

Wideband HF High-Power Antenna System

1 – 30 MHz

Product Code: OMNI-A0092

VERSION: 4.1

SPECIFICATIONS:

Electrical:	
Frequency range	1 – 30 MHz
VSWR	< 2.6:1
Nominal input impedance	50 Ω
Connector	N-type female
Feed power handling	1 kW CW
Efficiency	See graph
Polarisation	Linear (vertical / horizontal)
Mechanical:	
Deployed dimensions (ø x l)	5 m x 8 m
Stowed dimensions (l x w x h)	4.2 m x 0.62 m x 0.5 m
Colour	Upon request
Mass	350 kg (antenna) 60 kg (accessories) 550 kg (packaged)
Environmental: designed to meet the following specifications	
Wind survival	120 km/hr (with all guy ropes deployed)
Temperature (operational)	- 30 °C to + 51 °C
Temperature (storage)	- 30 °C to + 71 °C
Vibration (ground transportation when stowed)	MIL-STD-810E method 514.5, cat 1
Water ingress rating	MIL-STD-820F (506.4) IP65 (except enclosure)



PRODUCT FEATURES:

- Automatic deployment of antenna
- High-power handling
- Wideband
- Omni-directional
- Rugged
- Quick deployment time
- Compact packaging

APPLICATIONS:

- Wideband interception
- Non-NVIS HF communications interception
- RCIED suppression

PRODUCT DESCRIPTION:

This is a wideband wire cone monopole antenna that operates over the 1 to 30 MHz band with a VSWR of less than 2.6:1 over the band, with the typical value close to 1.7:1. The antenna gives a superior radiation pattern for HF signal interception and communications.

The antenna deploys from a compact enclosure by means of a combination of a winch mechanism and pneumatic actuation in less than 220 seconds by a team of as few as 2 people. The antenna can be stowed just as quickly.

The antenna is equipped with a sophisticated frequency selective matching unit which provides excellent VSWR characteristics for best possible efficiency across the band and requires no band switching or other matching control. The design has taken into account the worst-case soil-types and so will work for diverse deployments in deserts, urban areas and wetlands.

A groundplane structure of the size of a 20 foot container or larger is suggested for use.

All accessories, such as compressor, winch, guy ropes, matching unit etc. are all included with the product.

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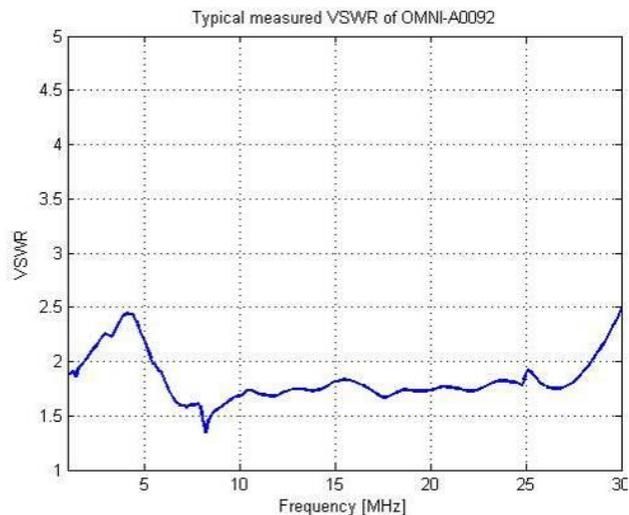
1 – 30 MHz

