



XR3 - 6 element 3 band HF Yagi (20/15/10) with 3.1m boom



## 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 XR3C MkII - A 6 element HF tri-bander Super-compact Yagi covering 20m/15m/10m bands with a single feed point**

Introducing the XR3C, a space-efficient variant of the acclaimed XR3 antenna, tailored for enthusiasts with limited installation space. The XR3C retains the powerful capabilities of the original XR3 but with a notable innovation: a capacity-loaded 20m element. This advanced design significantly reduces the overall width from just over 11 metres to just under 9 metres, making it an ideal solution for users with space constraints.

Despite its more compact size, the XR3C maintains exceptional performance. The use of capacity hats, recognised as the most efficient loading method for Yagi antennas, ensures that radiation efficiency remains within a few percentage points of the original XR3. This means that users of the XR3C can expect similar high performance in a more space-friendly design.

The XR3C is perfect for those who require a multiband Yagi antenna but have limited space to install it. With its reduced width and minimal impact on efficiency, the XR3C stands as a testament to InnovAntennas' commitment to providing versatile and powerful antenna solutions for all amateur radio enthusiasts.



The full sized and super-compact XR3C @ GM0OPX

The XR3 MkII - The InnovAntennas XR3 MkII - A 6 element multi-band 20m, 15m, 10m Super-compact Yagi with a single feed point.

Capacity Loading high efficiency loading

The XR3C uses capacity hats to reduce the width of the 20m elements which is the most efficient method of loading. Additionally, width has not been reduced more than 23% of the original radiator length, after this point radiating efficiency drops drastically. The XR3C radiates more of your power!

### Unique in the Market

The XR3C MkII provides 3 HF bands of 20/15/10 to match today's HF rigs and give excellent performance on all bands. With a boom of just 3.1m and weighing 30 Kilos, this antenna has created its own place in the 'full size' HF Beam market.

### Unlimited Power Handling

The XR3C MkII has no matching devices, no traps, no coils, no hairpins so nothing to lose valuable power and thus, nothing to over-heat through these inefficient devices. This means the only power limitation you have is how much power your coax cable can handle.

### The Ideal partner for SDR Radios

The XR3C MkII is an ideal partner for today's top SDR radios. There is no limitation in how many bands you can monitor or use at once. This means with products such as the Flex 6700, all 6 bands can be monitored at the same time **WITHOUT COMPROMISE**.

### Improved Performance

The XR3C MkII has been in development for the last 12 months improving bandwidth and gain to ensure more of each band than ever before can be used without the requirement of an ATU.

### Multi-band, Performance-Busting Design

The more bands there are added to a multi-band Yagi, the more interlaced elements there are and in turn, performance per band drops with each no band added. The Unique design of the XR3C MkII means no more than 3 band are interlaced on any part of the boom.

### Increased Rigidity

We have modified the construction of the XR3C MkII to provide a more rigid look with faster taper to ensure fatigue due to vortex shedding (constant wind flow causing vibration) are not an issue. 20m element start at 35mm diameter and boom is 50mm diameter.

### Excellent All-Weather handling and reliability

With no moving parts and being modelled for wide bandwidth per band, the XR3C MkII is very forgiving in all weathers allowing you to enjoy your hobby whatever the location or time of year.

### Maintenance Free

**Icom North America** and **Kenwood UK** changed their HF antennas to 'XR's' to ensure reliability and remove the need for maintenance. If you don't want to be climbing the tower each year to fix stuff, the XR3C MkII is for you.

### The Right Materials for the Job

The XR4 MkII standing on its own in terms of quality. Built using the latest CNC technology, all components are at the top of their field too. Our insulators are UV protected and handle -170 to +240 degrees C, our hardware is Marine Grade Stainless Steel and our aluminium aerospace grade T6 6066/6082.

### Technical Specification

**Turning Radius:** 15.2' / 4.62m

**Boom Length:** 10'3" / 3.1m

**Projected area:** 11.56 SqFt / 1.05SqMtr

**Average Gain per band @ 20m above average ground:** 11.24dBi

**Power Rating:** 10kw+

**Boom Length:** 3.1 Metres

**Weight:** 30Kg

**Wind Loading:** 1.2 Square Metres

**Wind Survival:** up to 175KPH / 115MPH

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

**Stacking Distance:** 7 - 12m ( 11m recommended)

## Specification

The boom is made from 50mm diameter square tube with a wall thickness of 2mm and thus is super-rigid. The largest diameter elements are the 20m elements which are 35mm diameter in the centre (with 2mm wall) tapering quickly to 13mm. Marine grade stainless steel is used throughout our antennas, no guying or boom truss is needed 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!

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**

## Customer Comments:

*"First major impression what an awesome construction this antenna is the best I have ever had the pleasure and experience to assemble.*

*Construction wise its bomb proof, I don't mean that literally but that's what I thought.*

*First up I doubted as to whether 2 elements would compete with the 3 element trapped Yagi.*

*Boy was I so wrong the XR3C is awesome my signal reports are so far in excess of the 3 Element Yagi ever were.*

*Yes its early days yet, more feed back will follow plus pictures when I get time.*

*My main consideration about the XR3C was its dimensions.*

*But when you put cap hats on the 20 meter band it reduces the longest element length down to 29 feet.*

*Compare that to my trapped Yagi which the longest element is 27 feet.*

*And as amateurs we all well know traps are very lossy.*

*One final point on what I have found is the front to back is far in excess of what Justin's spec says minus 4 and a bit S points down.*

*And that check has been carried out on both 15 & 20 meters with quite a lot of stations.*

*Also I got a report from USA 5 9 + using 10 watts wow.*

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