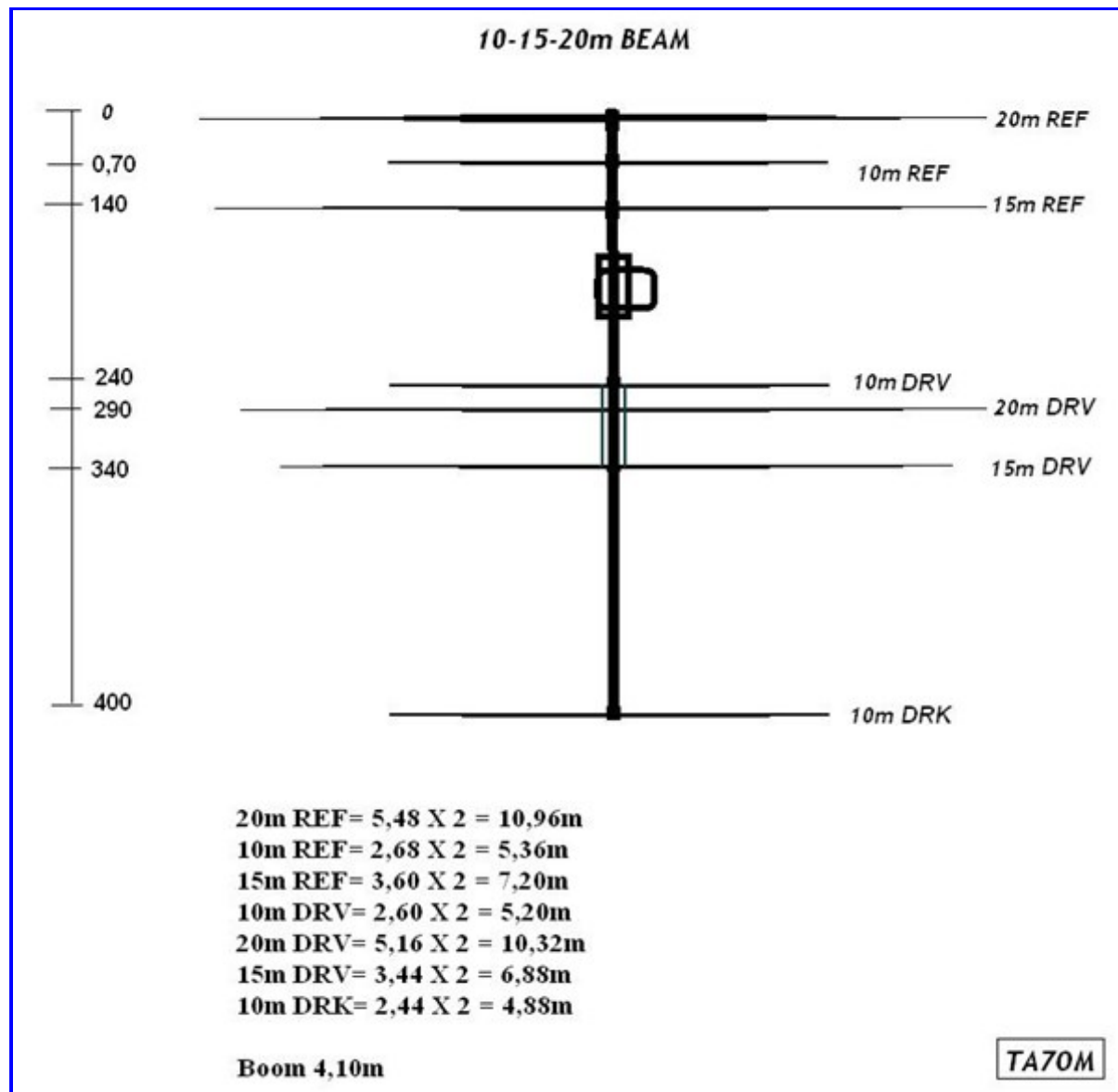
# 10m-15m-20m Tribander Yagi

Yazar: TA7OM <http://www.ta7om.com>

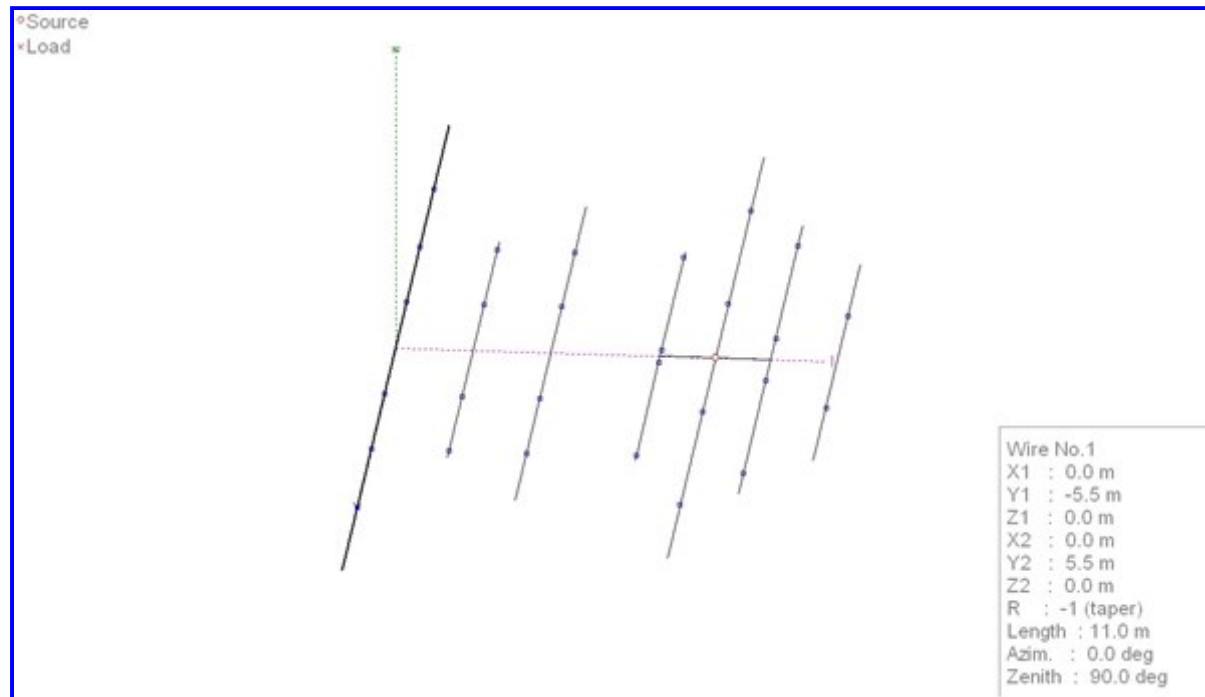
**10m/15m/20m** home mode 7 element tribander HF Super-compact yagi antenna. 20m band 2 el, 15m band 2 el. 10m band 3 elements. Very high gain, wideband operation antenna, low SWR, excellent F/B. Excellent mechanical properties. Direct 50 Ohm feed. Input power limited by feed line only.



Ready assamble my Home mode full size 10m/15m/20m Yagi



