



IOJXX di Donzello Rosanna

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7JXX6 Yagi

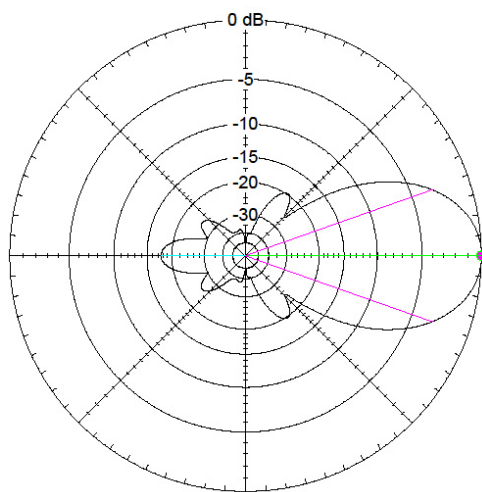
Item		Q.ty	Item		Q.ty
Stainless steel nut M5		8	Stainless steel bolt M5x40		2
Stainless steel nut M6		2	Stainless steel bolt M5x45		2
Stainless steel nut M8		8	Stainless steel Eyescrew M5		4
Lock washer 8 mm Ø		8	Stainless steel bolt M8x35		4
Flat washer 8 mm Ø		8	Stainless steel bolt M8x90		4
Lock washer 5 mm Ø		8	Stainless steel Turnbuckle		4
Lock washer 6 mm Ø		2	Stainless steel bolt M6x35		2
Flat washer 6 mm Ø		2	Stainless steel bolt M4x20		7
Lock washer 4 mm Ø		7	Stainless steel parker screw 3.5x9.5		13
Stainless steel nut M4		7	Plate PIA35JXX		1
Section boom A 25 mm Ø	145 cm.	1	Plate PIA40JXX		1
Section boom A - B 30 mm Ø	145 cm.	1	Semi-element Ø 12 mm		14
Section boom B - C 35 mm Ø	145 cm.	1	Dipole Hairpin and balun ISO25D_12		1
Section boom C - D 40 mm Ø	145 cm.	1	Insulator ISO25_12		3
Section boom D - E 35 mm Ø	145 cm.	1	Insulator ISO30_12		2
Section boom E - F 30 mm Ø	145 cm.	1	Insulator ISO40_12		1
Section boom F 25 mm Ø	145 cm.	1	Inbuss key 3 mm		1
Traversa	35 mm Ø	1	Hairpin	230 mm	1
Dacron rope front	430 cm.	2	Dacron rope back	320 cm.	2

Total Field

EZNEC+

Total Field

EZNEC+



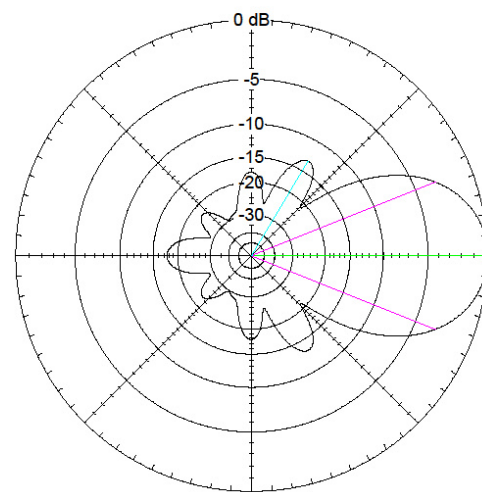
Dipole in free space

50,1 MHz

Azimuth Plot
Elevation Angle 0,0 deg.
Outer Ring 13,39 dBi

Cursor Az 0,0 deg.
Gain 13,39 dBi
0,0 dBmax
0,0 dBmax3D

3D Max Gain 13,39 dBi
Slice Max Gain 13,39 dBi @ Az Angle = 0,0 deg.
Front/Back 17,6 dB
Beamwidth 38,8 deg.; -3dB @ 340,6, 19,4 deg.
Sidelobe Gain -4,21 dBi @ Az Angle = 180,0 deg.
Front/Sidelobe 17,6 dB



