

Multiband HF Yagi XR7C - The most compact, highly efficient Ham Yagi available today - InnovAntennas XR7C 3.6m long, 8.8m wide



# **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

#### COMPACT VERSION OF THIS ANTENNA XR6C with CAPACITY LOADED 20M ELEMENTS ONLY 8.8M / 29' WIDE!

The XR7 - The InnovAntennas XR7C - An 14 element multi-band HF, 6m & 4m Super-compact Yagi covering 20m/17m/15m/12m/10m/6m/4m bands with a single feed point.

Discover the XR7, the world's shortest 7 Band Yagi antenna, a marvel in compact design and efficiency from InnovAntennas. At just 3.6 metres in length, the XR7 is approximately 30% more compact than most of its counterparts, offering a significant space advantage without compromising on performance. This antenna seamlessly covers the 20m, 17m, 15m, 12m, 10m, 6m, and 4m bands, all with a single feedline, making it a superb choice for ham radio operators with limited space.

The XR7's full-sized elements on all bands, a feature not commonly found in compact versions like the 'C' models, contribute to its class-leading radiating efficiency. By eliminating coils, matching devices, and other impedance-transforming components, the XR7 avoids additional loss, maintaining a exceptional radiating efficiency.

Additionally, the unique design of having only three bands interlaced at any one point brings the XR7's performance remarkably close to that of a monoband Yagi. This design, coupled with closer-spaced antenna elements, not only shortens the antenna but also enhances its stability, especially in adverse weather conditions.

For those who need an even more space-efficient design, the XR7C features capacity-loaded 20m elements. This design approach, which uses highly efficient capacity loading, further reduces the antenna's width (11m to 9m) while maintaining excellent performance, offering an ideal solution for extremely limited spaces.

Moreover, the XR7's rugged build, characterised by large diameter tubing, is engineered to withstand harsh environmental challenges. This robust construction ensures the antenna can endure high winds and the additional weight from snow and ice coverage, offering reliability and durability in any condition.

The XR7 stands as a testament to InnovAntennas' commitment to delivering high-quality, efficient, and space-conscious antenna solutions for amateur radio enthusiasts.

### Capacity Loading high efficiency loading

The XR7C 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 XR7C radiates more of your power!

## Unique in the Market

The XR7C has been given the 6m and 4m bands in addition to the traditional 5 HF bands of 20/17/15/12/10 to match today's HF rigs and give excellent performance on all bands. with a boom of just 3.6m and weighing under 32 Kilos, this antenna has created its own place in the 'full size' HF Beam market.

1 / 4

### **Unlimited Power Handling**

The XR7C has no matching devices, no traps, no coils, no hairpins so nothing to lose valueable 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 XR7C 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 XR7C 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.

### Multiband, 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 XR7 means no more than 3 band are interlaced on any part of the boom.

#### **Increased Rigidity**

We have modified the construction of the XR7C 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 XR7C is very forgiving in all weathers allowing you to enjoy your hobby whatever the location or time of year.

#### **Maintainance 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 XR7C is for you.

### The Right Materials for the Job

The XR7C standing on it's 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:**

Power Handling: 10KW+

Weight: 33 kilos

Turning Radius: 4.88m

Boom Length: 11'8" / 3.5m

Projected area: 12.56 SqFt /1.167SqMtr

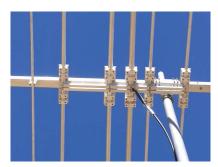
Wind Survival: 107Mph / 172Kph

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

2 / 4



A European version of the XR6C (Compact) installed at GI0TSS



Close-up of the feed arrangement on the XR6 MkII with straight, parallel lines



The XR6 MkII side view showing the short (3.5m) boom



View of the 50mm (2") Square boom and element holders on the rear of the antenna  $\,$ 

3 / 4



XR6 Mk1 version, installed at 9J2MM

Contact us to discuss your system/station requirements for a FREE CONSULTATION! //