

Man-Portable HF Directional Antenna

1.5 - 30 MHz

Product Code: TW-A0004

VERSION: 1.2





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

SPECIFICATIONS:

Electrical: DF	
Frequency range	1.5 – 30 MHz
Polarisation	Vertical
Nominal input impedance	50 Ω
VSWR	< 2.5:1
Gain	See graph
Power handling	2.5 kW average, 4 kW PEP
Mechanical:	
Dimensions (deployed)	100 m x 2 m x 10 m high
Dimensions (packed)	< 450 mm x 450 mm x 1750 mm
Mass (antenna)	< 15 kg (excludes packaging, and mast)
Total mass (packed)	< 60 kg
ļ	to meet the following specifications
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-A0004 is a man-portable 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-A0004 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 2.5 kW continuous (4 kW PEP). The TW-A0004 can be deployed by two persons in less than 60 minutes including the mast.

Man-Portable HF Directional Antenna

1.5 - 30 MHz

Product Code: TW-A0004 VERSION: 1.2

– L1: f=1.5, φ=0 – L2: f=3, φ=0

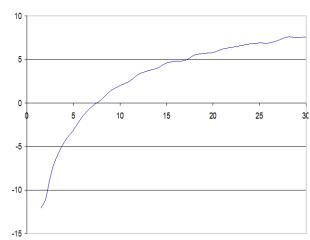
-L4: f=10, φ=0

L5: f=20, φ=0

-L6: f=30, φ=0

---L3: f=6, φ=0

GAIN:

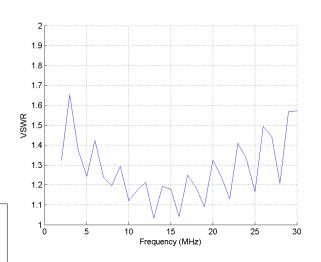


Note: The gain graph above shows simulated antenna gain over "average" ground with conductivity of 0.005 S/m and relative permittivity 13 and takes into account ground losses as well as resistive losses in the antenna.

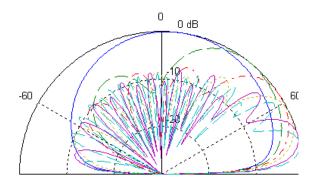
Tolerance: The tolerance of this graph is as follows:

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

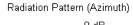
VSWR:

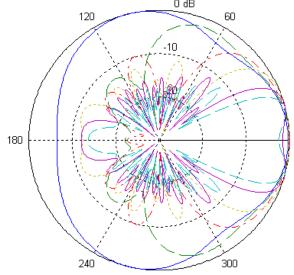


ELEVATION PATTERNS:



AZIMUTH PATTERNS:



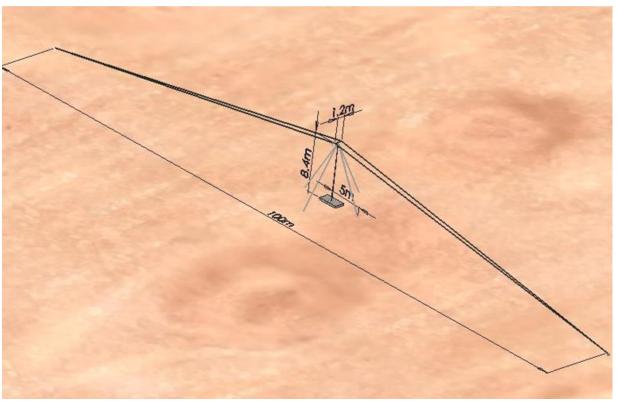


Man-Portable HF Directional Antenna

1.5 – 30 MHz

Product Code: TW-A0004 VERSION: 1.2

PRODUCT LAYOUT:



The dimensions of the antenna can be seen above.

PACKED ANTENNA:



The antenna cable is rolled onto the supplied drum for storage.