32JXX70 Cross Yagi

Item		Q.ty	Item		Q.ty
Stainless steel nut M5		2	Stainless steel bolt M5x35		4
Stainless steel nut M6		8	U_Bolt 30		2
Nylon nut M8		30	U_Bolt JXX		2
Lock washer 5 mm Ø		4	Plate **PIA30JXX**		1
Lock washer 6 mm Ø		8	Section boom **A** 25 mm Ø	100 cm.	1
Flat washer 6 mm Ø		8	Section boom **A—B** 30 mm Ø	118 cm.	1
Dipole with T-match		2	Section boom **B** 25 mm Ø	110 cm.	1
Horizontal element **1÷16**		15	Inbuss	2.5 mm	1
Vertical element **A÷P**		15			1

Total Field   EZNEC+   Total Field   EZNEC+
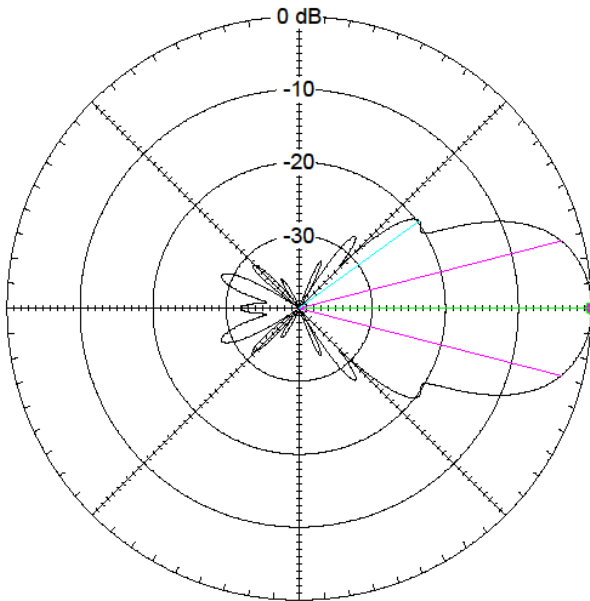
Dipole in free space   432 MHz   Dipole in free space   432 MHz

Azimuth Plot		Cursor Az	0,0 deg.
Elevation Angle	0,0 deg.	Gain	16,56 dBi
Outer Ring	16,56 dBi		0,0 dBmax
			0,0 dBmax3D
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		
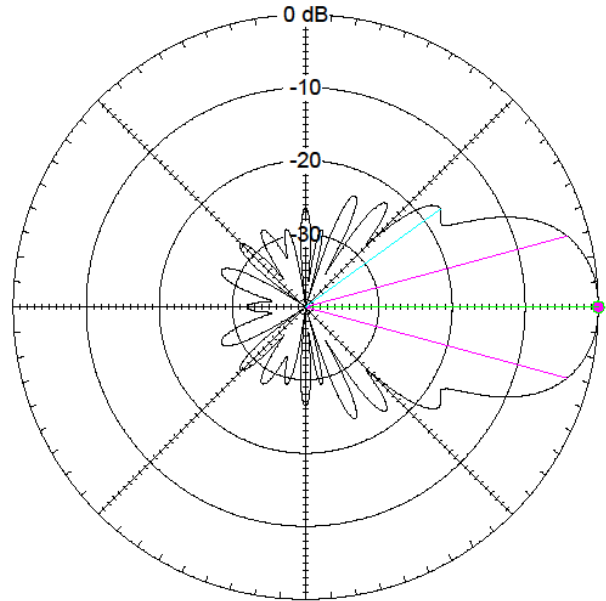
Elevation Plot		Cursor Elev	0,0 deg.
Azimuth Angle	0,0 deg.	Gain	16,56 dBi
Outer Ring	16,56 dBi		0,0 dBmax
			0,0 dBmax3D
3D Max Gain	16,56 dBi		
Slice Max Gain	16,56 dBi @ Elev Angle = 0,0 deg.		
Front/Back	32,01 dB		
Beamwidth	30,4 deg.; -3dB @ 344,8, 15,2 deg.		
Sidelobe Gain	-0,68 dBi @ Elev Angle = 36,0 deg.		
Front/Sidelobe	17,24 dB		

