



**IØJXX** di Donzello Rosanna

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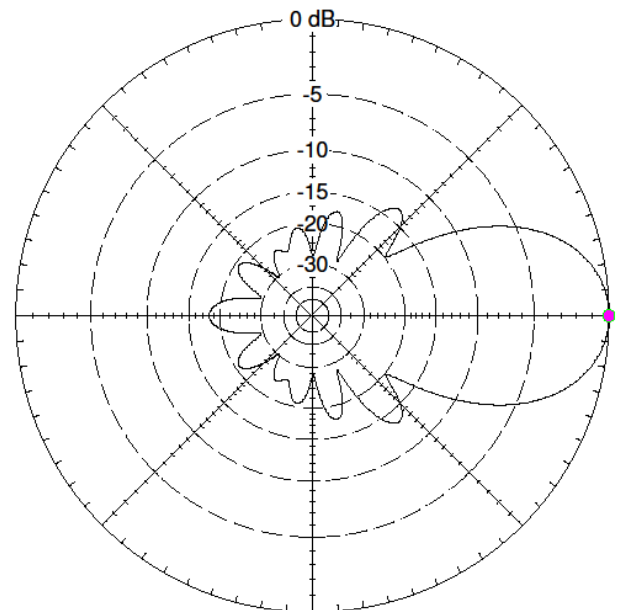
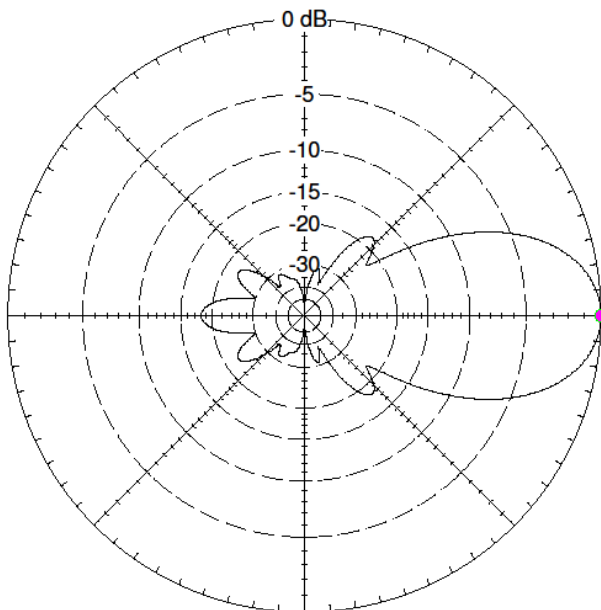
## 8JXX2 Yagi

Item		Q.ty	Item		Q.ty
Stainless steel nut M5		2	Stainless steel bolt M4x35		1
Stainless steel nut M6		8	Stainless steel bolt M5x35		2
Nylon nut M8		7	U_Bolt JXX		2
Lock washer 4 mm Ø		1	U_Bolt 30		2
Lock washer 5 mm Ø		2	Horizontal element <b>1÷8</b>		7
Lock washer 6 mm Ø		8	Dipole with Hairpin and balun		1
Flat washer 6 mm Ø		8	Section boom <b>A</b> 25 mm Ø	147 cm.	1
Ergal Plate <b>PIA30JXX</b>		1	Section boom <b>A - B</b> 30 mm Ø	147 cm.	1
			Section boom <b>B</b> 25 mm Ø	147 cm.	1

Total Field

EZNEC+ Total Field

EZNEC+



Dipole in free space

144,4 MHz

Dipole in free space

144,4 MHz

Azimuth Plot  
Elevation Angle 0,0 deg.  
Outer Ring 14,28 dBi

Cursor Az Gain 0,0 deg.  
14,28 dBi  
0,0 dBmax  
0,0 dBmax3D

3D Max Gain 14,28 dBi  
Slice Max Gain 14,28 dBi @ Az Angle = 0,0 deg.  
Front/Back 18,13 dB  
Beamwidth 34,8 deg.; -3dB @ 342,6, 17,4 deg.  
Sidelobe Gain -3,79 dBi @ Az Angle = 49,0 deg.  
Front/Sidelobe 18,07 dB

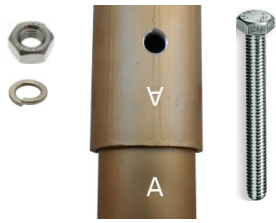
Elevation Plot  
Azimuth Angle 0,0 deg.  
Outer Ring 14,28 dBi

