



Best Yagi for 50MHz DX - A super low-noise 7el WOS 50MHz LFA Yagi by G0KSC



## 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)

The 7LFA2WOS was originally designed for G3WOS - 2023 update

The G0KSC LFA Yagi is a major step forward in the development of the Yagi Antenna; **it provides a low-noise front-end for your radio so you hear more weak signals.** This 7 element 50Mhz LFA2 is another exciting slant on the LFA design with both the last third of both the reflector and first director elements being bent towards the driver loop in order to enhance performance. Incredible levels of F/B have been achieved providing the ultimate in rear-end suppression.

This antenna has very highly suppressed lobes in both azimuth and elevation plots and therefore is idea for very noisy city locations. If you want to beat the noise in a mid-sized 6m antenna, this is the one for you!



A single 7el 50MHz WOS in use at VP8EME reflecting signals off of the Moon

One of our customers in Canada sent this comparison video switching between his conventionally optimised 7el 50MHz Yagi and our 7el WOS which were at the same height but separate towers.

## Performance

12.90dBi @ 50.150MHz

30.74dB @ 50.150MHz

**Peak Gain:** 12.96dBi

**Peak F/B:** 33.75dB

**Power Rating:** 5kw

**SWR:** Below 1.1:1 from 50.00MHz to 50.450MHz

**Stacking Distance:** 5.5 -7.5m ( 6.8m recommended)

**2 Stacked Gain @ 6.8m spacing:** 15.75dBi

**2 Stacked F/B:** 37.83dB

**2 Stacked Gain @ 6.8m Spacing 10m above ground:** 20.72dBi

**Boom Length:** 9.5m

**Weight:** 15Kg / 33LB

**Turning Radius:** 4.974m / 16.3ft

**Wind Loading:** 0.36 Square Metres / 3.93 Square feet

**Wind Survival:**176KPH / 110MPH

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

#### Specification

This antenna is made with tapered elements 16mm centres and 13mm outer sections. 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 2" (50mm) aluminum in the centre, tapering to 40mm with a 45mm section, all with 2mm booms. **A boom guy system is provided with this antenna.**

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, 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**

When new transceivers are released by manufacturers, they are often sent to Peter Hart, G3SJX for review who's findings grace the pages of Radcom magazine. Peter purchased a 7el 50MHz WOS. Pictures of this installation are below along with some extracts of his notes to us in an Email.

" **The quality of the hardware is excellent.** It all fits together very well and the parts are all **accurately machined** to allow this. "

"I have had a few QSOs around Europe so far, nothing very distant yet. The main lobe is very clean, front to side and back are very well suppressed and I get the impression that the low noise claim is well deserved, but I don't have a separate antenna for comparison."



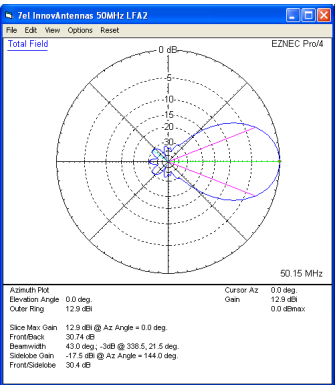
The 7el WOS installed are G2SJX



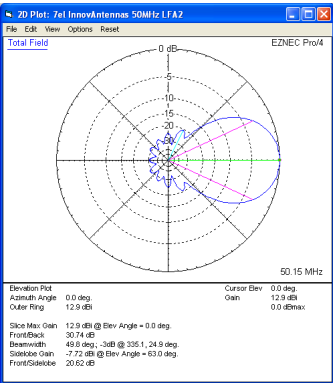
Another photo of the G3SJX installation



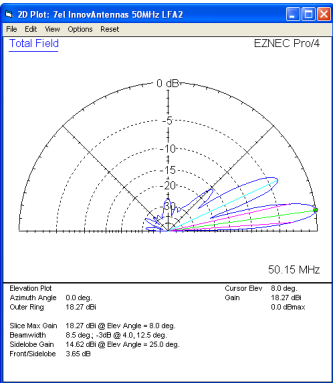
A 6 x 7el 50MHz WOS vertical stack at W7EL



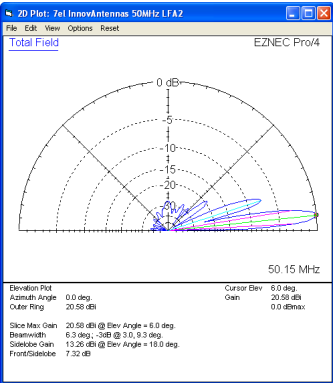
Azimuth Plot



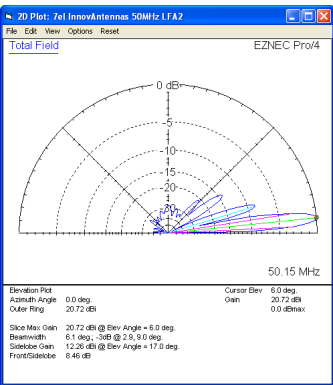
Elevation Plot



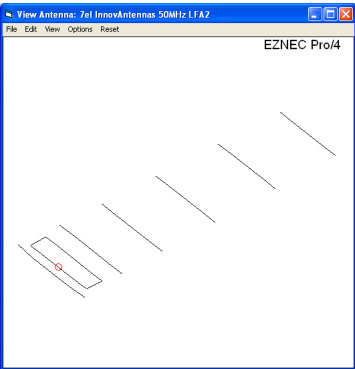
Single 7 element LFA2 up 10m above ground



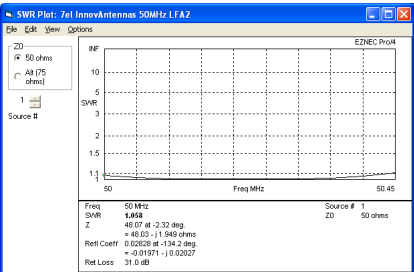
2 x 7 el LFA Yagi 6m apart with the bottom antenna 10m above ground



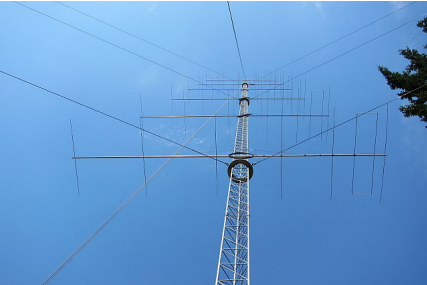
2 x 7 el LFA Yagi 6.8m apart with the bottom antenna 10m above ground



The 7el LFA2 element layout



SWR



6 x 7el 50MHz WOS LFA2s at W7EW

Manufactured the right way, not the cheapest way!  
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