

ZFX3000 ANTENNA USER MANUAL

ZFX3000 PRODUCT DETAILS

- High performance vertical wire antenna for portable operation. Length is approx. 6.5 m.
- For the 15m, 12m, 11m and 10m bands.
- No SWR-tuning when setting up the antenna or changing bands, suitable for military broadband systems.
- No additional counterpoise system required.
- Fits in your pocket, weighs under 200 g.
- Connector for PL259-style coaxial cable.
- Use any glass fibre mast longer than 8 m for vertical support, recommended is DX-WIRE® MINI 10M.
- Very low elevation angle due to downtilt design, $5/8 \lambda$ for 11m/10m bands, $1/2 \lambda$ for 15m/12m bands.
- Tested with 100 W and 100% duty cycle.



Package contains radiator element and feed-point unit (FPU). Both should be detached for transport.

SETTING-UP INSTRUCTIONS

- Carefully untangle radiator element to the ground. Do not kink the antenna wire.
- Lock top section of glass fibre mast and fix the mast to its vertical support, i.e. a fence post.
- Prior to mounting the radiator element, move all white retaining rings to the top of radiator element.
- Insert mast top section through all white retaining rings into the tip fixture at the top of radiator element.
- Telescope mast upwards and lock sections. The white retaining rings should slide down to their positions.
- Wrap radiator element approx. 2 times around the mast to avoid separation from it.
- Connect coaxial cable to FPU and fix FPU with Velcro® or similar to mast.

ATTENTION

- Do not use conductive masts, e.g. a carbon fibre mast. Use glass fibre masts. White colour is best.
- Do not use heavy 10 mm antenna cable, e.g. RG213. Use lightweight 5 mm cable, RG58, better Aircell 5®.
- Do not exert pulling force greater 20 N on radiator element. If necessary, use strain relief.

MAINTAINANCE AND INTEGRITY CHECK

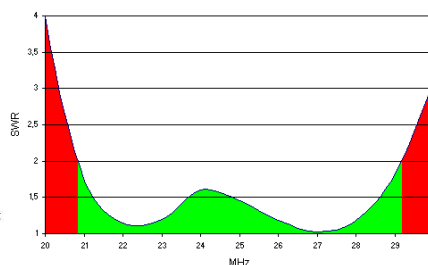
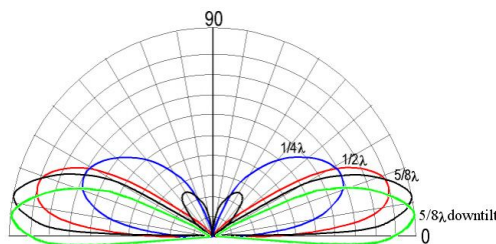
Measure exact length of radiator element and document. If in doubt about antenna integrity, check length.

WHAT MAKES THE ZFX3000 REACH A GREATER DISTANCE?

It's all about a low elevation angle and keeping the power where you need it: close to the ground.

Note that the $5/8\lambda$ downtilt design covers a larger area on the ground than conventional $5/8\lambda$ antennas.

Note also, that the absolute gain of the $5/8\lambda$ downtilt design is the same as with conventional $5/8\lambda$ antennas. Still, due to the lower elevation angle of the $5/8\lambda$ downtilt design, the signal on the ground will be approx. 3 dB stronger, giving you that extra communication distance.



SWR	Power to Antenna [%]	Range [%]
1,0	100,0	100,0
1,1	99,8	99,9
1,3	98,3	99,1
1,5	96,0	98,0
1,7	93,3	96,6
2	88,9	94,3
3	75,0	86,6
4	64,0	80,0
5	55,6	74,5
6	49,0	70,0

Elevation diagram and typical SWR diagram of ZFX3000. Use green SWR area for safe operation.