

# Man-Portable HF Directional Antenna

1.5 – 30 MHz

VERSION: 1.2

Product Code: TW-A0003



## SPECIFICATIONS:

<b>Electrical: DF</b>	
Frequency range	1.5 – 30 MHz
Polarisation	Vertical
Nominal input impedance	50 Ω
Connector	7/8"
VSWR	< 2.5:1
Gain	See graph
Power handling	10 kW
<b>Mechanical:</b>	
Dimensions (deployed)	100 m x 2 m x 10 m high
Dimensions (packed)	< 450 mm x 450 mm x 1750 mm
<b>Environmental: designed to meet the following specifications</b>	
Wind survival	160 km/h (without ice)
Temperature range	-30 °C - +70 °C
Water resistance	IP 66
Vibration and shock	MIL-STD-810F

## PRODUCT DESCRIPTION:

The TW-A0003 is tactical HF directional antenna system designed for rapid deployment in the field. It is ideal for high-power and long-range HF communications.

The antenna system consists of a multi-wire travelling-wave antenna that gives good directivity throughout the frequency range.

The TW-A0003 can be connected directly to 50 ohm transmitters without the need for an antenna matching unit. The VSWR is below 2.5:1 over the entire frequency range from 1.5 to 30 MHz and the antenna is rated for a transmitter power of 10 kW continuous. The TW-A0003 can be deployed by four persons in less than 120 minutes.

The TW-A0003 is supplied with a 10m non-conductive mast to support the centre spreader system above the ground.

## PRODUCT FEATURES:

- Man-portable HF antenna
- Significant directive gain
- Low VSWR across a wideband

## APPLICATION AREAS:

- Portable communication
- Long range HF transmission
- Any HF application

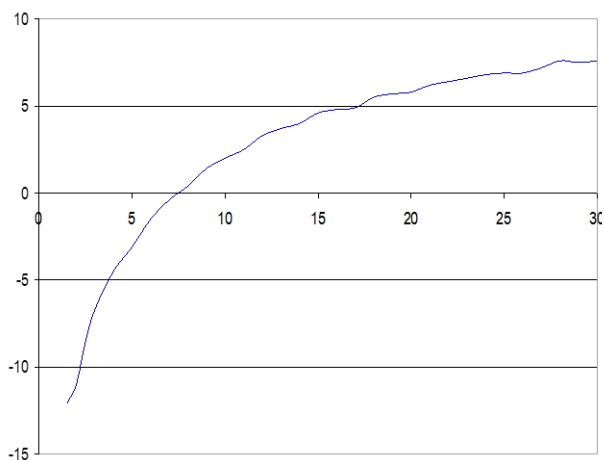
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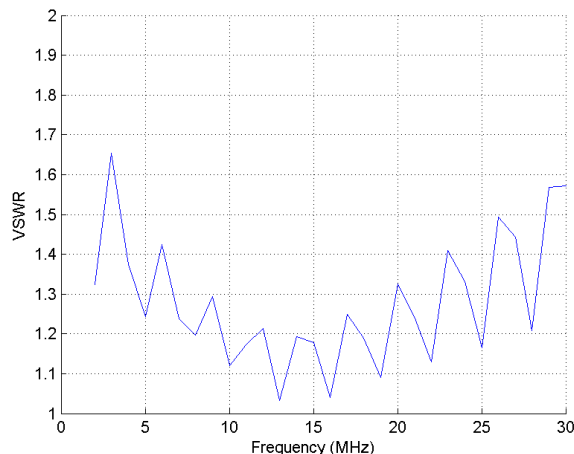
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## GAIN:



## VSWR:

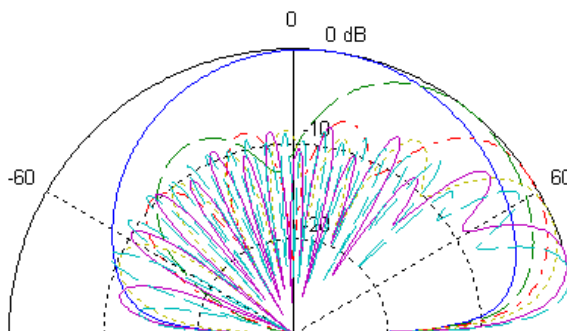


**Note:** The gain graph above shows simulated antenna gain over “average” ground with conductivity of 0.005 S/m and relative permittivity 13 and takes into account ground losses as well as resistive losses in the antenna.

