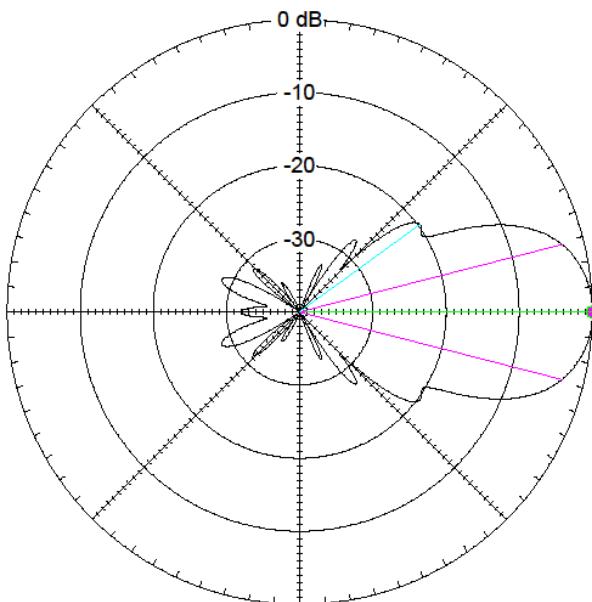




## 16JXX70 Yagi

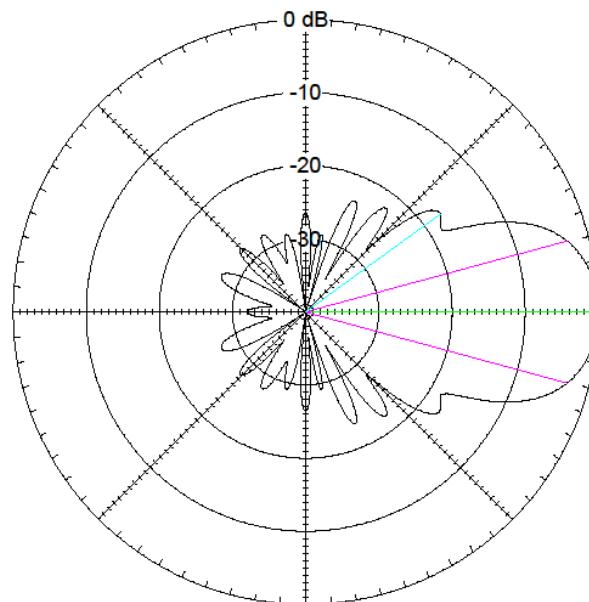
Item		Q.ty	Item		Q.ty
Stainless steel nut M4		4	Stainless steel bolt M4x35		4
Stainless steel nut M6		8	Stainless steel bolt M5x35		1
Nylon nut M8		15	Plate <b>PIA30JXX</b>		1
Dipole with T-match		1	Horizontal element <b>1÷16</b>		15
Lock washer 4 mm Ø		4	Section boom <b>A</b> 25 mm Ø	100 cm.	1
Lock washer 5 mm Ø		1	Section boom <b>A - B</b> 30 mm Ø	118 cm.	1
Lock washer 6 mm Ø		8	Section boom <b>B</b> 25 mm Ø	108 cm.	1
Flat washer 6 mm Ø		8	Inbuss	2.5 mm	1

Total Field



EZNEC+

Total Field



EZNEC+

Dipole in free space

432 MHz

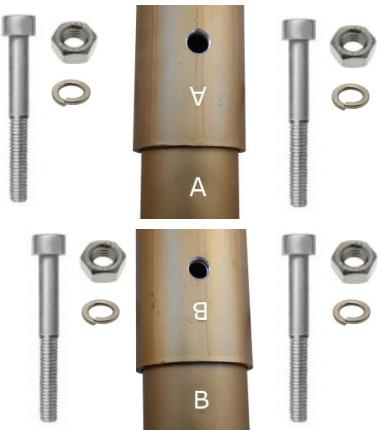
Azimuth Plot  
 Elevation Angle 0,0 deg.  
 Outer Ring 16,56 dBi  
  