TA70M 10m/15m/20m Yagi



<b>Band</b>	<b>10m / 15m / 20m</b>
<b>Gain(dbi)</b>	<b>13,1 / 12,0/ 11,5</b>
<b>SWR; 14,0 – 14,20 – 14,35</b>	<b>1,3 – 1,0 – 1,4</b>
<b>21,0 – 21,25 – 21,45</b>	<b>1,6 – 1,0 – 1,5</b>
<b>28,0 – 28,40 – 29,00</b>	<b>1,2 – 1,1 – 1,6</b>
<b>Impedance</b>	<b>50 Ohm</b>

Number of Elements

7

Active Elements

10m:3 EL / 15m: 2 EL / 20m:2 EL

Longest element.

10,96m

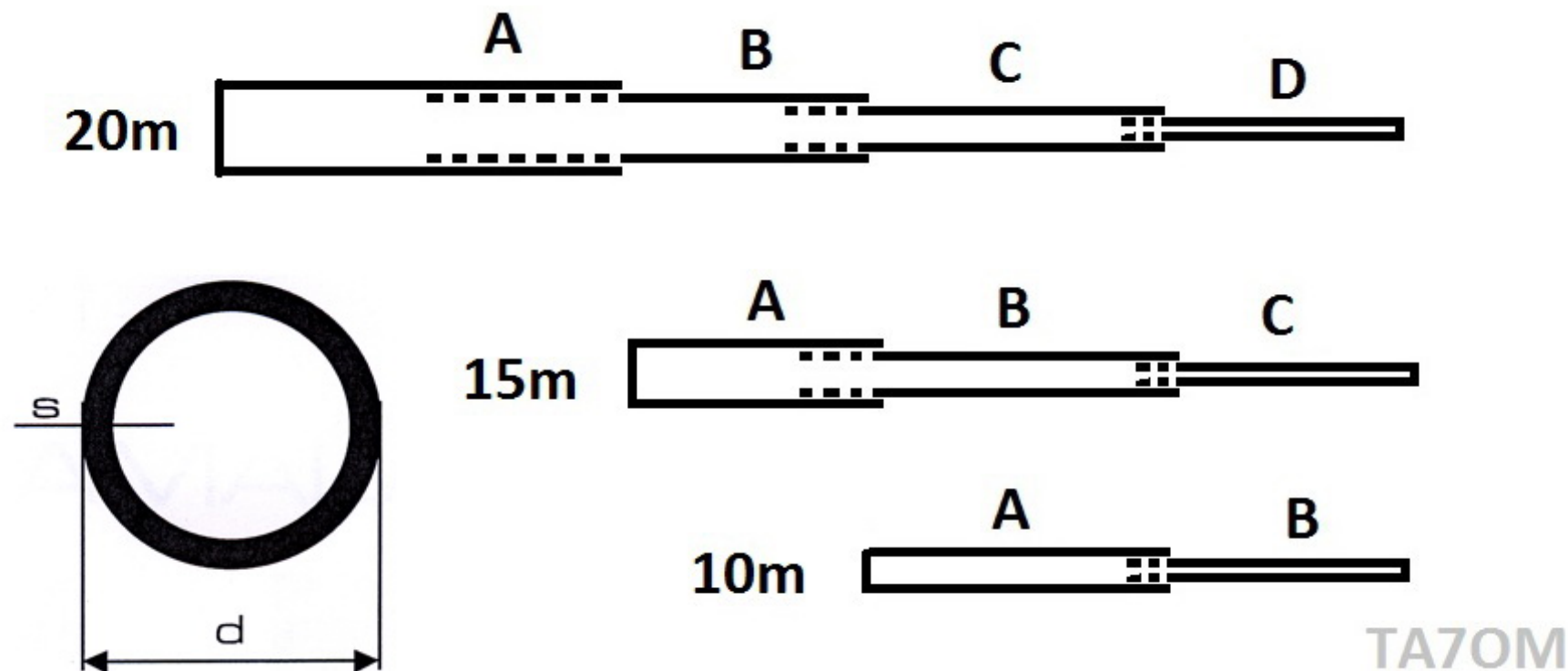
Boom length.