Dipole in free space

50,1 MHz


Elevation Plot
Azimuth Angle 0,0 deg.
Outer Ring 13,39 dBi


Cursor Elev 0,0 deg.
Gain 13,39 dBi
0,0 dBmax
0,0 dBmax3D


3D Max Gain 13,39 dBi
Slice Max Gain 13,39 dBi @ Elev Angle = 0,0 deg.
Front/Back 17,6 dB
Beamwidth 43,6 deg.; -3dB @ 338,2, 21,8 deg.
Sidelobe Gain 0,33 dBi @ Elev Angle = 59,0 deg.
Front/Sidelobe 13,06 dB


IOJXX may vary them without any warning
Made in Italy

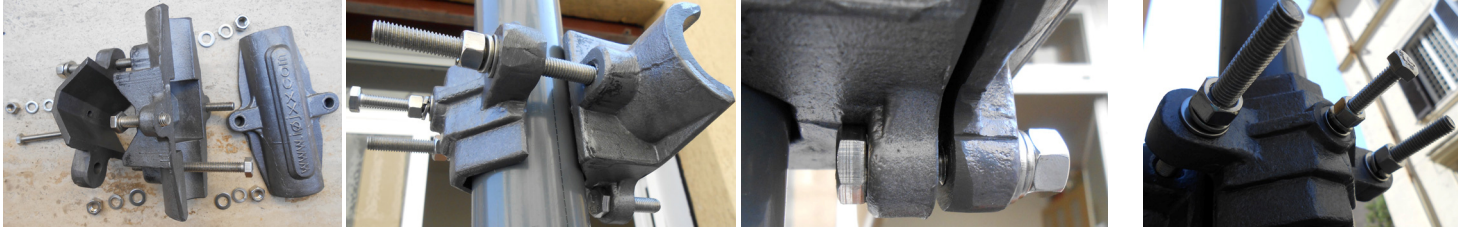



 Combine the boom respecting the letters placed at the ends of each section
 Insert the screws M5x35 mm washer and nut into the junction points **A - A** and **D - D** then insert the screws M5x40 mm washer and nut, junction points **B - B** and **C - C**


 Combinez le boom sur les lettres placées aux extrémités de chaque section
 Insérez les vis M5x35 mm rondelle et un écrou dans les points de jonction **A - A** et **D - D** puis, insérez les vis M5x40 mm rondelle et un écrou, les points de jonction **B - B** et **C - C**


 Kombinieren Sie den Boom und achten Sie dabei auf die Buchstaben am Ende jeder Sektion
 Fügen Sie die Schrauben M5x35 mm Unterlegscheibe und Mutter in die Verbindungsstellen **A - A** und **D - D**, und die Schrauben M5x40 mm Unterlegscheibe und Mutter in den Knotenpunkte **B - B** und **C - C**


 Unire il boom rispettando le lettere poste alle estremità di ogni singola sezione
 Inserire le viti M5x35 mm rondella e dado, nei punti di giunzione **A - A** e **D - D**, inserire le viti M5x40 mm rondella e dado, nei punti di giunzione **B - B** e **C - C**