Cursor Elev Gain 0,0 deg.  
14,28 dBi  
0,0 dBmax  
0,0 dBmax3D

3D Max Gain 14,28 dBi  
Slice Max Gain 14,28 dBi @ Elev Angle = 0,0 deg.  
Front/Back 18,13 dB  
Beamwidth 38,2 deg.; -3dB @ 340,9, 19,1 deg.  
Sidelobe Gain 1,01 dBi @ Elev Angle = 51,0 deg.  
Front/Sidelobe 13,27 dB

IØJXX may vary them without any warning

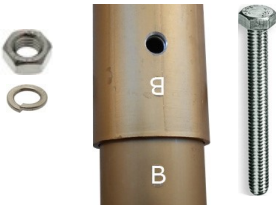
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Combine the boom respecting the letters placed at the ends of each section  
Insert the screws M5x35 mm washer and nut into the junction points **A - A** and **B - B**



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 **B - B**



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 **B - B**



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 **B - B**



Attach the mounting plate between boom and mast **PIA30JXX** between elements **3 - 4**



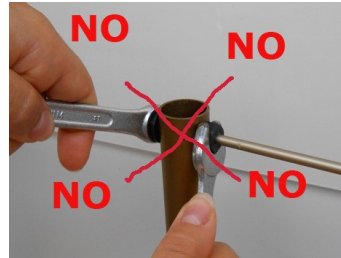
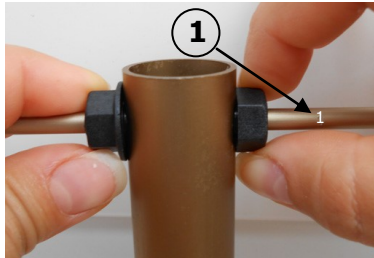
Fixez la plaque de montage entre la flèche et le mât **PIA30JXX** entre les éléments **3 - 4**



Montieren Sie die Montageplatte zwischen Ausleger und Mast **PIA30JXX** zwischen den Elementen **3 - 4**



Montare la piastra di fissaggio tra boom e mast **PIA30JXX** tra gli elementi **3 - 4**



Insert elements as shown in the figure, hand tighten the nut M8 Nylon (**do not use keys as the material used has a self - locking function**)



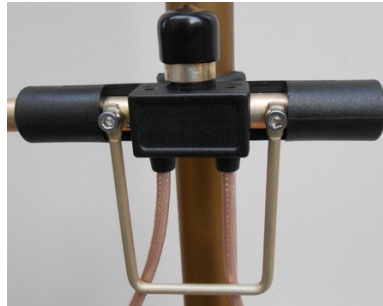
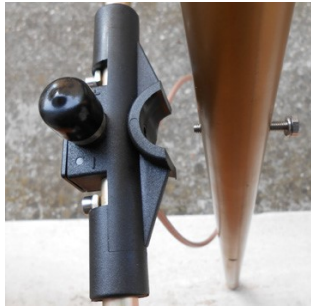
Fügen Sie die Elemente hinein wie in der Abbildung dargestellt, schrauben Sie die Mutter M8 Nylon mit den Händen zusammen (**benutzen Sie keine Schlüssel, da das verwendete Material eine Selbstverriegelung hat**)



Insertion d'éléments comme indiqué sur la figure, serrez à la main l'écrou M8 nylon (**ne pas utiliser les touches que le matériau utilisé a une auto - verrouillage**)



Inserire gli elementi come riportato in figura, stringere a mano il dado in Nylon da M8 (**non utilizzare chiavi in quanto il materiale impiegato ha effetto auto - bloccante**)



Match the dipoles with M4x35 mm and washer as shown in photo



Verbinden Sie die Dipole mit der M4x35 mm Schraube und der Unterlegscheibe wie das Foto zeigt



Installez les dipôles avec M4x35 mm et la rondelle comme indiqué sur la photo



Montare i dipoli con vite M4x35 mm e rondella come indicato in foto

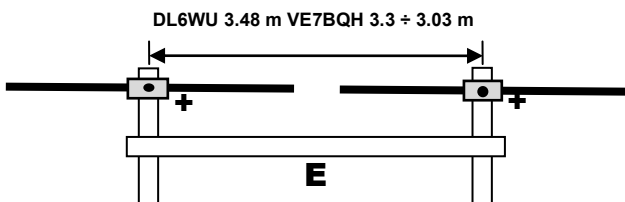
## Stacking

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

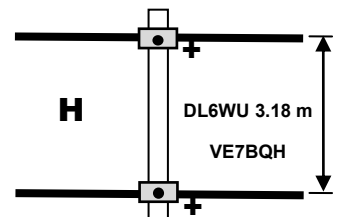
On the basis of further studies conducted by Lionel VE7BQH over the antenna stacking argument, a reduction of 5÷10% may be introduced on stacking distances without noticing significant overall worsening of the characteristics. Do respect the driven element supplying symmetry to allow anti-phase coupling

$$\text{Plane E} = 34.8^\circ = \frac{2079}{2 * \sin(34.8 / 2)} = \frac{2079}{0.598} \cong 3.48 \text{ m (with VE7BQH from 3.3 m to 3.13 m)}$$

$$\text{Plane H} = 38.2^\circ = \frac{2079}{2 * \sin(38.2 / 2)} = \frac{2079}{0.6544} \cong 3.18 \text{ m (with VE7BQH from 3.02 m to 2.86 m)}$$



