



A 20 element 11.1m long dualband 50/70MHz Yagi with single feedpoint FT8 optimised

Description

Available through **WiMo Germany** and **DX Engineering in the USA** - for Direct factory supply, Email us for pricing and time lines.

www.dxengineering.com - www.wimo.com

An Excellent 20 element Dual Band Yagi for 50/70MHz with 11.1m boom FT8 Optimised

The 4-6-20 Dual Band Yagi has a total of 20 elements, 10 elements are used on 70MHz while 10 elements are used on 50MHz. The 4-6-20 InnovAntennas Dual Band Yagi stands aside from the crowd due to the methods used for it's design. The 4-6-20 uses no traps or coils, no phasing arrangements and has no need for 'compromise' spacing between elements as the antenna has a set of correctly spaced elements for either band but still deploys only one feed point. An excellent antenna with great SWR bandwidth and performance in one package.

NOTE: This antenna is wideband optimised to ensure excellent performance and SWR coverage at through to and including the FT8 section of the bands.

Performance

Gain on 50MHz: 13.38dBi @ 50.150MHz - **13.41dBi @ 50.313MHz (FT8)**

F/B on 50MHz: 18.42dB @ 50.150MHz - 17.72dB @ 50.313MHz (FT8)

Gain on 50MHz at 12m above Ground: 18.89dBi

Gain on 70MHz: 14.5dBi @ 70.200MHz - **14.46dBi @ 70.154MHz (FT8)**

F/B on 70MHz: 22.17dB @ 70.200MHz - 22.85dB @ 70.154MHz (FT8)

Gain on 70MHz at 12m above Ground: 20.12dBi

Power Rating: 5kw+

SWR 50MHz: Below 1.4:1 from 50.00MHz to 50.500MHz

SWR 70MHz: Below 1.4:1 from 70.00MHz to 70.400MHz

Boom Length: 11.1m

Weight: 15Kg / 33LB

Turning Radius: 5.843m / 19.3ft

Wind Loading: 0.51 Square Metres / 5.13 Square feet

Wind Survival: 160KPH / 100MPH

Other options available if higher wind loading/survival is required.

Specification

This antenna is made with 13mm (2mm wall) centre elements and 10mm outer elements (70MHz element are one piece 13mm, 2mm wall). The antenna has fully insulated elements which will ensure continuous, high performance for many years to come. Boom to mast brackets are included with all antennas which will support 2 inch (50mm) masts. **Boom is 45mm with a 2mm wall tapering the 40mm then 30mm and a Kevlar boom guy** is supplied with **stainless steel** turnbuckles for final guy adjustment.

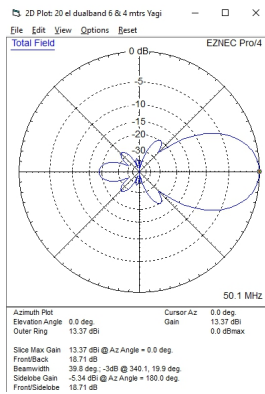
Our antennas are constructed with the best quality materials in order that the best mechanical construction can be achieved, not the cheapest

20e1 50MHz & 70MHz Dual Band DX Yagi

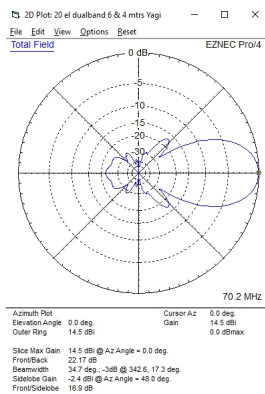
and most profitable! Even a digital caliper is used (with an accuracy of .01mm) to measure the elements during production to ensure they are within 0.2mm of what they should be, ensuring they work as well as our software model predicts.

Note: Much development time has gone into our antennas, not just on basic electromagnetic design, we are able to model the effect of insulators, booms and other objects to ensure the make up of our antennas have least effect on performance and pattern degradation. More information can be found [here](#)

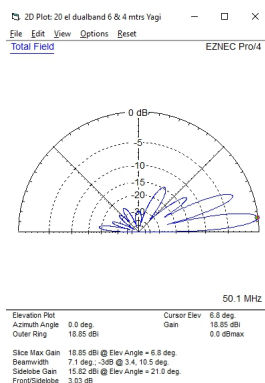
- Marine grade Stainless Steel Fittings
- Original Stauff Insulation clamps
- Mill finished boom and elements for highest levels of accuracy



Azimuth Plot 50MHz in free space



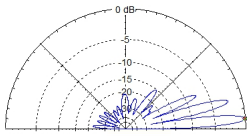
Azimuth Plot 70MHz in free space



Elevation Plot 50MHz (12m above ground including ground gain)

20e1 50MHz & 70MHz Dual Band DX Yagi

2D Plot: 20 el dualband 6 & 4 mtrs Yagi

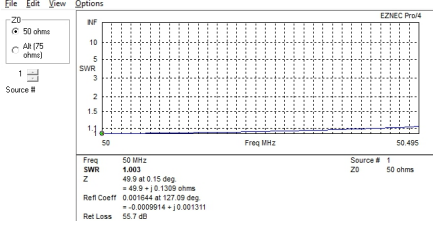


70.2 MHz

Elevation Plot	0.0 deg	Cursor Elev	4.9 deg
Azimuth Angle	0.0 deg	Gain	20.12 dBi
Outer Ring	20.12 dBi		0.0 dBmax
Gain Max Gain	20.12 dBi @ Elev Angle = 4.9 deg		
Beamwidth	5.0 deg @ 3dB @ 2.5 7.5 deg		
Sidelobe Gain	17.98 dBi @ Elev Angle = 15.1 deg		
Front/Sidelobe	2.14 dB		

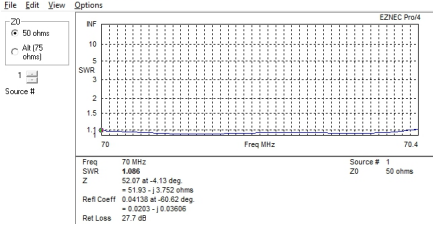
Elevation Plot 70MHz (12m above ground including ground gain)

SWR Plot: 20 el dualband 6 & 4 mtrs Yagi



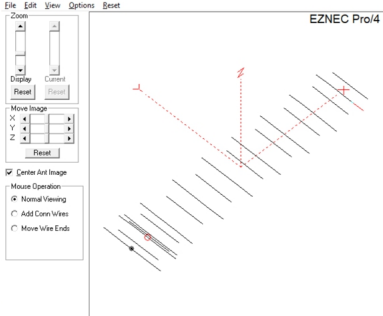
SWR 50MHz

SWR Plot: 20 el dualband 6 & 4 mtrs Yagi



SWR 70MHz

View Antenna: 20 el dualband 6 & 4 mtrs Yagi



The 4-6-20 element layout



Installed at EA5GF and nested between HF and 2m Yagis

Manufactured the right way, not the cheapest way!

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