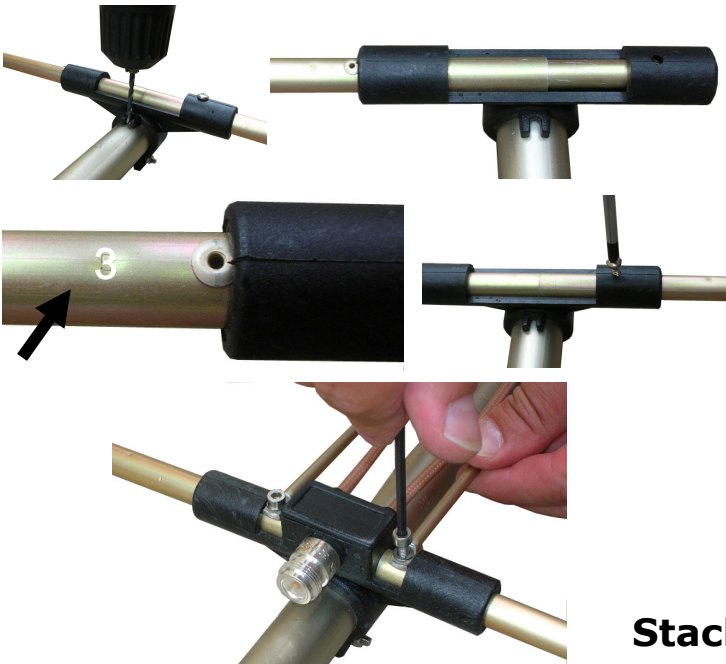



 Attach the mounting plate between boom and mast **PIA40JXX** between elements **3 - 4**


 Fixez la plaque de montage entre la flèche et le mât **PIA40JXX** entre les éléments **3 - 4**


 Montieren Sie die Montageplatte zwischen Ausleger und Mast **PIA40JXX** zwischen den Elementen **3 - 4**


 Montare la piastra di fissaggio tra boom e mast **PIA40JXX** dietro l'elemento **3**




 Insert elements as shown in the figure spaced apart and balanced (as shown in the figure) with the elements standing under the boom, in order to avoid ponding, ice accretion and snowdrift

 Fügen Sie die Elemente räumig und zentriert hinein und fügen Sie sie mit den Elementen unter dem Boom zusammen, wie in der Abbildung dargestellt (siehe Abbildung). Das sollte die Anhäufung von Wasser, Eis und Schnee verhindern.


 Insertion d'éléments comme indiqué sur la figure (voir la figure) spatial et centré avec les éléments placer sous le boom, comme ça on peut éviter cumulus d'eau, de glace et de neige

 Inserire gli elementi come riportato in foto e spazati centro-centro (vedi figura), con gli elementi sotto al boom, in modo da evitare l'accumulo di acqua, ghiaccio e neve

 Match the dipoles as shown in the figure

 Verbinden Sie die Dipole wie abgebildet

 Installez les dipôles comme représenter

 Montare il dipolo come indicato in figura

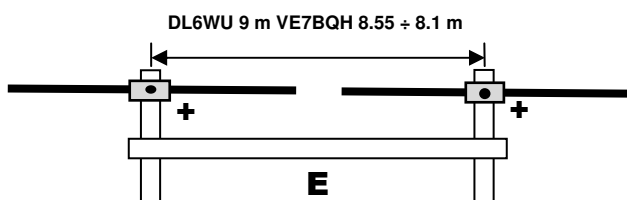
Stacking

In order to obtain the best results in coupling the antennas, we warmly recommend an adequate antenna stacking calculation which would allow the best forward gain together with low side lobes. The stacking distance may be calculated with the following formula from Güenter Hoch DL6WU

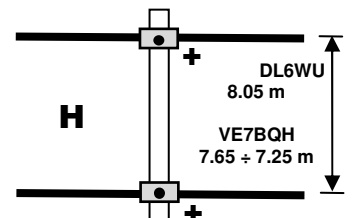
On the basis of further studies conducted by Lionel VE7BQH over the antenna stacking argument, a reduction of 5÷10% may be introduced on stacking distances without noticing significant overall worsening of the characteristics. Do respect the driven element supplying symmetry to allow anti-phase coupling

$$\text{Plane E} = 38.8^\circ = \frac{5982}{2 * \sin(38.8 / 2)} = \frac{5982}{0.6643} \cong 9 \text{ m (with VE7BQH from 8.55 m to 8.1 m)}$$

$$\text{Plane H} = 43.6^\circ = \frac{5982}{2 * \sin(43.6 / 2)} = \frac{5982}{0.7427} \cong 8.05 \text{ m (with VE7BQH from 7.65 m to 7.25 m)}$$



$$d = \frac{L}{2 * \sin(\Phi / 2)}$$



7JXX6

