

A Wideband 21MHz OP-DES Yagi

## 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](http://www.dxengineering.com) - [www.wimo.com](http://www.wimo.com)

### A 5 element wideband 21MHz OP-DES (Opposing Phase Driven Element System) Yagi

The OP-DES is the newest in patent technology produced by InnovAntennas and is specifically designed for maximum performance, wide-band HF applications. Read more about the [OP-DES Yagi Here](#). InnovAntennas use the latest in [Electromagnetic Design Technology](#) to ensure the very best results and the OP-DES Yagi is proof of that!

This antenna has a flat SWR curve covering 21.000 - 21.450MHz at 1.1:1 SWR.

### Performance

**Gain:** 10.17dBi @ 21.250MHz

**F/B:** 19.42dB @ 21.250MHz

**Peak Gain:** 10.23dBi

**Gain at 15m above Ground:** 15.29dBi

**Peak F/B:** 20.02dB

**Power Rating:** 5kw

**SWR:** Below 1.1:1 from 21.000MHz to 21.450MHz

**Boom Length:** 8.5m

**Stacking Distance:** 7.5 - 11.5m ( 10m recommended)

**2 Stacked Gain @ 10m spacing:** 12.95dBi/19.42dB

**2 Stacked F/B:** 26.87dB

**2 Stacked Gain @ 10m Spacing 15m above ground:** 17.76dBi

**Weight:** 12.74KG / 28.1LB

**Turning Radius:** 5.494m / 18ft

**Wind Loading:** 0.53 Square Metres / 5.67 Square feet

**Wind Survival:** 164KPH / 102MPH - **A 125MPH (HD) version of this antenna available upon request**

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

**Specification**

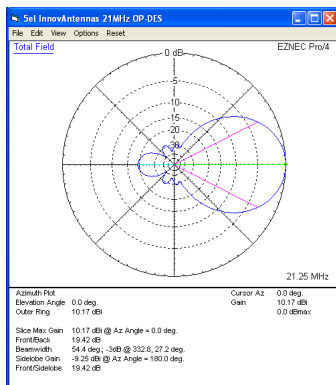
This antenna is made 3/4 inch (19.05mm) element sections in the centre of each element, followed by 5/8 inch (15.88mm) and 1/2 inch (12.7mm) outer elements with the OP-DES end sections 3/8 inch (9.525mm). The antenna has fully insulated elements which will ensure continuous, high performance for many years to come. Boom to mast brackets are included with all antennas which will support 2 inch (50mm) masts. Boom is 1.5 inch square 16SWG aluminum.

**OTHER TAPER SCHEDULES ARE AVAILABLE FOR THIS ANTENNA, CALL OR EMAIL FOR DETAILS**

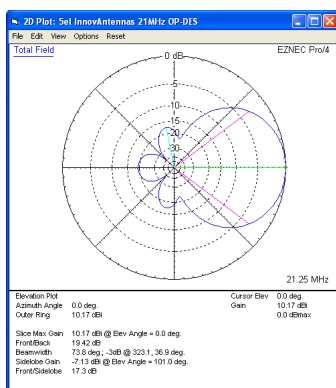
Our antennas are constructed with the best quality materials in order that the best mechanical construction can be achieved, not the cheapest and most profitable! Even a digital caliper is used (with an accuracy of .01mm) to measure the elements during production to ensure they are within 0.2mm of what they should be, this ensures 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

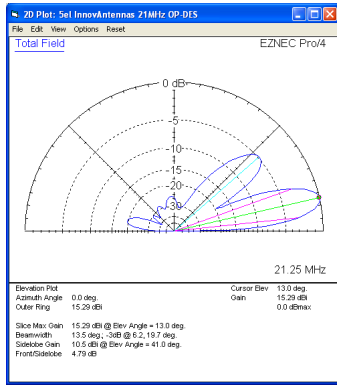


**Azimuth Plot**

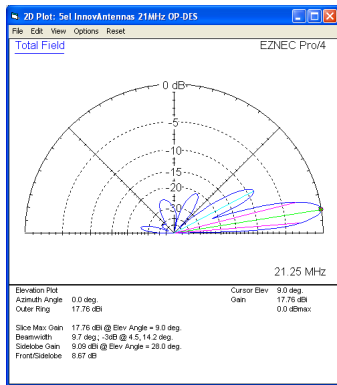


**Elevation Plot**

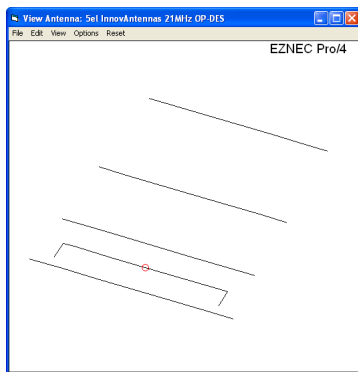
**21MHz Yagis (All): 5 element 21MHz OP-DES Yagi (8.5m)**



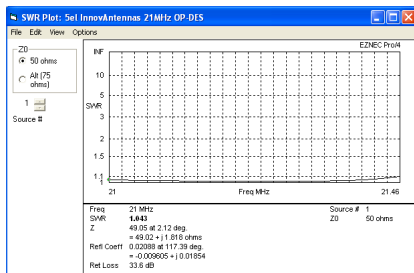
**Single 5 element OP-DES up 15m above ground**



**2 x 5el OP-DES Yagi 10m apart with the bottom antenna 15m above ground**



**The 5el 21MHz OP-DES Element Layout - how the OP-DES Yagi looks**



**SWR**

**Manufactured the right way, not the cheapest way!**

\* where possible marine grade stainless steel components are used.  
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