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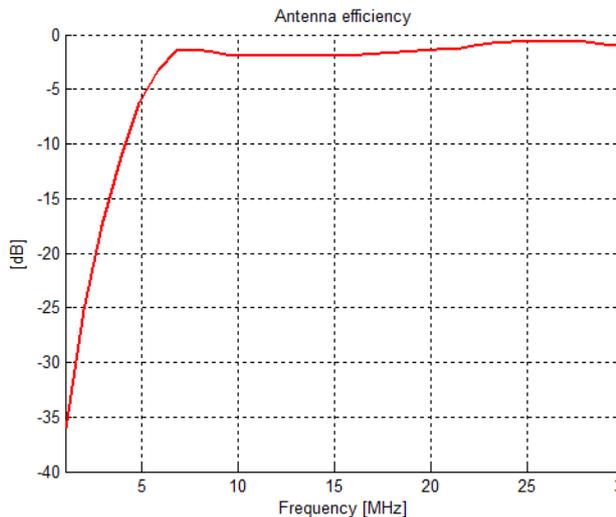
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ELECTRICAL PERFORMANCE GRAPHS:

VSWR:

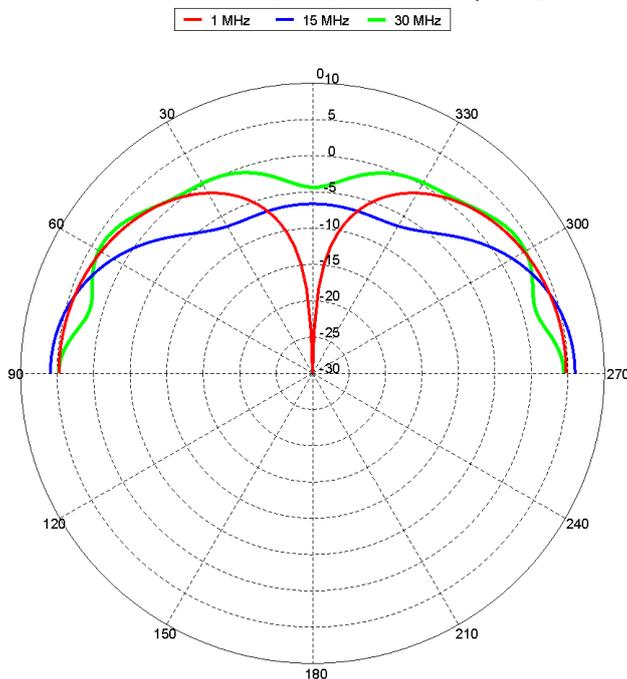


EFFICIENCY:



Patterns:

Simulated elevation gain pattern (infinite ground)*:



1. Infinite conducting ground plane
2. Does not include effects of efficiency (see graph above)
3. Antenna mounted centrally on 40 ft container



