

# Wideband HF Monopole

1 – 30 MHz

Product Code: MONO-A0082

VERSION: 1.1

## SPECIFICATIONS:

<b>Electrical:</b>	
Frequency	1 – 30 MHz
VSWR	< 3:1
Nominal input impedance	50 Ω
Feed power handling	2.5 kW
Efficiency	Typical is above 50% down to 15 MHz, reducing to 10% at 8 MHz, and 1 % at 5 MHz
Directivity	0 dBi (± 0.5 dB) dependent on the groundplane
Connector	N-type bulk-head (female)
<b>Mechanical:</b>	
Dimensions (l x d of base)	6000 mm x 330 mm
Weight	< 29.2 kg
MTBF	30000 hours
<b>Environmental: designed to meet the following specifications</b>	
Wind survival	120 km/h
Temperature (operational)	-40 °C to +70 °C
Shock	40 g's for 10 ms (all axis)
Vibration	MIL-STD-810E (514.5) 2.3.9.b track laying vehicles
Water ingress rating	MIL-STD-820F (506.4)
Max speed of vehicle (antenna operational)	30 km/h
Max speed of vehicle (antenna non-operational)	80 km/h

## PRODUCT DESCRIPTION:

The MONO-A0082 is a wideband dual monopole antenna that covers the frequency range of 1 MHz to 30 MHz at an input power of 2.5 kW.

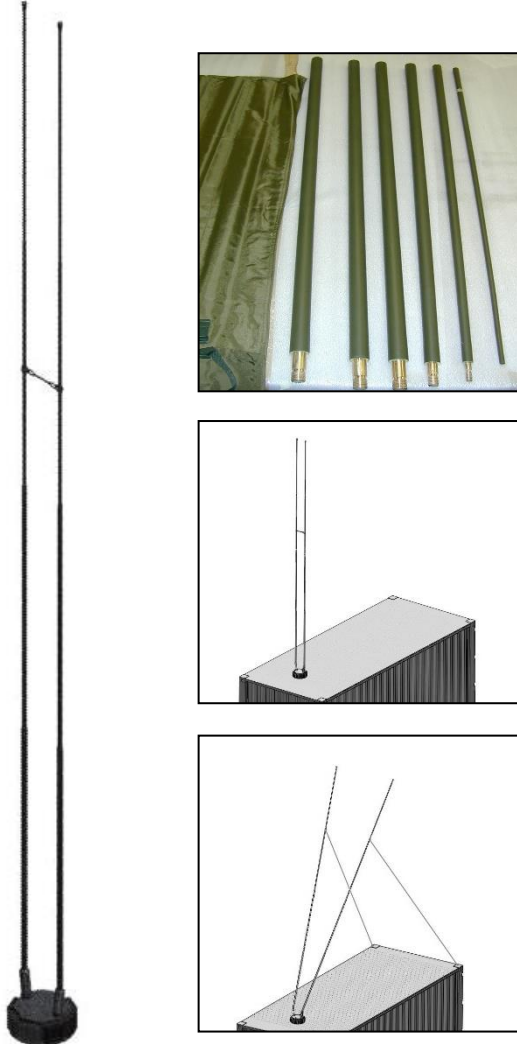
The antenna pattern is essentially omni-directional, making it ideal for wideband high-power applications such as improvised explosive device (IED) suppression.

This antenna has a nice compact footprint when mounted and being relatively light in weight makes it suitable for any rapid deployment applications like vehicles and shelter roof tops where larger antennas would be impractical. The whips can be tied back in a variety of ways to ensure best performance and mobility trade-offs.

The whip sections of the antenna are easily removed from the base and then stored in a canvas bag for easy transportation and storage.

For most applications the base can then remain attached as a fixed low profile installation that also gets a canvas bag to cover it when not in use. This further reduces the assembly time to only a couple of minutes in the field. The assembly mechanism is designed to be highly shock and vibration resistant.

The MONO-A0082 is constructed entirely from corrosion-resistant materials and specified over a wide operating temperature range: -40 °C to + 70 °C (no icing).



## PRODUCT FEATURES:

- Small and light – significantly shorter in length than a full-size dipole for this frequency range
- VSWR better than 3:1 across the entire frequency range.
- No matching unit required, so ideal for wideband and frequency-agile applications

## APPLICATIONS:

- Wideband high-power transmission
- Frequency agile communications
- Spectrum monitoring

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## VSWR AND GAIN:

NOTE: Provided gain data is REALISED gain and **includes** effect of mismatch loss and efficiency