 3D Max Gain 16,56 dBi  
 Slice Max Gain 16,56 dBi @ Az Angle = 0,0 deg.  
 Front/Back 32,01 dB  
 Beamwidth 28,8 deg.; -3dB @ 345,6, 14,4 deg.  
 Sidelobe Gain -3,09 dBi @ Az Angle = 36,0 deg.  
 Front/Sidelobe 19,65 dB

Cursor Az  
 Gain 0,0 deg.  
 16,56 dBi  
 0,0 dBmax  
 0,0 dBmax3D

Elevation Plot  
 Azimuth Angle 0,0 deg.  
 Outer Ring 16,56 dBi  
  
 3D Max Gain 16,56 dBi  
 Slice Max Gain 16,56 dBi @ Elev Angle = 0,0 deg.  
 Front/Back 32,01 dB  
 Beamwidth 30,4 deg.; -3dB @ 344,8, 15,2 deg.  
 Sidelobe Gain -0,68 dBi @ Elev Angle = 36,0 deg.  
 Front/Sidelobe 17,24 dB

Cursor Elev  
 Gain 0,0 deg.  
 16,56 dBi  
 0,0 dBmax  
 0,0 dBmax3D

**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 M4x35 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 M4x35 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 M4x35 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 M4x35 mm rondella e dado, nei punti di giunzione **A - A** e **B - B**



Attach the mounting plate between boom and mast **PIA30JXX** between elements **7 – 8**



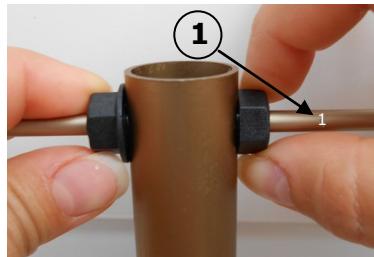
Fixez la plaque de montage entre la flèche et le mât **PIA30JXX** entre les éléments **7 – 8**



Montieren Sie die Montageplatte zwischen Ausleger und Mast **PIA30JXX** zwischen den Elementen **7 – 8**



Montare la piastra di fissaggio tra boom e mast **PIA30JXX** tra gli elementi **7 – 8**



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 dipole with M5x35 mm and washer as shown in photo



Verbinden Sie die Dipole mit der M5x35 mm Schraube und der Unterlegscheibe wie das Foto zeigt



Installez les dipôle avec M5x35 mm et la rondelle comme indiqué sur la photo



Montare il dipolo con vite M5x35 mm e rondella come indicato in foto

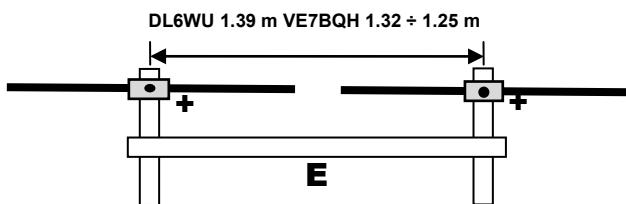
## Stacking

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

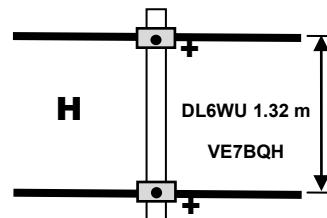
On the basis of further studies conducted by Lionel VE7BQH over the antenna stacking argument, a reduction of 5÷10% may be introduced on stacking distances without noticing significant overall worsening of the characteristics. Do respect the driven element supplying symmetry to allow anti-phase coupling

$$\text{Plane E} = 28.8^\circ = \frac{693.96}{2 * \sin(28.8/2)} = \frac{693.96}{0.4973} \approx 1.39 \text{ m (with VE7BQH from 1.32 m to 1.25 m)}$$

$$\text{Plane H} = 30.4^\circ = \frac{693.96}{2 * \sin(30.4/2)} = \frac{693.96}{0.5244} \approx 1.32 \text{ m (with VE7BQH from 1.26 m to 1.19 m)}$$