4,10m

Weight. (kg)

20kg

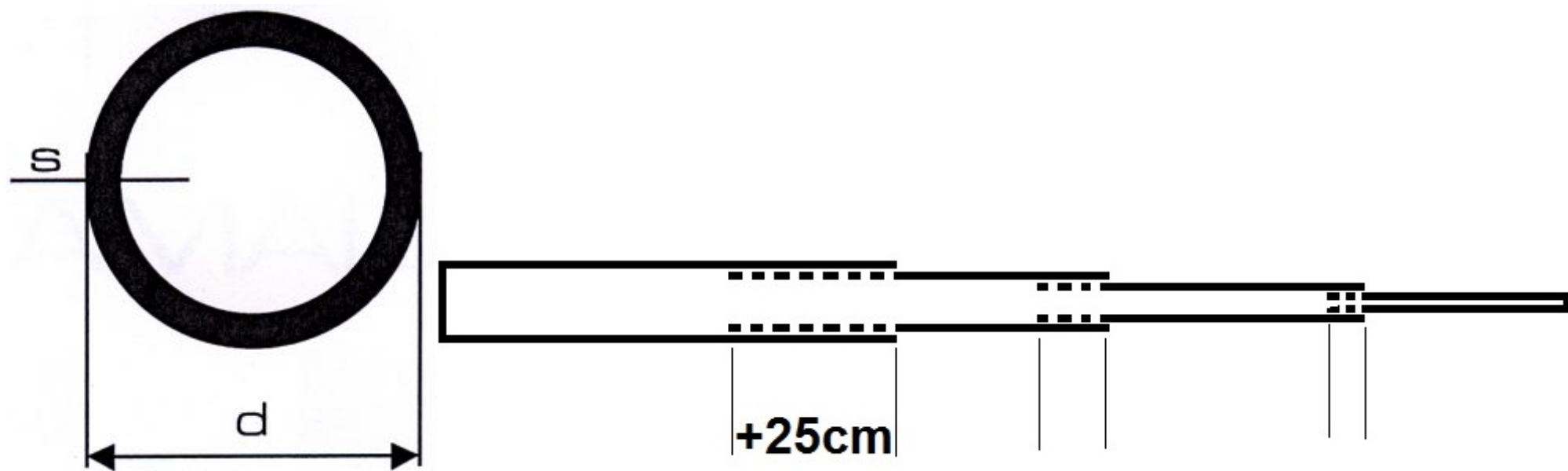
ASSEMBLED SIZE (1 WING)





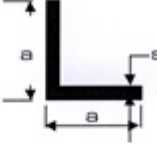

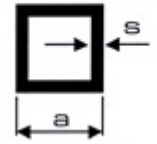
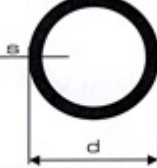
<b>BANDS</b>	<b><u>A</u></b> D: 25 mm S: 2 mm	<b><u>B</u></b> D: 20 mm S: 1,5 mm	<b><u>C</u></b> D: 16 mm S:1,5 mm	<b><u>D</u></b> D:12mm S: 1 mm	<u>One wing length</u>	<b>NOTES</b>
20m REF	100cm	150cm	150cm	148cm	548	+25 cm will be added.
20m DRV	100cm	150cm	150cm	116cm	516	
		<b><u>A</u></b> D: 20 mm S: 1,5 mm	<b><u>B</u></b> D: 16 mm S:1,5 mm	<b><u>C</u></b> D:12mm S: 1 mm		
15m REF	-----	125cm.	115cm	120cm	360	
15m DRV	-----	125cm.	115cm	104cm	344	
			<b><u>A</u></b> D: 16 mm S:1,5 mm	<b><u>B</u></b> D:12mm S: 1 mm		
10m REF	-----	-----	125cm	143cm	268	
10m DRV	-----	-----	125cm	135cm	260	
10m DRK	-----	-----	250cm	119cm	244	