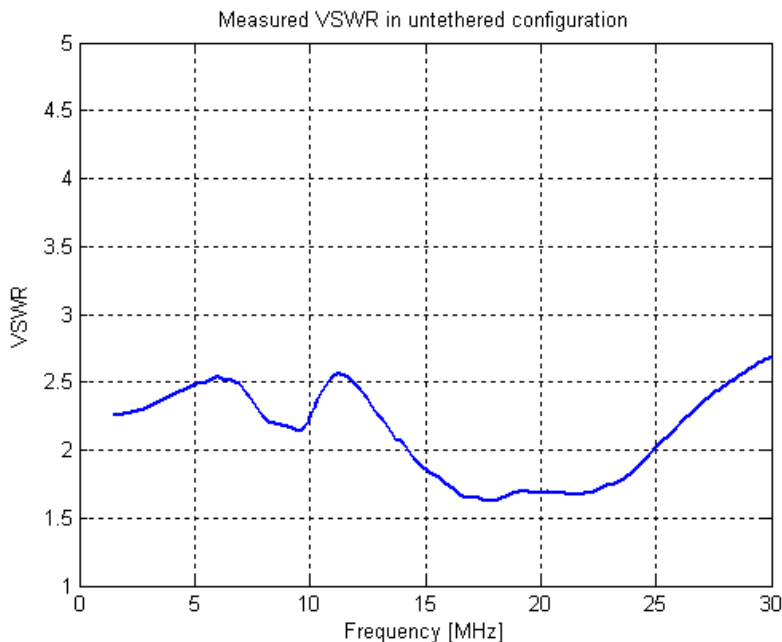


Figure 1: Measured antenna VSWR in untethered configuration

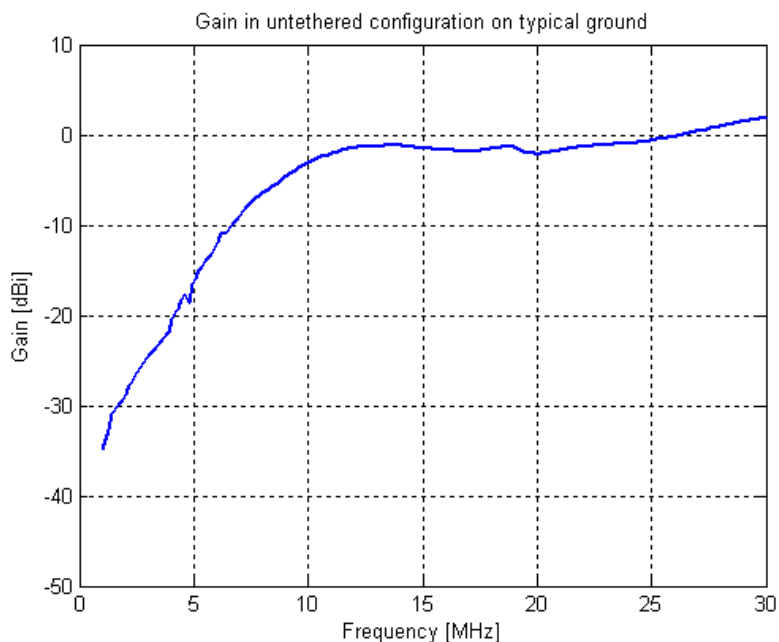


Figure 2: Antenna gain in untethered configuration

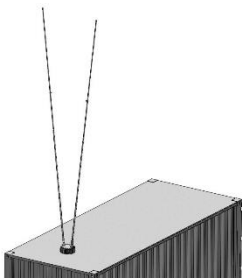
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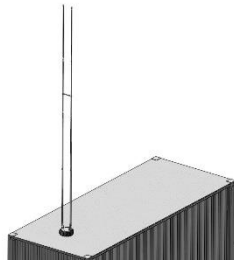
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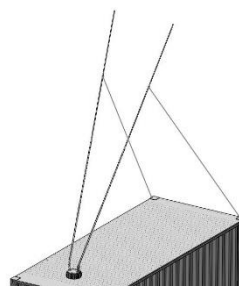
## DEPLOYMENT OPTIONS:



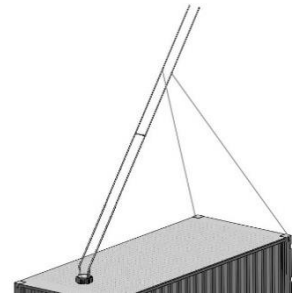
Untethered



Tied together



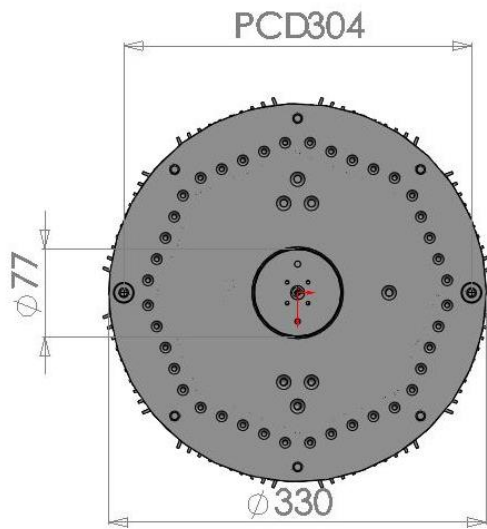
Splayed back



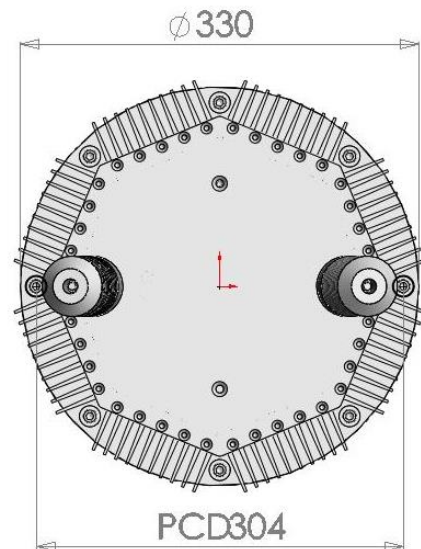
Tied back



## MECHANICAL DRAWINGS:



Outline of base with dimensions



Top view of base with dimensions