



Long-wire directional half-rhombic Antenna R&S® HD3001

Designed for quick set-up of mobile VHF communication sites

R&S® HD3001 is a wide-range directional VHF antenna with a frequency range 30 MHz to 88 MHz. The nominal antenna load is 50 Ω . The direction of maximum radiation is in the direction of terminal resistor.

This antenna is suitable for stationary operation for longer distances – (up to 25 km) also in undulated terrain. The antenna must be directed using a compass and a map and must be directed with an accuracy $\pm 10^\circ$. Failure to fulfil this provision will result in a shorter range.

Features

- ◆ High Gain
- ◆ Easy to erect and disassemble
- ◆ Compact package for transportation
- ◆ Low weight
- ◆ Radiating element

The long-wire directional antenna consists of an insulated 30 m long line with a loop in the middle. Both end of the line are terminated with threaded pegs. The long-wire antenna set contains also the impedance transformer and the terminating resistor with counterweights, consist-

ing of three 1.5 m long lines. Both ends of the antenna radiator are equipped with a couple of anchoring ropes with a maximum adjustable length of 2 m. All antenna parts are deposited in a bag.



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Specifications

Electrical Specifications	
Frequency range	30 MHz to 88 MHz
Impedance	50 Ω
VSWR	≤4 :1
Power	max. 32 W continuous
Antenna directing accuracy	±10°
Front-to-back ratio	typ. 10 dB, 18 dB under 50 MHz
Connection	BNC female
Finish	polyurethane lacquer, olive, RAL 6014
Temperature range	-55 °C to +71 °C
Mounting	threaded socket
Environmental specifications	
Temperature range	in line with MIL-STD-810E method 501.3 proc I + II and method 502.3 proc I + II
operational	-30° to +60°C
storage	-50° to +85°C
Shock (transport only)	in line with MIL-STD-810E method 516.4, proc. I, functional shock for ground equipment, crossover frequency 45 Hz, 40g, 6 ms to 9 ms
Vibration (transport only)	in line with MIL-STD-810E method 514.4, category 8, ground mobile, 5 Hz to 500 Hz (20 Hz to 350 Hz, 0.02 g ² /Hz 20 Hz to 5 Hz, -6 dB/octave 350 Hz to 500 Hz, -6 dB/octave)
Leakage (immersion)	1 m during 2 hours, in line with MIL-STD-810E method 512.3, proc. I
Humidity	in line with MIL-STD-810E method 507.3, proc. III
Sand and dust	in line with MIL-STD-810E method 510.3
Proc. I, blowing dust	
Low pressure (altitude)	in line with MIL-STD-810E method 500.3, proc. I+II 5000 m above sea-level at < +35 °C
Solar radiation	in line with MIL-STD-810E method 505.3, proc. II

Max. wind speed	150 km/h
MTBF	150000 h
MTTR	<5 min
Mechanical specifications	
Dimensions W × D × H	850 mm × 150 mm × 100 mm
Weight	max. 3.5 kg including portable bag
Color radiator	RAL 9005 black

Ordering information

Designation	Type	Order No
Long-Wire Antenna	R&S® HD3001	6131.7406.02
Adapter for R&S® MR3000	R&S® GK3019	6125.9300.02



More information at
www.rohde-schwarz.com
 (search term: M3TR)



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