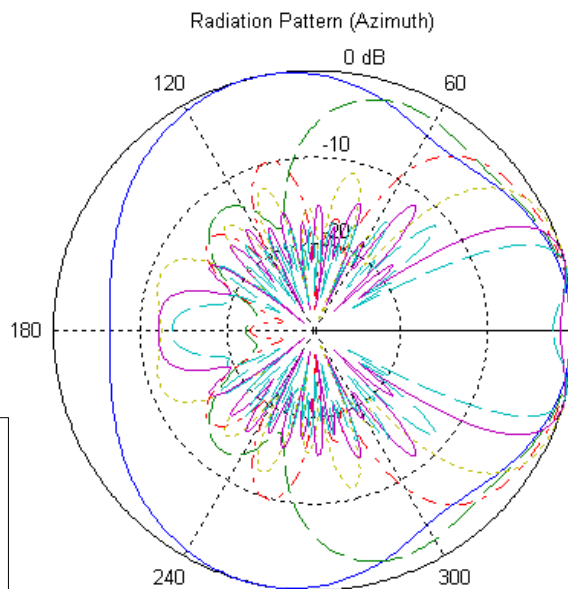
**Tolerance:** The tolerance of this graph is as follows:

- > 5 MHz: ± 6 dB of graph
- < 5 MHz: ± 9 dB of graph

## ELEVATION PATTERNS:



## AZIMUTH PATTERNS:



- L1: f=1.5, φ=0
- L2: f=3, φ=0
- L3: f=6, φ=0
- L4: f=10, φ=0
- L5: f=20, φ=0
- L6: f=30, φ=0

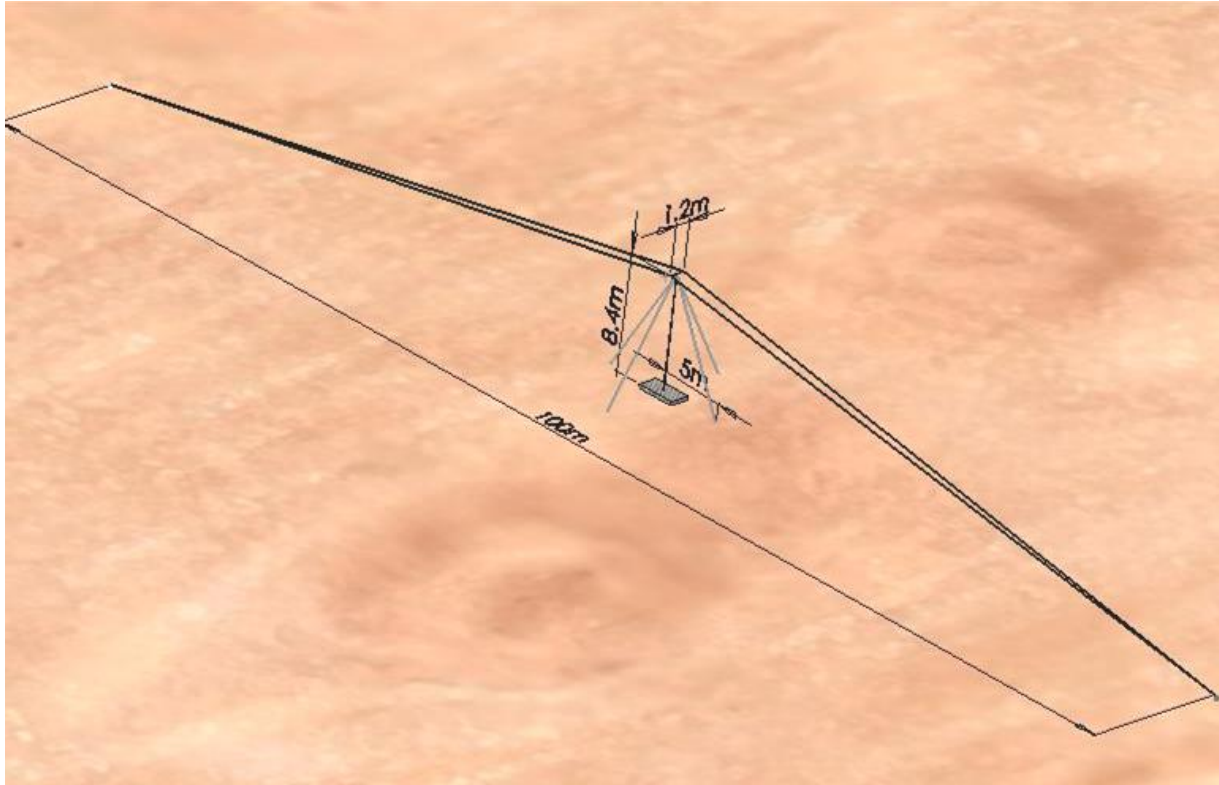
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## PRODUCT LAYOUT:



The dimensions of the antenna can be seen above.