DATA SHEET

SMC GROUP
MASTS - ANTENNAS - RF COMMUNICATIONS

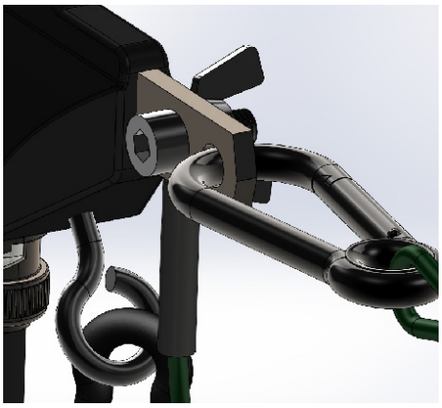
Tactical Dipole LW8 Antenna

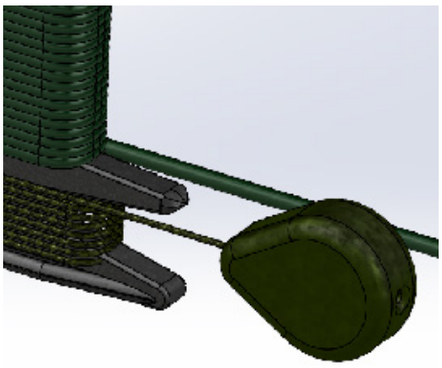
The LW8 Series are portable HF antennas that can withstand tough terrains during tactical operations.

As a general purpose antenna, the versatility of the tactical LW8 makes it suitable for a wide range of military applications, spanning from the Antarctic to the Tropics. Carbine clips enable quicker deployment in the field. The LW8 can be configured as a long wire antenna with an ATU. Custom and NATO codified variations can be available.

Key Benefits:

- Consumable
- Lightweight
- Compact
- Quick deployment
- Easy to set up





Mechnical specs	Information
LW8 / KTA	PVC covered kevlar braid with plaited copper wire
LW8 / KTB	
Centre junction	Type SMC CCJ/2 carbon loaded ultra-violet resistant moulding
Metal fittings	Stainless steel or brass
Kit bag	Olive drab coloured with 1" wide webbing strap

Technical specs	Information
Frequency range	3 - 30 MHz (LW8/KTA) or 2 - 30 MHz (LW8/KTB)
Power rating	Rx - 500W average
Polarisation	Horizontal
VSWR	2:1 maximum at 50 Ohms
Input impedance	50 - 75 Ohms
Input connector	BNC (at CCJ). Other options available

DATA SHEET

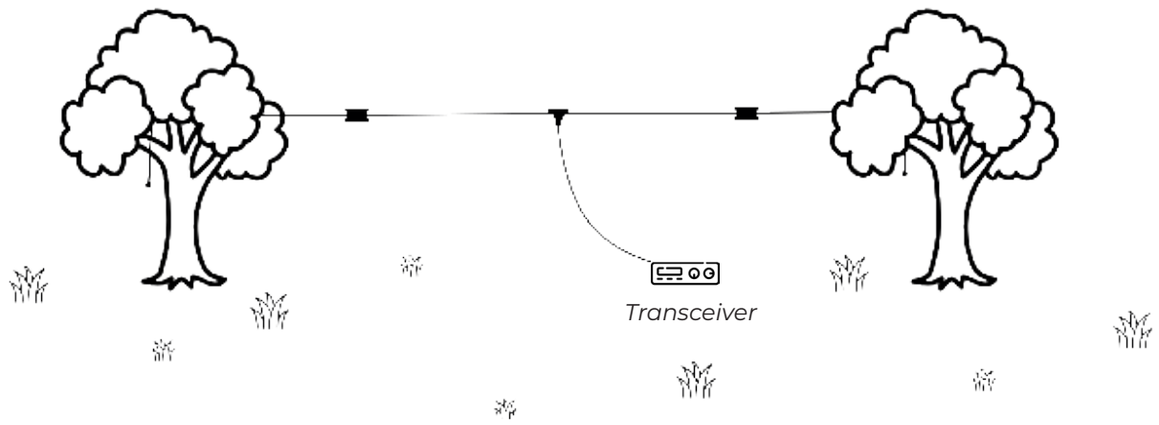
Horizontal Configuration

One of the greatest strengths of the LW8 dipole tactical antenna is its simplicity. As a general-purpose HF antenna, it is suitable or a wide range of military applications in various environments.

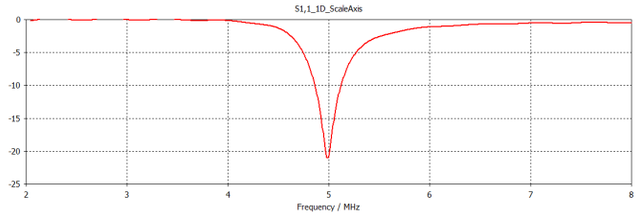
The horizontal dipole configuration is the most straightforward setup for the LW8 Antenna. The antenna is strung horizontally between two elevated points at a reasonable height above the ground, such as trees, poles, or other structures.