IØJXX may vary them without any warning

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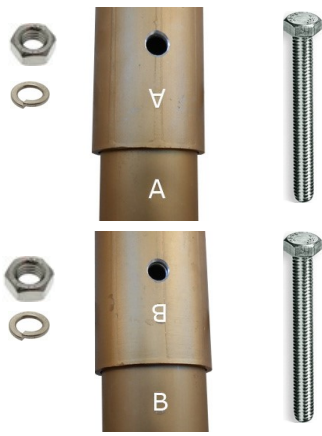
🇬🇧 Combine the boom respecting the letters placed at the ends of each section
Insert the screws M5x35 mm washer and nut into the junction points **A - A** and **B - B**

🇩🇪 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**
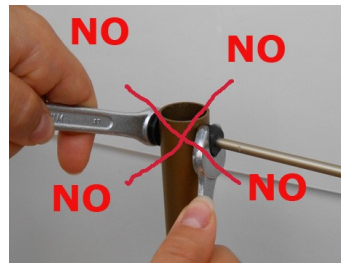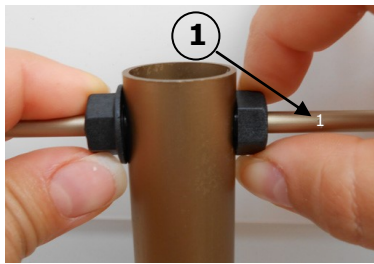
🇩🇪 Montieren Sie die Montageplatte zwischen Ausleger und Mast **PIA30JXX** zwischen den Elementen **3 – 4**

🇫🇷 Fixez la plaque de montage entre la flèche et le mât **PIA30JXX** entre les éléments **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 M5x35 mm and washer as shown in photo

🇩🇪 Verbinden Sie die Dipole mit der M5x35 mm Schraube und der Unterleg-scheibe wie das Foto zeigt

🇫🇷 Installez les dipôles avec M5x35 mm et la rondelle comme indiqué sur la photo

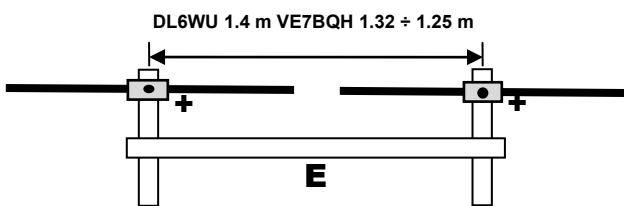🇮🇹 Montare i dipoli con vite M5x35 mm e rondella come indicato in foto

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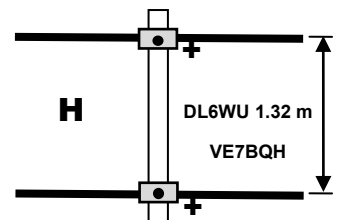
On the basis of further studies conducted by Lionel VE7BQH over the antenna stacking argument, a reduction of 5÷10% may be introduced on stacking distances without noticing significant overall worsening of the characteristics. Do respect the driven element supplying simmetry to allow anti-phase coupling

$$\textbf{Plane E} = 28.8° = \frac{693.96}{2 * \sin(28.8/2)} = \frac{693.96}{0.4974} \cong \textbf{1.4 m} \text{ (with VE7BQH from } \textbf{1.32 m} \text{ to } \textbf{1.25 m)}$$

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

DL6WU 1.4 m VE7BQH 1.32 ÷ 1.25 m

E

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

H

DL6WU 1.32 m

VE7BQH

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32JXX70

Nut 6

Lock 6

Flat 6

Flat 6

Lock 6

Nut 6

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