

# Rugged Wideband DF Antenna

1 – 6000 MHz

Product Code: DF-A0088

VERSION: 1.8

## SPECIFICATIONS:

<b>Electrical:</b>	
Frequency range	1 – 6000 MHz
Polarisation	Vertical
Electrically Hardened	200V/m E-field Survivability
<b>DF:</b>	
DF type	Correlative interferometer
Frequency bands	A: 1 – 90 MHz <sup>*1</sup> B: 30 – 1000 MHz <sup>*1</sup> C: 1000 – 3600 MHz D: 3000 – 6000 MHz
DF accuracy in azimuth	A: 2° RMS <sup>*2</sup> B: 2° RMS <sup>*2</sup> C: 2° RMS <sup>*2</sup> D: 3° RMS <sup>*2</sup>
Elevation coverage	-7° to +7° (full accuracy) -15° to +15° (reduced accuracy)
<b>Monitoring:</b>	
Frequency bands	A: 1 – 60 MHz B: 50 – 500 MHz C: 500 – 6000 MHz
Monitoring antenna types	A: Whip on top of antenna B: Combined 5 dipoles C: Bi-conical antenna
<b>Other internal features:</b>	
GPS antenna	Active L1 patch antenna
<b>Mechanical:</b>	
Dimensions (h x d)	Approx. 2000 mm x 1100 mm incl whip
Mass	Approx. 85 kg
Colour	Grey, others on request

**Notes:**

1) Optimum A-B change-over is above 30 MHz, to be determined by user.

2) DF accuracy when calibrated, on a test range. Operational accuracy will be lower, depending on platform and range effects.

## PRODUCT FEATURES:

- Full-band correlative interferometer
- HF capability
- Wideband dedicated omni capability
- Rugged construction
- GPS Antenna
- 200 V/m E-field survivability

## APPLICATIONS:

- Marine DF
- Wideband monitoring

## RELATED PRODUCTS:

- DF-A0037: Marine DF antenna, 1 to 3600 MHz
- DF-A0095: Portable DF antenna, 1 to 6000 MHz
- DF-A0226: 1 MHz to 6000 MHz Band Switch
- MISC-A0063: Isolating mounting mast for DF-A0088



## PRODUCT DESCRIPTION:

The DF-A0088 is a wideband DF antenna suitable for rugged applications. Based on the more portable DF-A0095 product, the rugged version features an upgraded electrical, mechanical and environmental design for marine use.

The antenna has a redesigned loop array for good DF performance at low frequencies where the phase size of the array is small and three pentagonal dipole-based arrays for the higher frequency ranges.

The monitoring function is provided by means of a removable whip antenna for the 1 MHz to 60 MHz band, a pentagonal dipole-array for the 50 MHz to 500 MHz band and an integrated bi-conical antenna provides the coverage from 500 MHz to 6000 MHz

A decagonal cylindrical cavity inside the antenna, approximately 350 mm wide by 370 mm high, allows switching, amplification and RF processing to be integrated into the antenna, reducing cable loss and weight. The cavity slides open giving access to the RF unit. A suggested switch for integration with the DF-A0088 is the DF-A0226 which is a 1MHz to 6000 MHz 4-Band Switch.

# Rugged Wideband DF Antenna

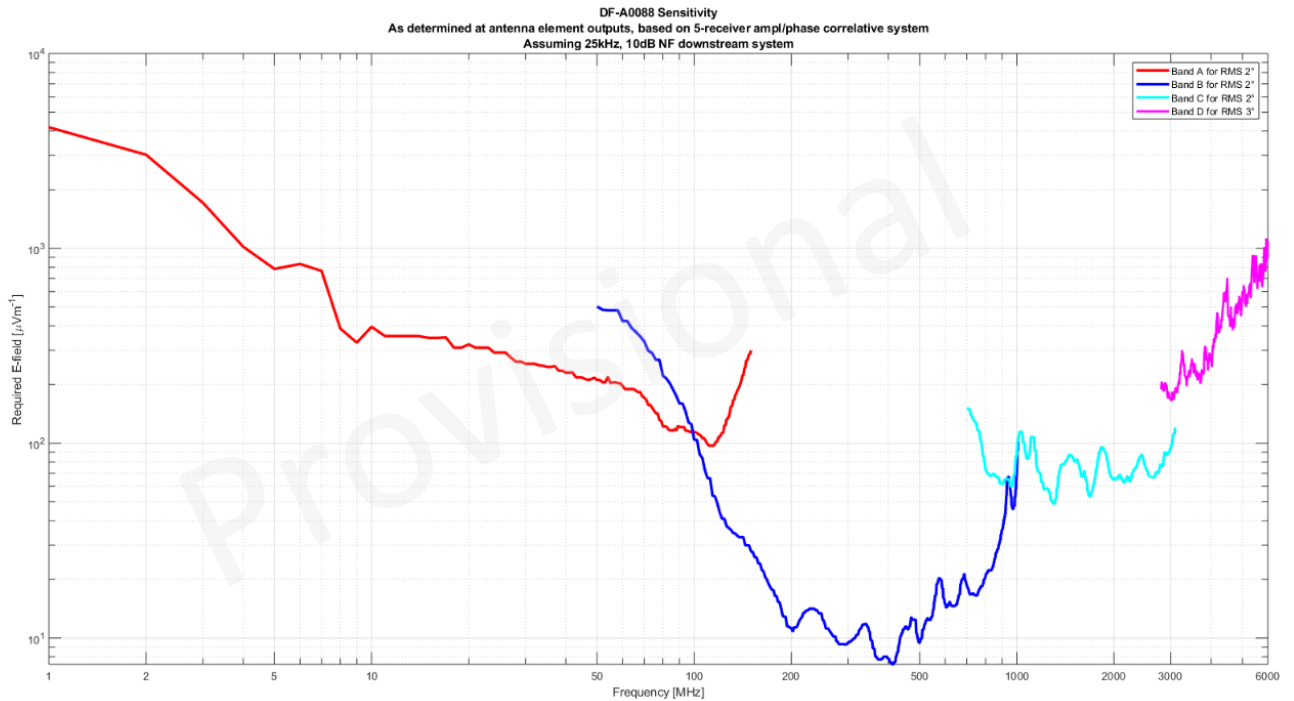
1 – 6000 MHz

Product Code: DF-A0088

VERSION: 1.8

## DF SENSITIVITY:

The following graph shows the predicted DF sensitivity of the antenna over frequency. The assumptions about RMS error are stated next to the lines.



## LIST OF RF OUTPUTS FROM ANTENNA:

The antenna has 27 elements with connectors ending in the antenna cavity.

- 5 Band A loops
- 5 Band B DF elements
- 5 Band C DF elements
- 5 Band D DF elements
- Band A OMNI output
- Band B OMNI output
- Band C OMNI output