Key Benefits of this Configuration:

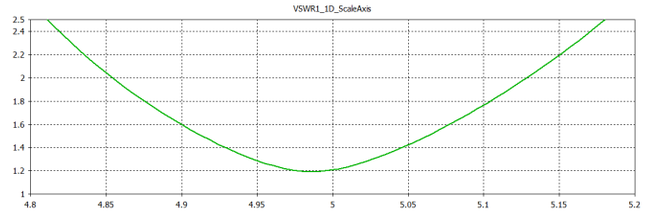
- Ideal for NVIS usage
- Easy to set up
- Adaptable to frequencies



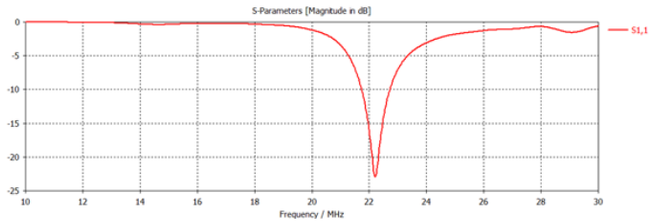
Frequency Response



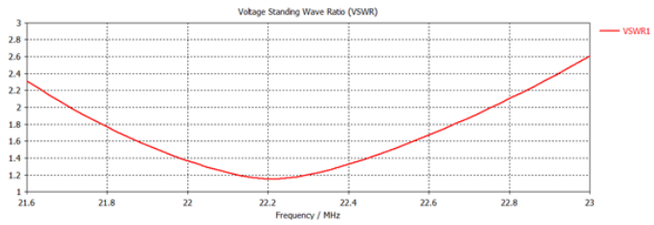
Typical return loss at 5 MHz horizontally configured at 9m high.



Typical VSWR at 5 MHz horizontally configured at 9m high.



Typical return loss at 22 MHz horizontally configured at 9m high.

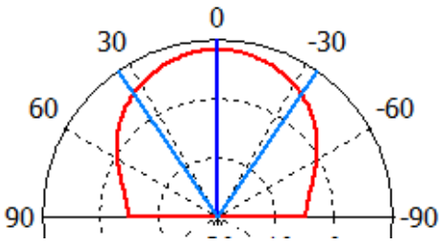


Typical VSWR at 22 MHz horizontally configured at 9m high.

RADIATION PATTERNS

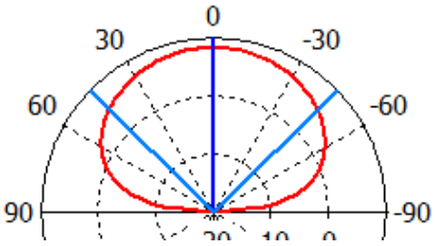
All simulated at 9m high

Farfield Directivity Abs (Phi=0)



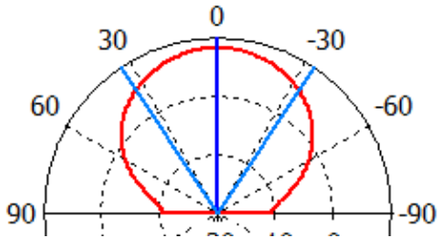
Frequency = 2.5 MHz
Main lobe magnitude = 8.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 69.2 deg.

Farfield Directivity Abs (Phi=90)



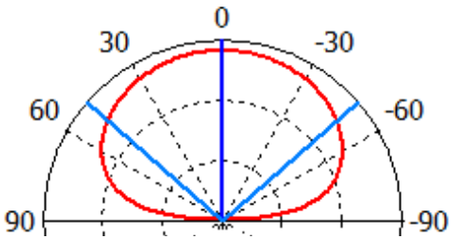
Frequency = 2.5 MHz
Main lobe magnitude = 8.2 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 90.9 deg

Farfield Directivity Abs (Phi=0)



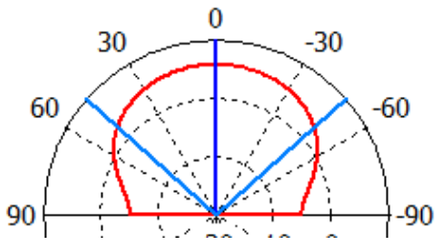
Frequency = 5 MHz
Main lobe magnitude = 8.21 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 67.9 deg.