ALUMINUM CUTING LENGTHS (+25cm addet)



<b>BANDS</b>	<b><u>A</u></b> D: 25 mm S: 2 mm	<b><u>B</u></b> D: 20 mm S: 1,5 mm	<b><u>C</u></b> D: 16 mm S:1,5 mm	<b><u>D</u></b> D:12mm S: 1 mm	<b>NOTLAR</b>
<b>20m REF</b>	200cm X 1piece	175cm X 2piece	175cm X 2piece	170cm X 2 piece	will you cutting aluminum according to this measure!
<b>20m DRV</b>	100cm X 2piece	175cm X 2piece	175cm X 2 piece.	141cm X 2 piece.	
		<b><u>A</u></b> D: 20 mm S: 1,5 mm	<b><u>B</u></b> D: 16 mm S:1,5 mm	<b><u>C</u></b> D:12mm S: 1 mm	
<b>15m REF</b>	-----	250cm X 1piece	140cm X 2piece	145cm X 2 piece.	
<b>15m DRV</b>	-----	125cm X 2piece	140cm X 2 piece	130cm X 2 piece.	
			<b><u>A</u></b> D: 16 mm S:1,5 mm	<b><u>B</u></b> D:12mm S: 1 mm	
<b>10m REF</b>	-----	-----	250cm X 1 piece	168cm X 2 piece	
<b>10m DRV</b>	-----	-----	125cm X 2 piece	160cm X 2 piece	
<b>10m DRK</b>	-----	-----	250cm X 1 piece	145cm X 2piece	

## THE TOTAL LENGHT LIST

<u>Aluminum Pipes;</u>			
25x2mm	20x1,5m m	16x1,5m m	12x1mm
4 meter	12meter	20,10 meter	21,66 meter
<u>L Bracket</u> A – A: 4 cm S: 4mm	Total: 52 cm 13cm x 4 piece		
SHEET 30cmx6cm (thickness) B: 6 mm	Total: 90 cm 30cm x 3 piece		
BOX A-A:20 mm S: 1mm	Total: 204 cm 102cm x 2 piece		
BOOM D: 40 mm S: 2,5mm	Total: 410 cm		

## OTHER MATERIALS

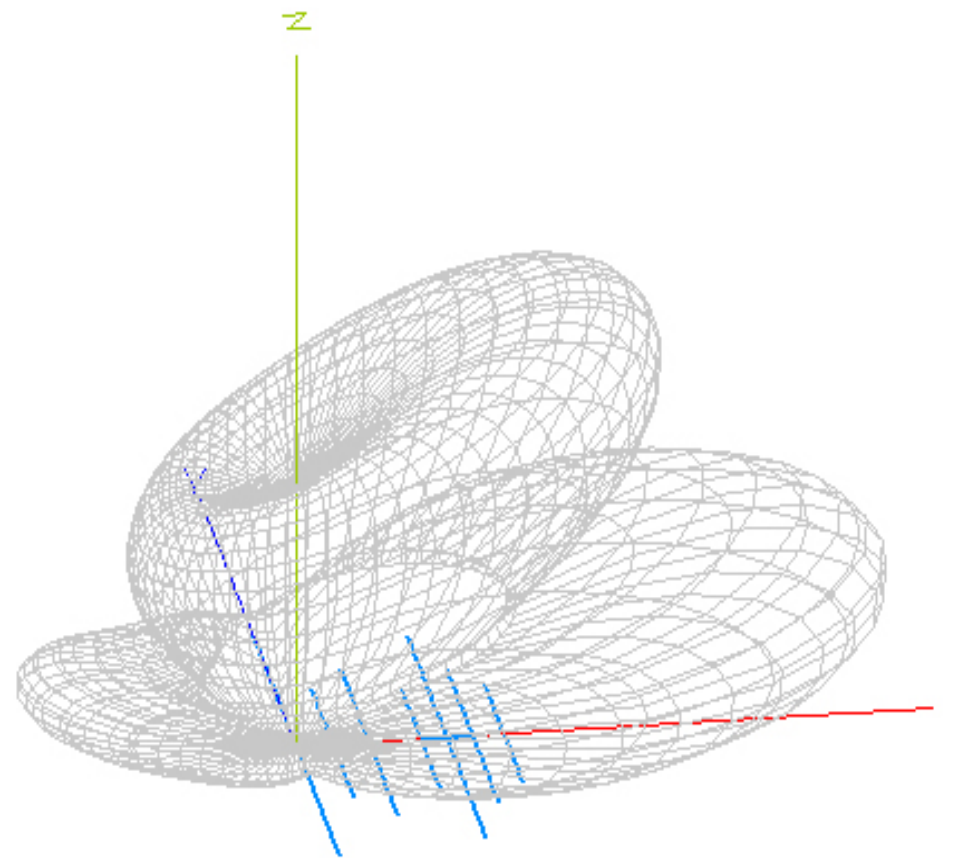
<u>U Bolt Clamp</u> 54mm	2 piece	
<u>U Bolt Clamp</u> 45mm	12 piece	
<u>Hydraulic Pipe Clamps</u>	25x4 piece 20x4 piece 16x4 piece	

