

Tunable Wideband HF Monopole

1 – 30 MHz

VERSION: 1.2

Product Code: MONO-A0092

SPECIFICATIONS:

Electrical:	
Frequency	1 – 30 MHz
Sub-band 1	1 – 3 MHz
Sub-band 2	1 – 6 MHz
Sub-band 3	5 – 12 MHz
Sub-band 4	10 – 30 MHz
VSWR	< 3:1
Nominal input impedance	50 Ω
Feed power handling	1000 W
Efficiency	Refer to graph below
Directivity	0 dBi (± 0.5 dB) dependent on the groundplane
Connector	N-type (female)
Mechanical:	
Dimensions (l x d of base)	6000 mm x 330 mm
Weight	< 35 kg
MTBF	30000 hours
Environmental: designed to meet the following specifications	
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-A0092 is a tunable wideband dual monopole antenna that covers the frequency range of 1 MHz to 30 MHz at an input power of 1000 W.

The antenna has 4 selectable sub-bands with gain optimisation per band. Providing significant performance benefit for the compact size.

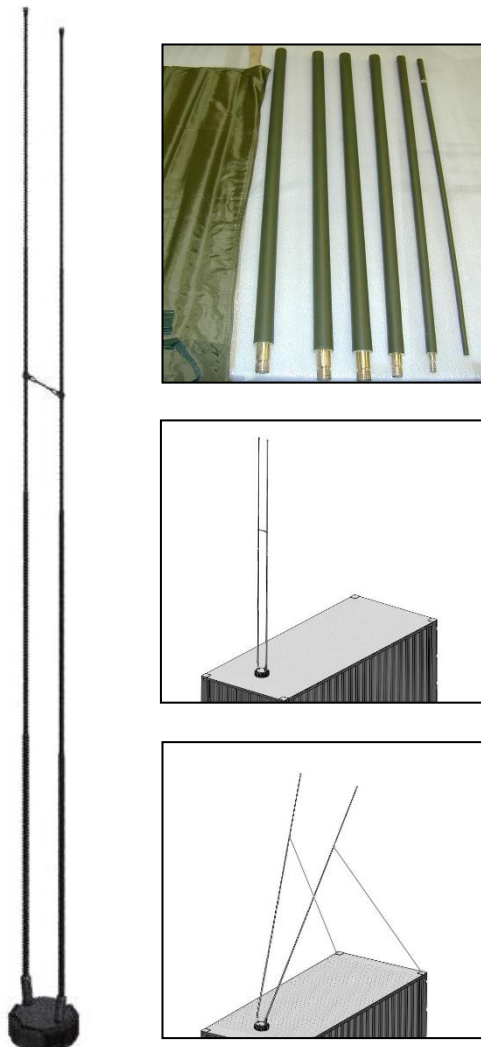
The antenna pattern is essentially omni-directional, making it ideal for wideband high-power applications such as improvised explosive device (IED) suppression.

This antenna has a 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-A0092 is constructed entirely from corrosion-resistant materials and specified over a wide operating temperature range: -40 °C to + 70 °C (no icing).



PRODUCT FEATURES:

- Selectable sub-bands for performance optimisation.
- 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