Farfield Directivity Abs (Phi=90)



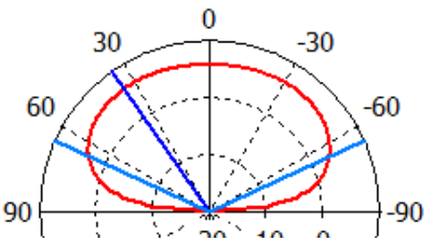
Frequency = 5 MHz
Main lobe magnitude = 8.21 dBi
Main lobe direction = 0.0 deg.
Angular width (3 dB) = 98.6 deg.

Farfield Directivity Abs (Phi=0)



Frequency = 10 MHz
Main lobe magnitude = 5.68 dBi
Main lobe direction = 180.0 deg.
Angular width (3 dB) = 97.1 deg.

Farfield Directivity Abs (Phi=90)



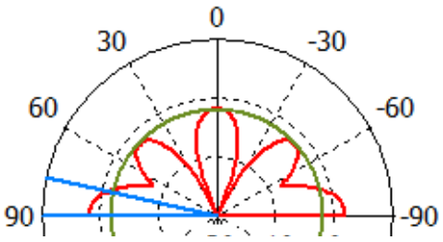
Frequency = 10 MHz
Main lobe magnitude = 6.18 dBi
Main lobe direction = 35 deg.
Angular width (3 dB) = 131.3 deg.

Simulated at 9m high

RADIATION PATTERNS

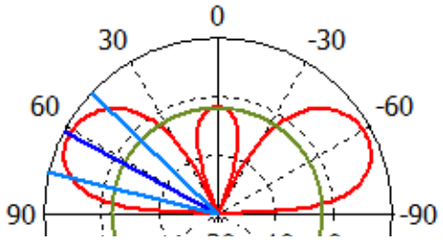
All simulated at 9m high

Farfield Directivity Abs (Phi=0)



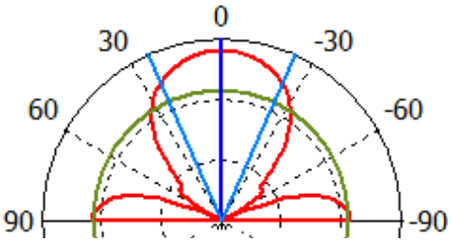
Frequency	*= 16 MHz*
Main lobe magnitude	*= 1.8 dBi*
Main lobe direction	*= 90.0 deg.*
Angular width (3 dB)	*= 12.6 deg.*
Side lobe level	*= -3.7 dB*

Farfield Directivity Abs (Phi=90)



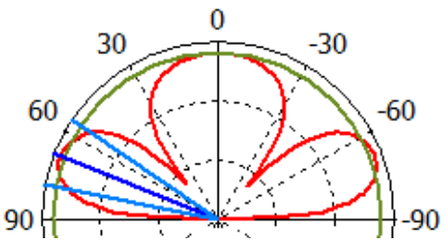
Frequency	*= 16 MHz*
Main lobe magnitude	*= 8.73*
Main lobe direction	*= 62.0*
Angular width (3 dB)	*= 30.3*
Side lobe level	*= -10.6 dB*

Farfield Directivity Abs (Phi=0)



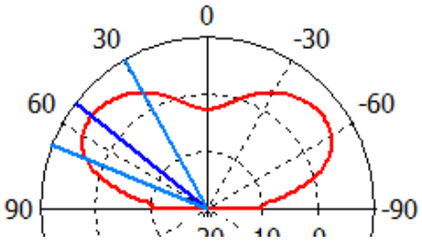
Frequency	*= 22 MHz*
Main lobe magnitude	*= 7.96 dBi*
Main lobe direction	*= 0.0 deg.*
Angular width (3 dB)	*= 47.6 deg.*
Side lobe level	*= -6.5 dB*

Farfield Directivity Abs (Phi=90)



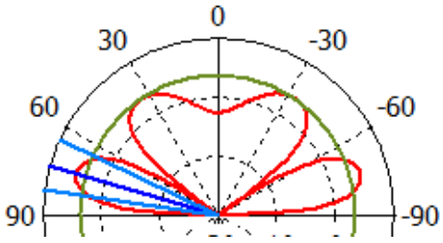
Frequency	*= 22 MHz*
Main lobe magnitude	*= 8.68 dBi*
Main lobe direction	*= 68.0 deg.*
Angular width (3 dB)	*= 23.4 deg.*
Side lobe level	*= -0.7 dB*

Farfield Directivity Abs (Phi=0)



Frequency	*= 30 MHz*
Main lobe magnitude	*= 6.19 dBi*
Main lobe direction	*= 52.0 deg.*
Angular width (3 dB)	*= 38.6 deg.*

Farfield Directivity Abs (Phi=90)



Frequency	*= 30 MHz*
Main lobe magnitude	*= 5.23 dBi*
Main lobe direction	*= 74.0 deg.*
Angular width (3 dB)	*= 17.0 deg.*
Side lobe level	*= -1.6 dB*