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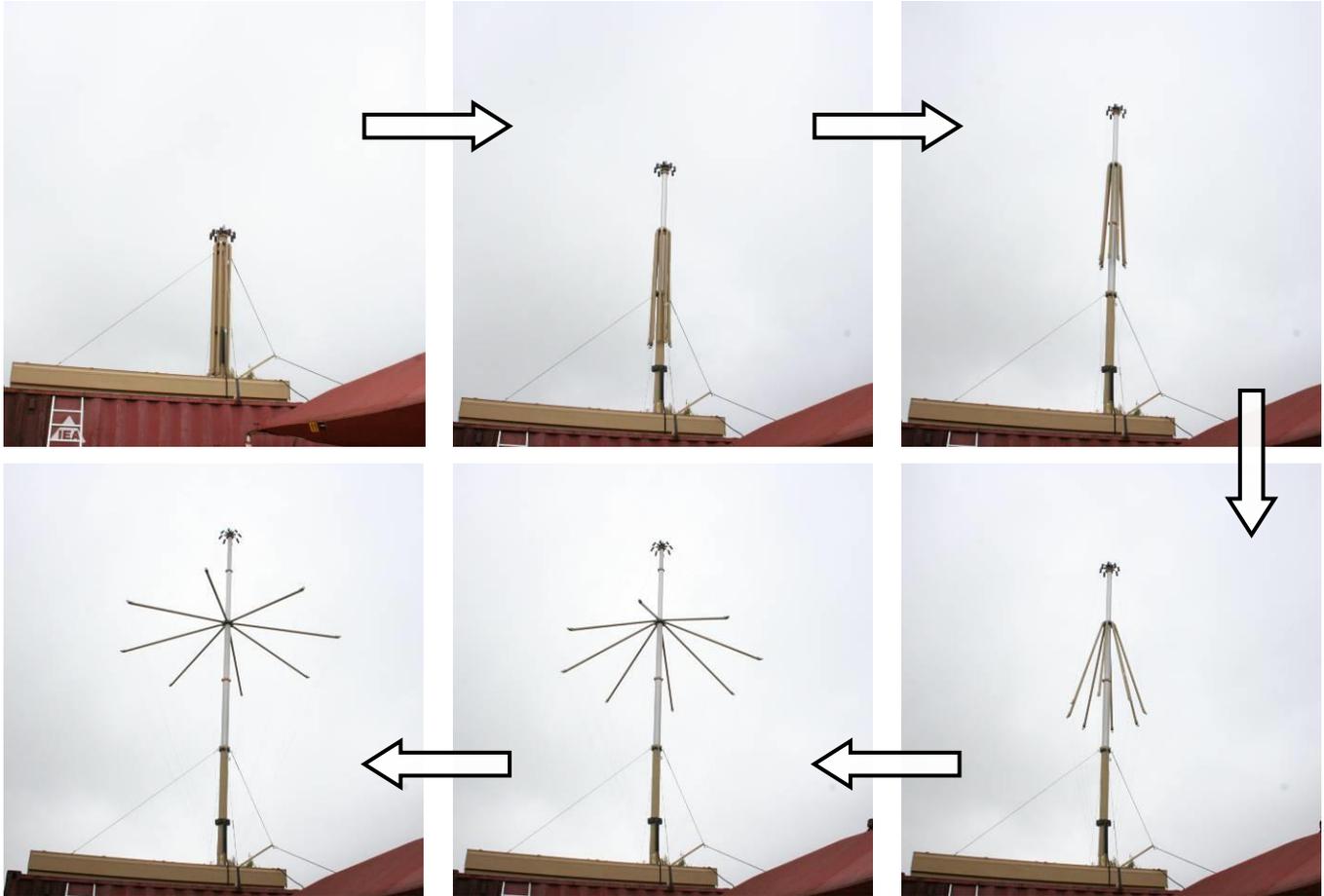
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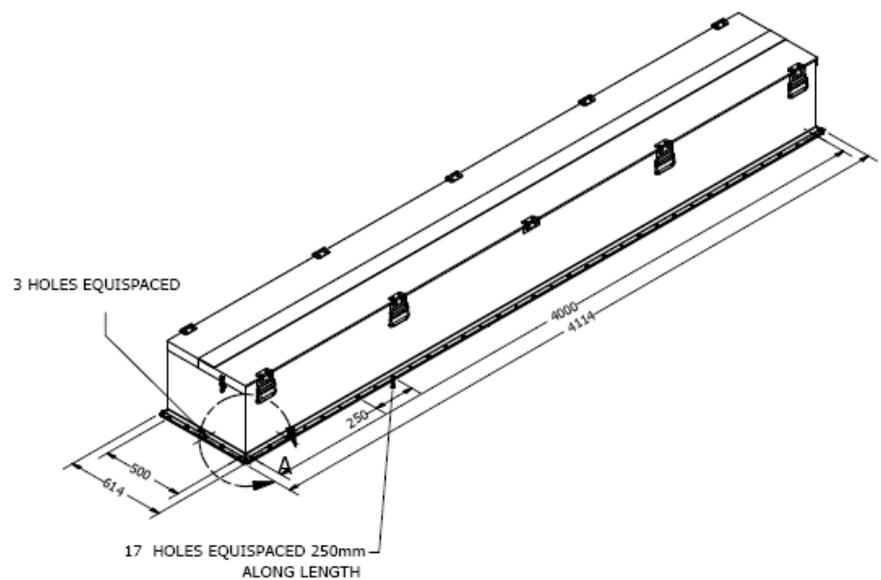
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Deployment:



Stowed:

Antenna assembly enclosure ICD:



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