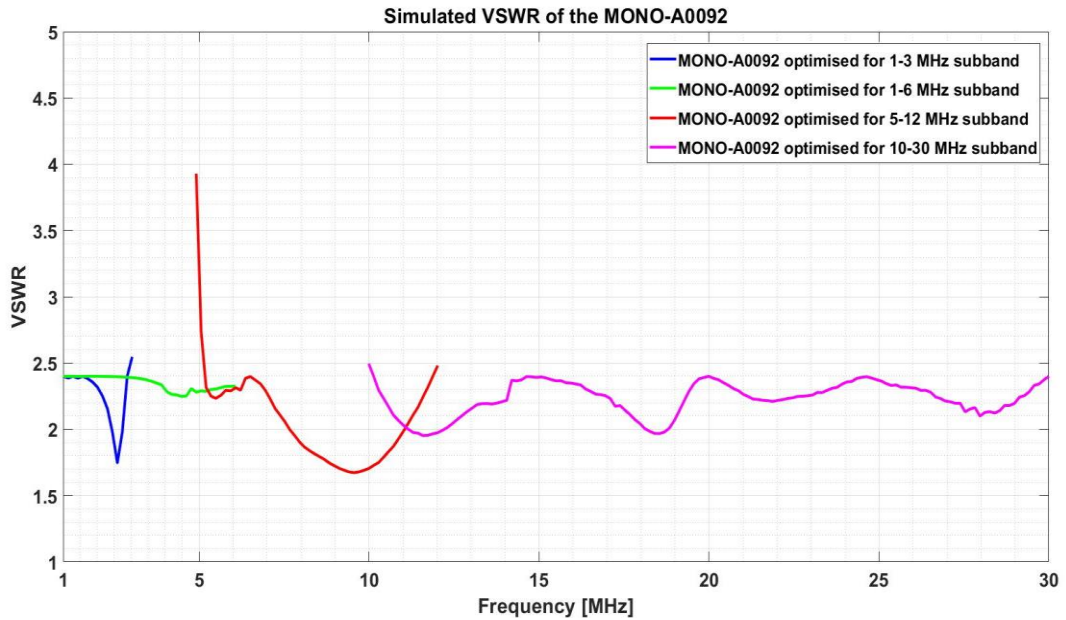


Figure 1: Measured antenna VSWR in untethered configuration

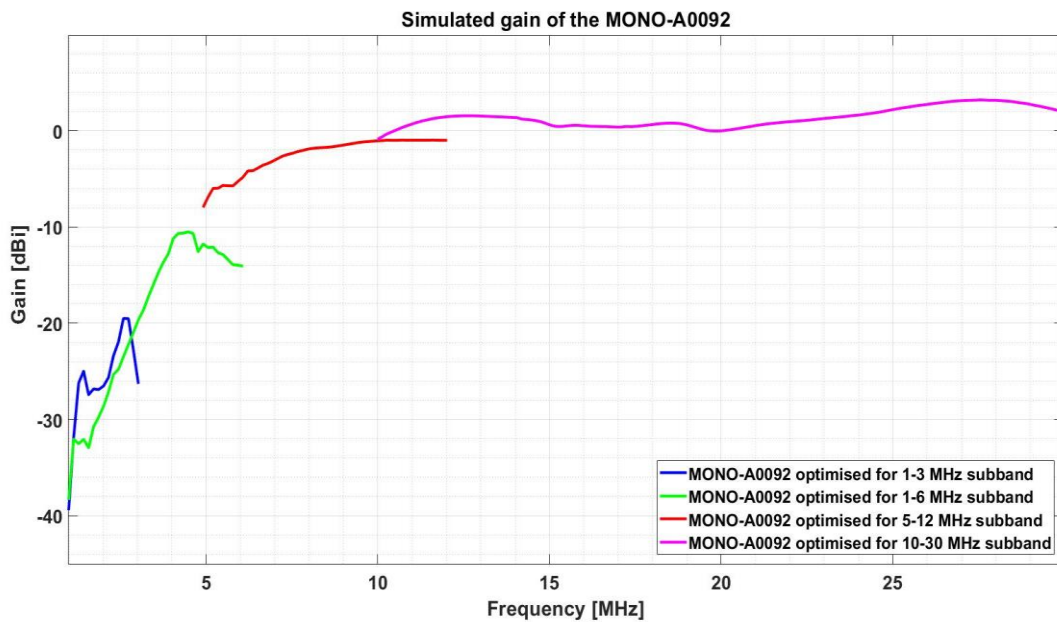


Figure 2: Antenna gain in untethered configuration

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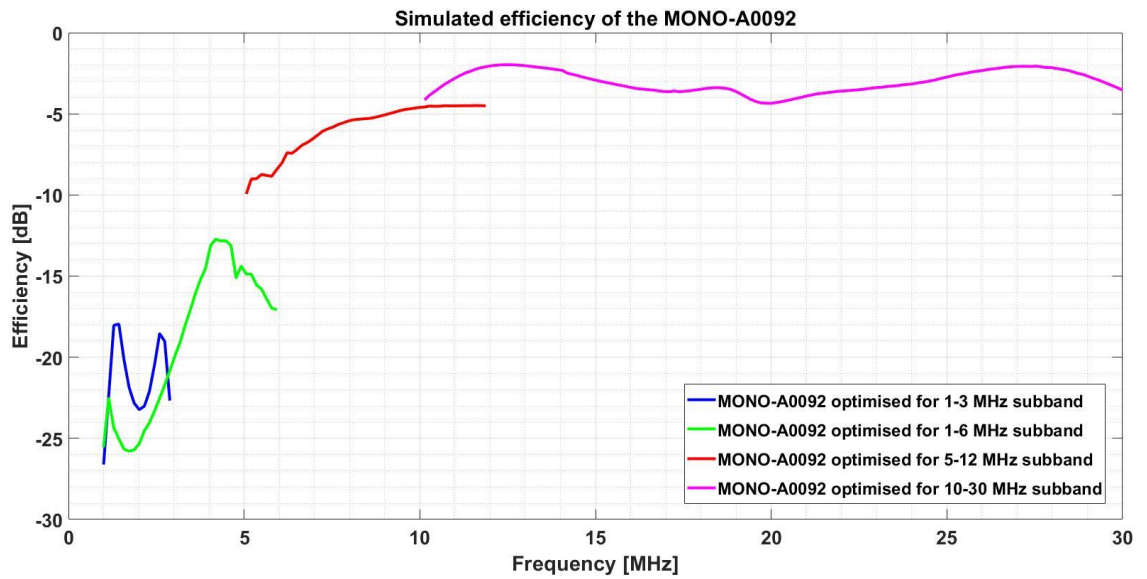
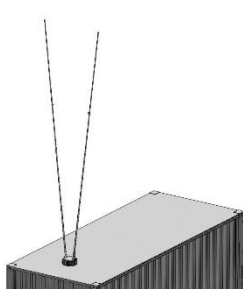
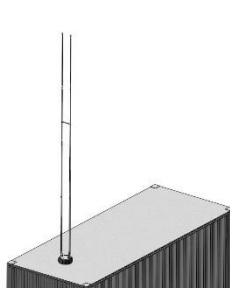


Figure 3: Antenna efficiency in untethered configuration

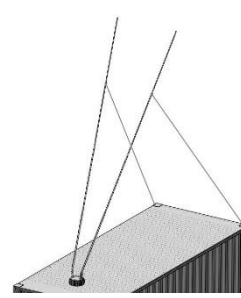
DEPLOYMENT OPTIONS:



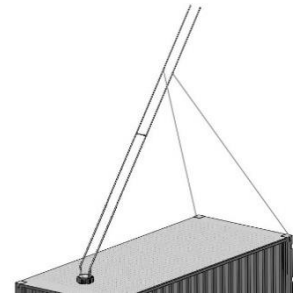
Untethered



Tied together



Splayed back



Tied back