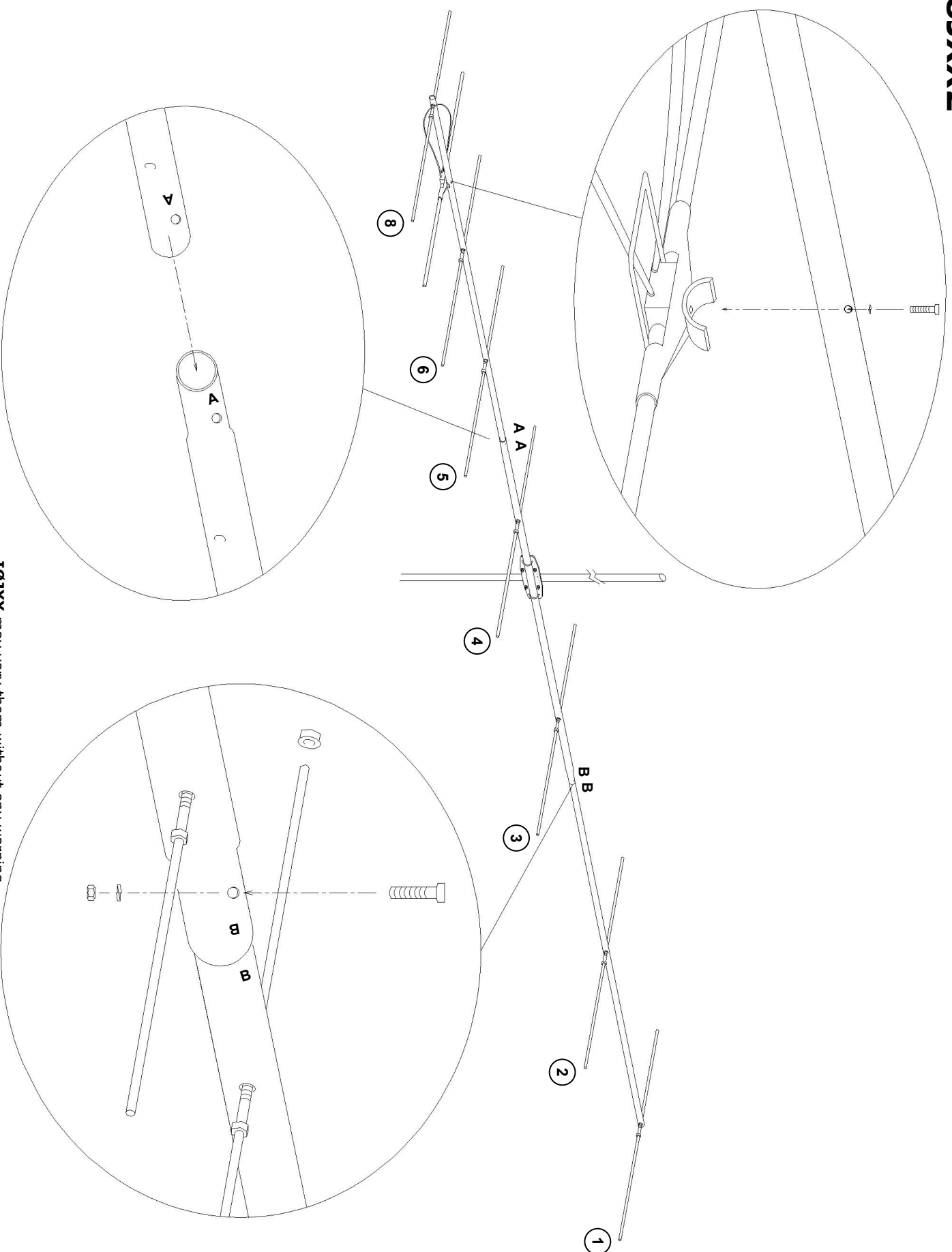
$$d = \frac{L}{2 * \sin(\Phi / 2)}$$



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