1 PCS ANTENNA CUTTING LENGTHS

<b>6063 Aluminium Alloy</b>		<b>Cutting Lenght</b>
<b>40x2,5mm(Boom)</b>		<b>410cm X 1 pcs</b>
<b>25x2mm</b>		<b>200cm X 1 pcs 100cm X 2 pcs</b>
<b>20x1,5mm</b>		<b>175 cm X 4 pcs 250 x 1 pcs 125 x 2 pcs</b>
<b>16X1,5mm</b>		<b>175cm x 4 pcs 140 cm x 4 pcs 250cm x 2 pcs 125 cm x 2 pcs</b>
<b>12X1mm</b>		<b>170 cm x 2 pcs 141 cm x 2 pcs 145 cm x 4 pcs 130cm x 2 pcs 168 cm x 2 pcs 160 cm x 2 pcs</b>

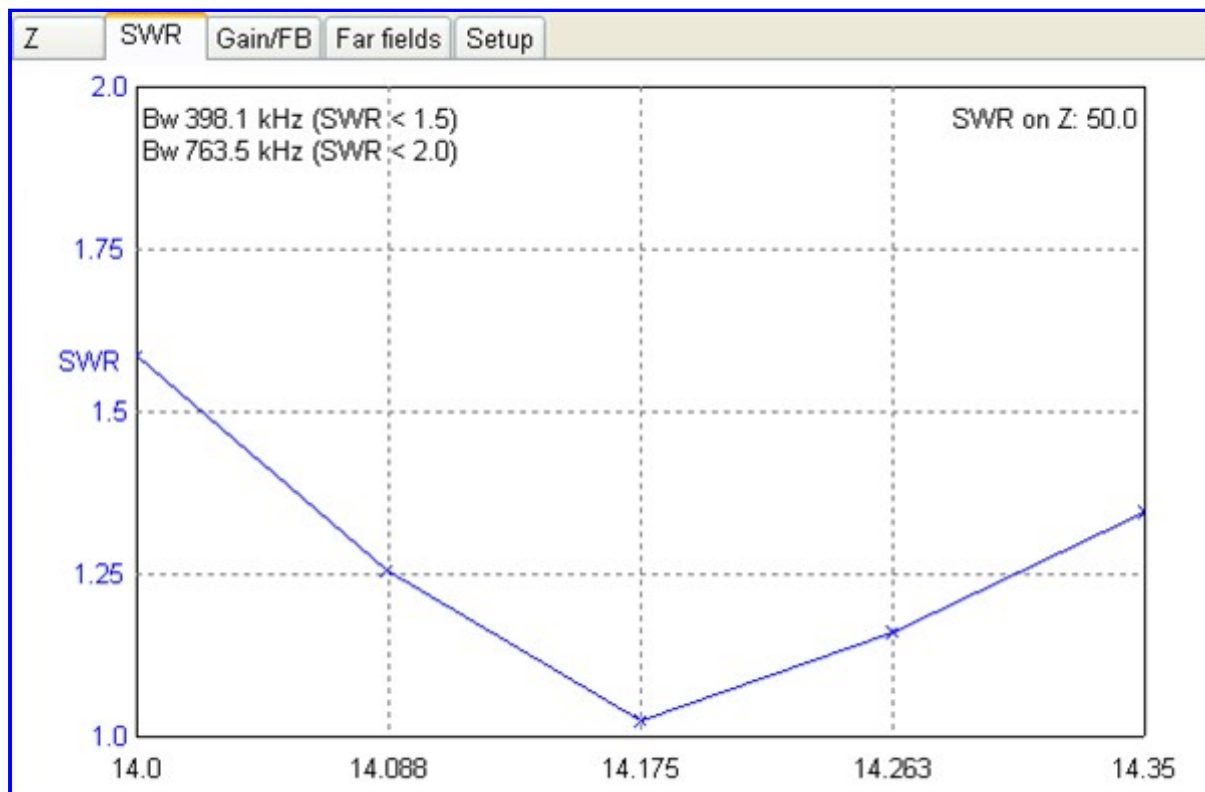
