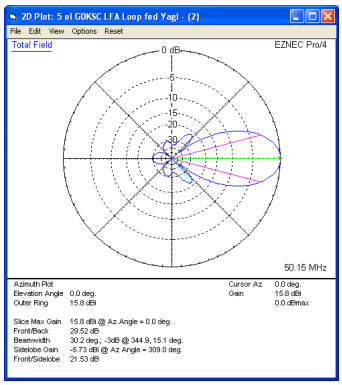


Sales price £599.95

Sales price without tax £499.96
Tax amount £99.99

10 element (5H/5V) X-polarised LFA Yagi optimised for K1JT's MAP65 software & other EME applications. Stacked pair or box of 4 will work great off the moon & also extraordinarily well on down-to-earth modes such as F2, Es & TEP. Matching H-Frame available

Description

Prices 20% less for customers outside of EU

A 5 element Crossed (X-POL) LFA Yagi (10el total) for EME and MAP65 Applications

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 compact 5el X-POL is just 4.5m long and provides both Vertical and horizontal polarization. This Yagi has been optimized for use with K1JT's MAP65 software and other EME applications and we have developed a matching non-conductive H-frame for use with it (see H-frame section on this Website for further info). A single, stacked pair or box of 4 of these Yagis will work great off the moon and also perform extraordinarily well on ionospheric modes such as F2, Es and TEP.

IMPORTANT NOTES: Despite what you may see from other manufacturers, it is not best practice to have any part of the vertical sections of the H frame conductive on an X-POL intended H-Frame. Pattern distortion WILL occur and this will impede the ability of your system to receive weak signals.

Should you be looking to work via the moon (EME) or just work some serious DX via MS (Meteor Scatter) or just pack a punch! The combining the power of 2 Yagis crossed (X-pol) antennas in one setup carries with it a lot of benefits especially when reflecting signals from the moon. MAP65 is a digital mode that allows the reception in both plane vertical and horizontal (and in between!) at the same time. Below are a few words of the MAP65 protocol inventor, Joe Taylor K1JT which best explains how it works and why:

'MAP65 measures the polarization angle of each received JT65 signal. This measurement is not simply "H is better" or "V is better", but rather "pol = 37 deg", or whatever.

Then, if the decoded message contains a grid locator (which it normally does), the program can calculate the correct Tx polarization angle. If this angle is greater than 45 and less than 135, the program recommends that you transmit V; otherwise, H.

In summary: with MAP65 you match the polarization angle of received signals exactly. On transmit, you select H (0 deg) or V (90 deg), whichever will produce the better signal for fixed linear polarization angle at the other end.

Because we mostly use Az-El antenna mounts and measure polarization angles relative to the local horizon, polarization shifts in EME have contributions from both geometric and Faraday causes. See, for example, the discussion surrounding Figure 30.68 on page 30.36 of http://physics.princeton.edu/pulsar/K1JT/Hbk_2010_Ch30_EME.pdf .

-- Joe, K1JT'

Antenna Performance

Gain: 10.63dBi @ 50.150MHz

F/B: 29.52dB @ 50.150MHz

Peak Gain: 10.68dBi

Peak F/B: 30.02dB

Power Rating: 5kw

SWR: Below 1.1:1 from 50.00MHz to 50.700MHz

Stacking Distance: 3.9-5.1m (4.70m recommended)

2 Stacked Gain @ 4.70m spacing: 13.45dBi

2 Stacked F/B: 27.53dB

2 Stacked Gain @ 4.70m Spacing 10m above ground: 18.67dBi

Boom Length: 4.354m

Weight: 9.73Kg / 21LB

Turning Radius: 2.667m / 8.78ft

Wind Loading: 0.30 Square Metres / 3.26 Square feet

Wind Survival: 160KPH+ / 100MPH+

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

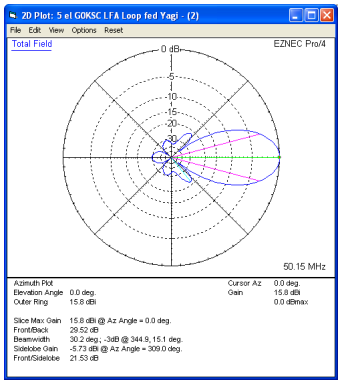
Specification

This antenna is made 1/2 inch (12.7mm) center elements and 3/8 inch (9.525mm) outer elements. 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 1.25 inch square 16SWG aluminum.

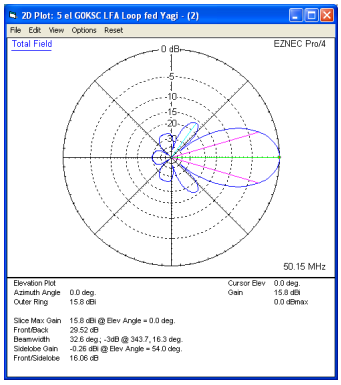
Our antennas are constructed with the best quality materials in order the best mechanical construction can be achieved, not the cheapest and most profitable! Even a digital caliper is used (with an accuracy of .01mm) to measure the elements during production to ensure they are within 0.2mm of what they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

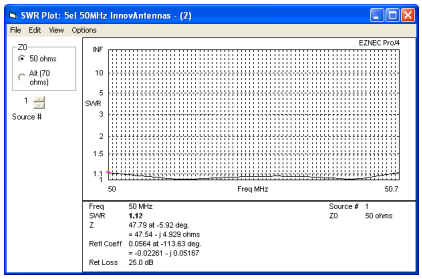
- **Marine grade Stainless Steel Fittings**
- **Original Stauff Insulation clamps**
- **Mill finished boom and elements for highest levels of accuracy**



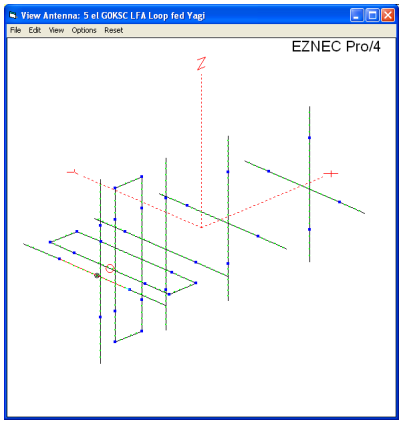
4 x antenna in H frame Azimuth Plot in one plane (swapped in reverse polarization)



4 x antenna in H frame Elevation Plot in one plane (swapped in reverse polarization)



SWR



Manufactured the right way, not the cheapest way!
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