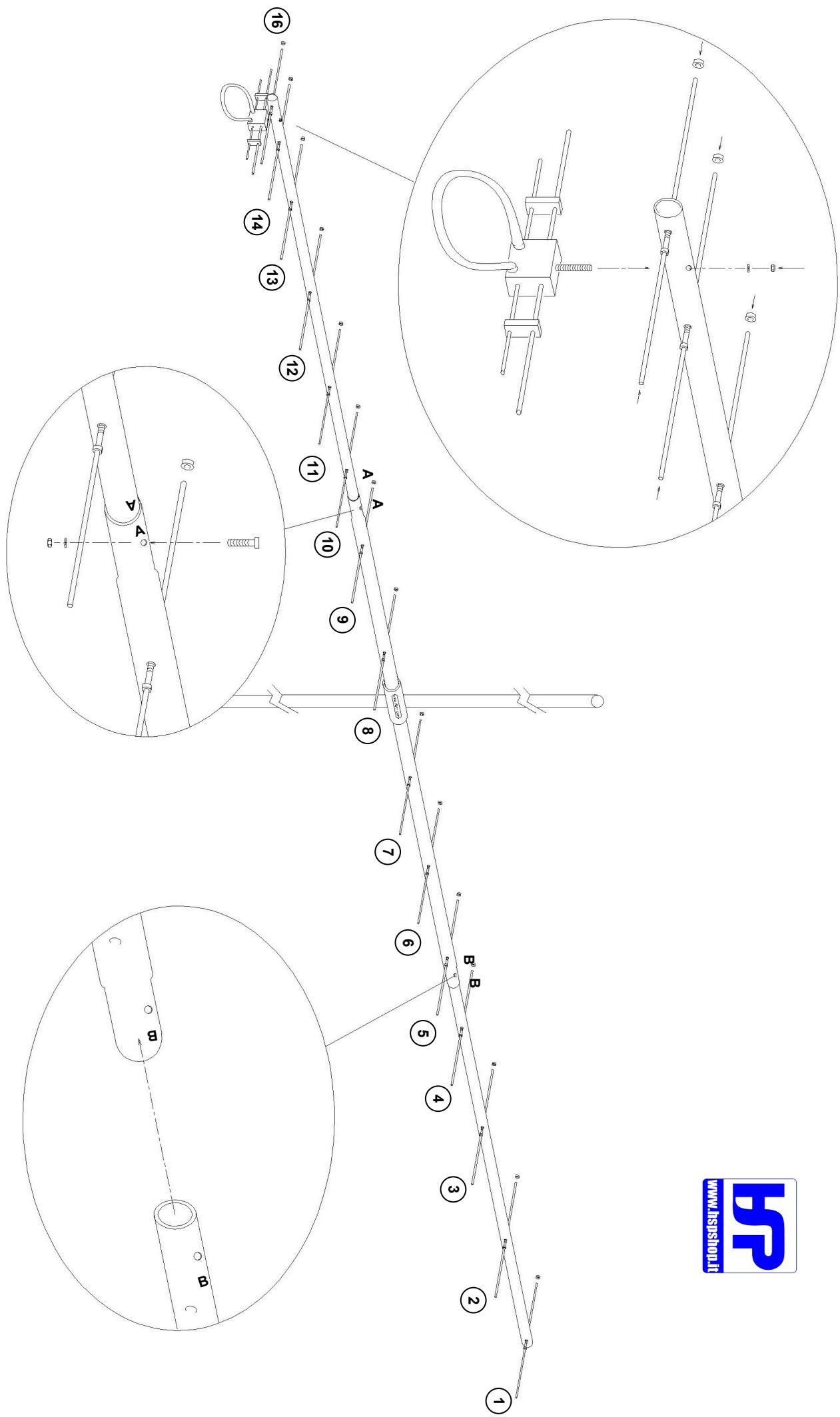


$$d = \frac{L}{2 * \sin(\Phi / 2)}$$

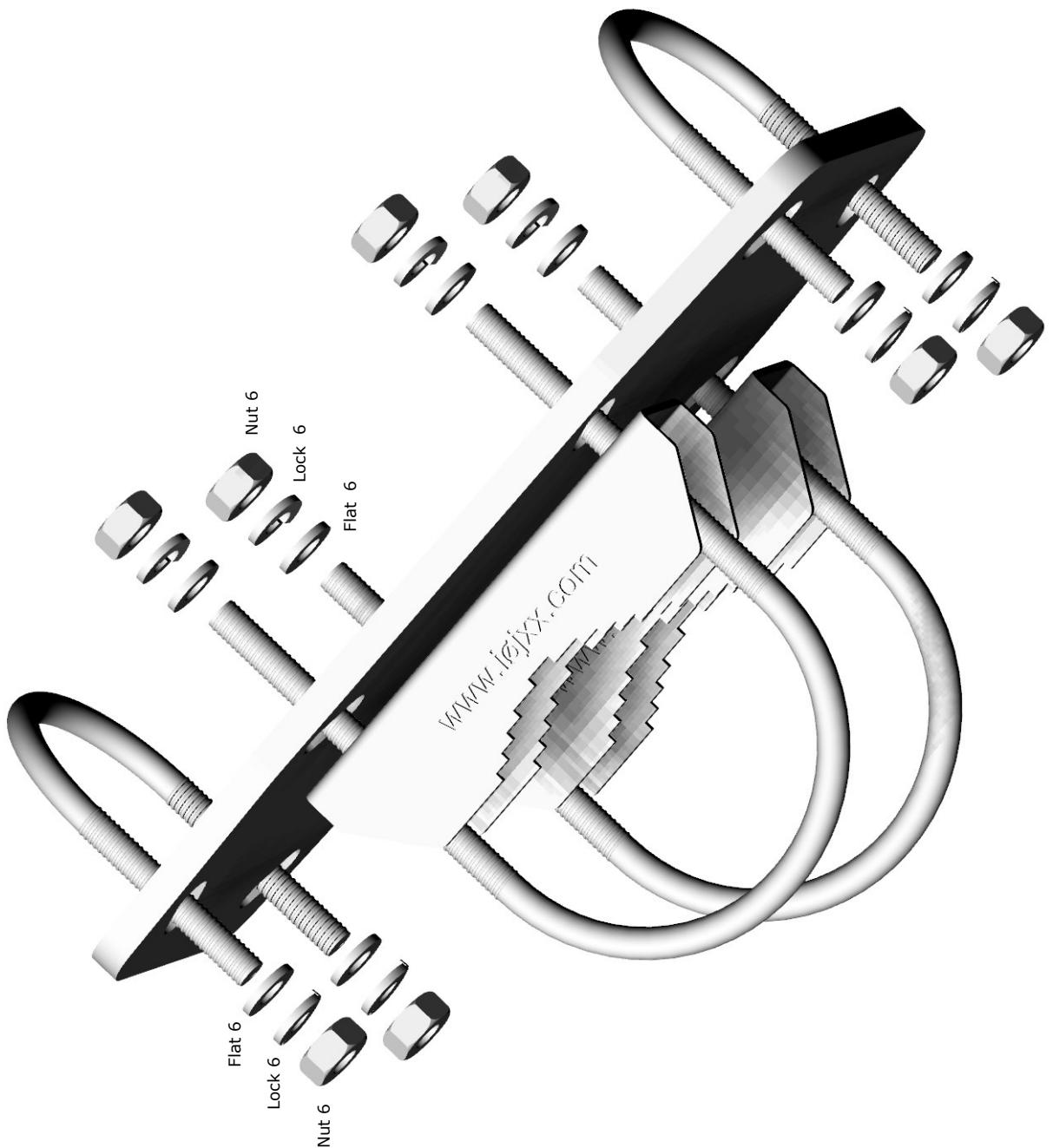


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**16JXX70**



**16JXX1** may vary them without any warning  
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