**Technical Notes;**

**20m Pattern;**

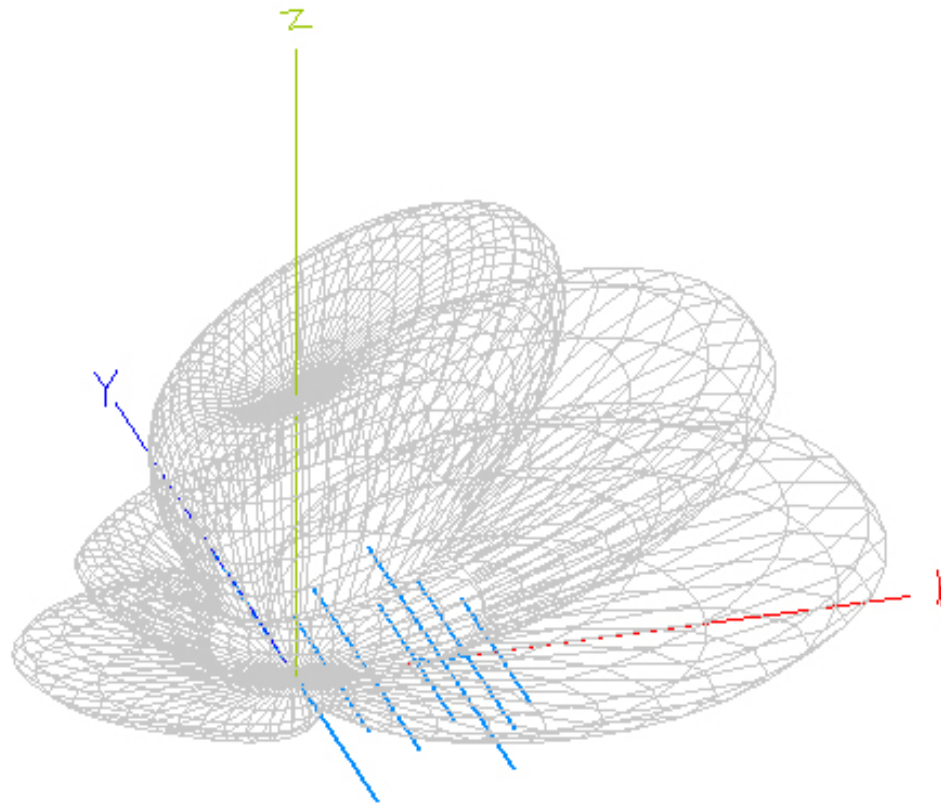


**20m 3D**

**20m SWR;** Bandwidth 398 Khz. ( <1.5 )



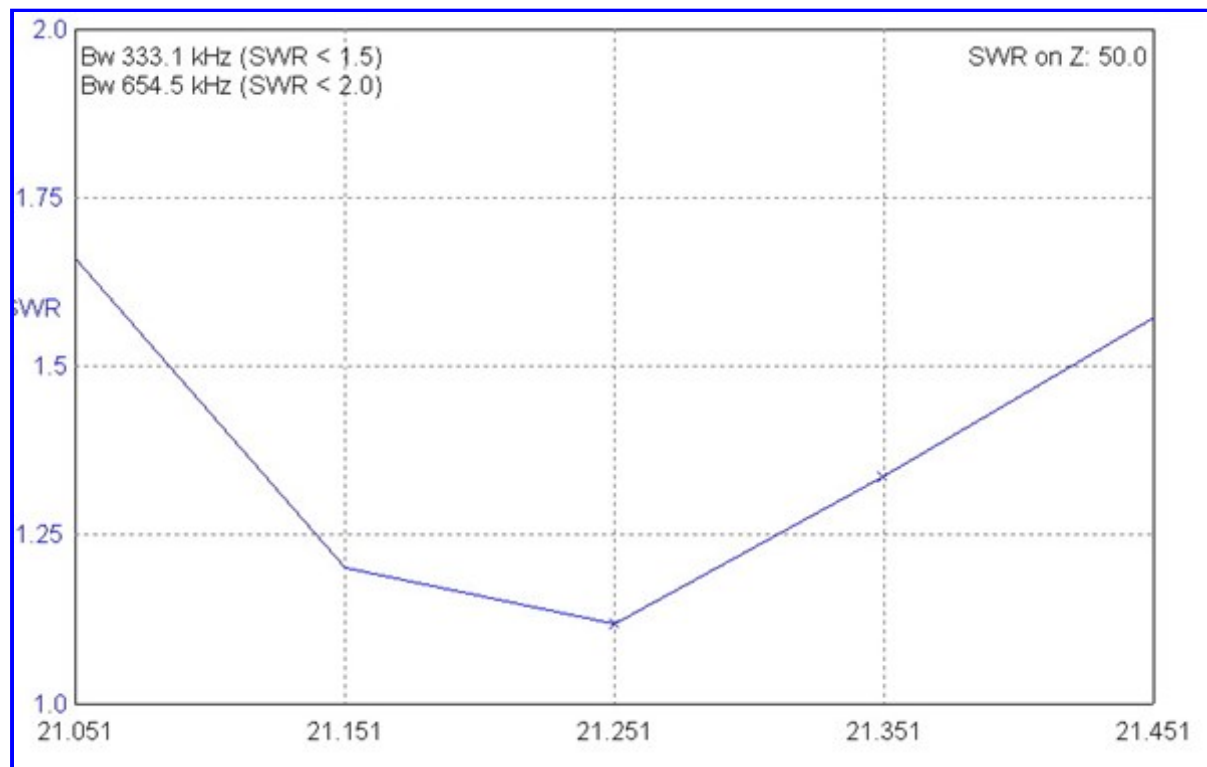




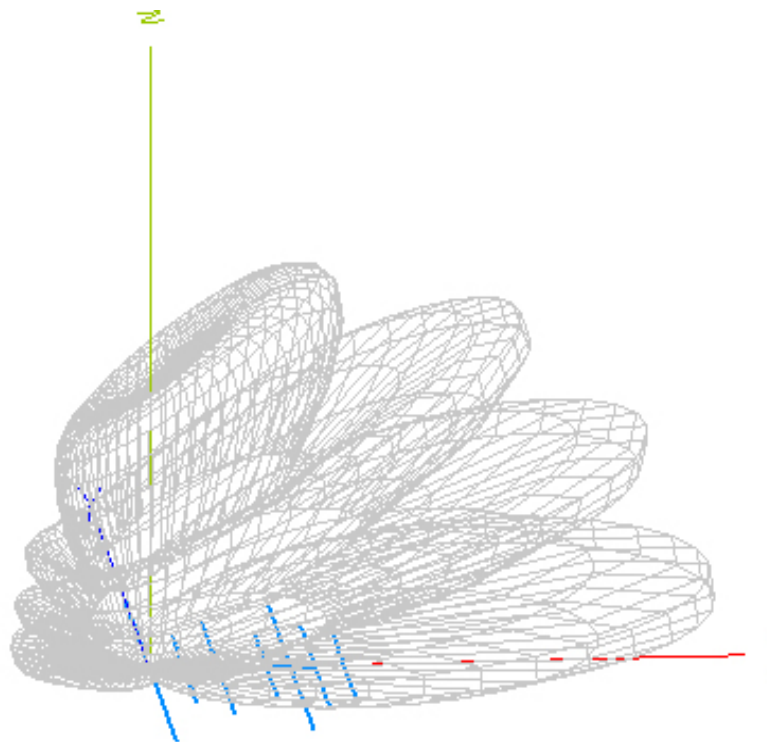
**15m Patern;**

**15m 3D**

**15m SWR;** Bandwidth 333Khz ( < 1.5)

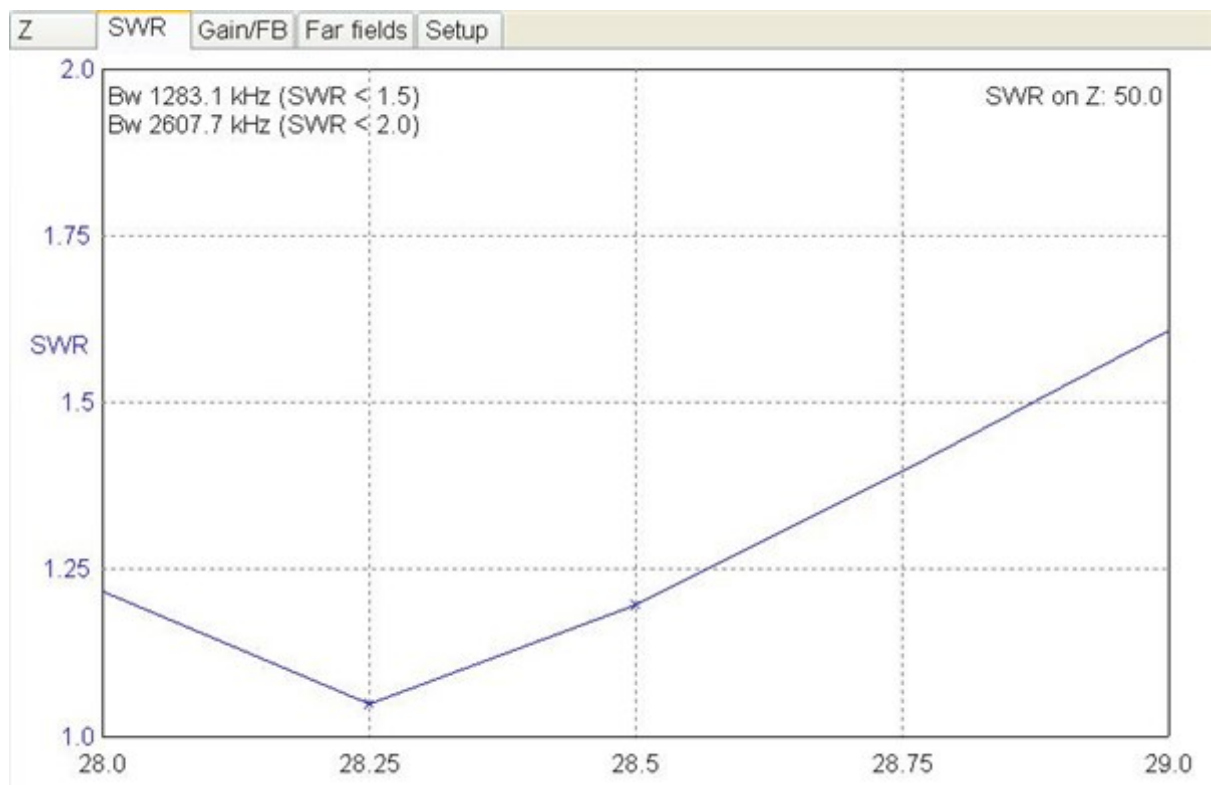


**10m Patern;**



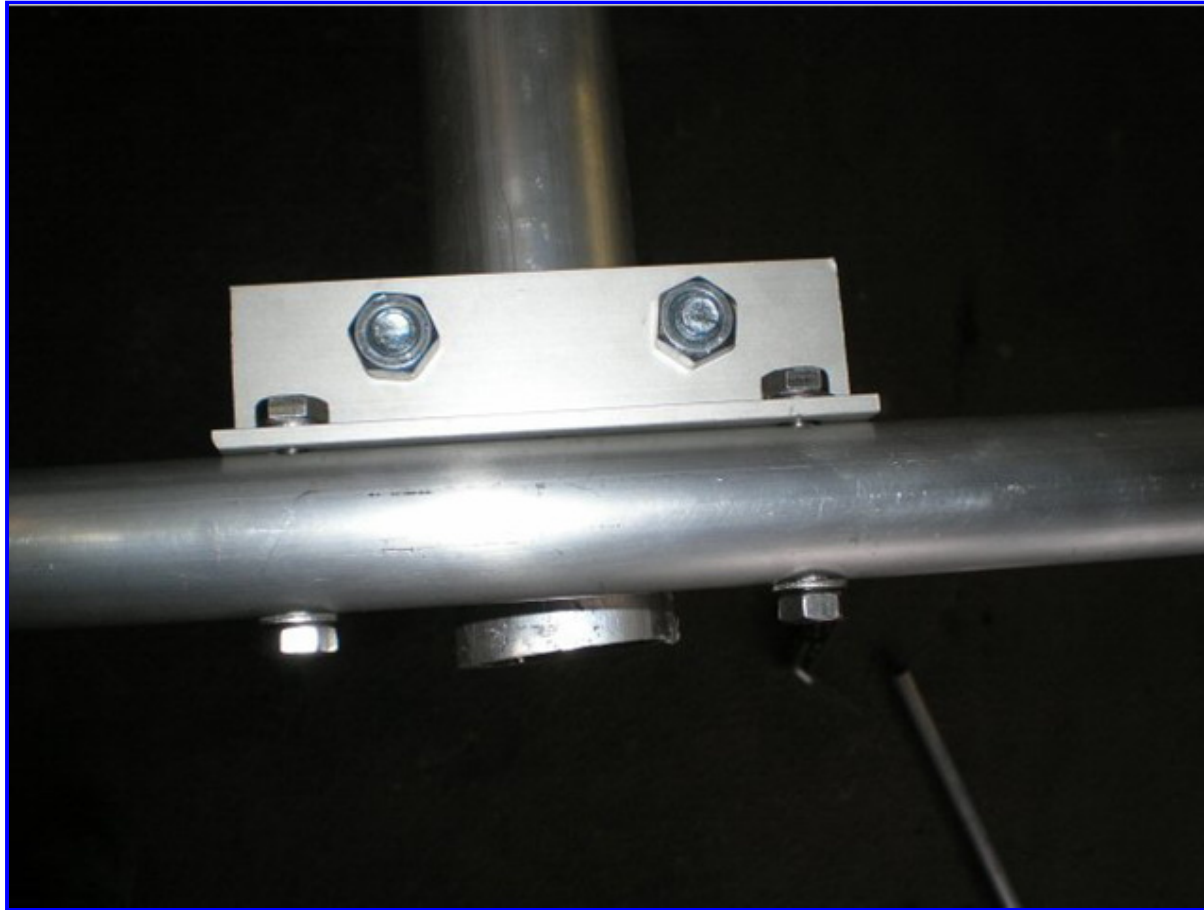
**10m 3D**

**10m SWR;** Bandwidth 1283 Khz ( $< 1.5$ )



**L-Bracket; (13cm length)**







**U Bolt Clamp** (for the elements 47mm. and the Tower mounting pipe 54 or 60mm)





**Hydraulic Pipe Clamps; ( good material for the construction of the antenna).**







**Driver Elements insulator; (Hart plastic)**

According to the internal diameter of the pipe will be made. Pipes should be 25 cm. internal node spacing of 2.5 cm.



(This photo shows the plastics made for **4 antennas**.) you need one for each band.)

#### **Pipe insertion method;**

it should be noted in the screwing method. Aluminum pipes are drilled according to proper opening of the element chrome bolt hole opened up, but to go through the head of a screw on the top side of the aluminum supplied complete and tightly tightening. Otherwise it is not possible to make a complete and powerful compression. you need to use washers under the screw and relaxation for chromium to prevent corrosion.





**Driving element montage; (Lama 6X30cm)**







**Phase Line;** 102cm X 2 piece, (2cm x 2cm)









