

# R&S®HL451 LOG-PERIODIC HF ANTENNA

2 MHz to 30 MHz

Transmission and reception of horizontally polarized waves over medium and long distances



The compact, rotatable R&S®HL451 log-periodic HF antenna can be used for transmission and reception of horizontally polarized waves.

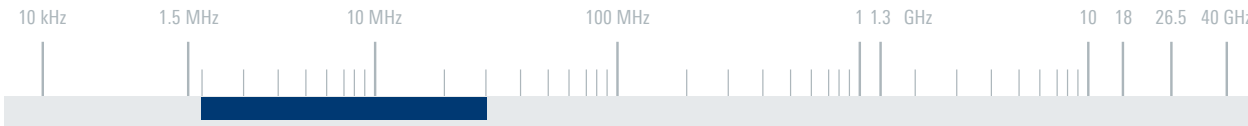
The antenna's transmission frequency range from 5 MHz to 30 MHz makes it particularly suitable for communications over medium and long distances. Reception is possible from 2 MHz so that all distances can be covered.

The antenna has been optimized for small size, low weight and minimum maintenance.

### Key facts

- ▶ Reception from 2 MHz
- ▶ Transmission from 5 MHz
- ▶ Unshortened half-wave elements for high gain despite extremely small size
- ▶ Easy and quick assembly
- ▶ Low maintenance
- ▶ Suitable for roof mounting





**Specifications**

Frequency range

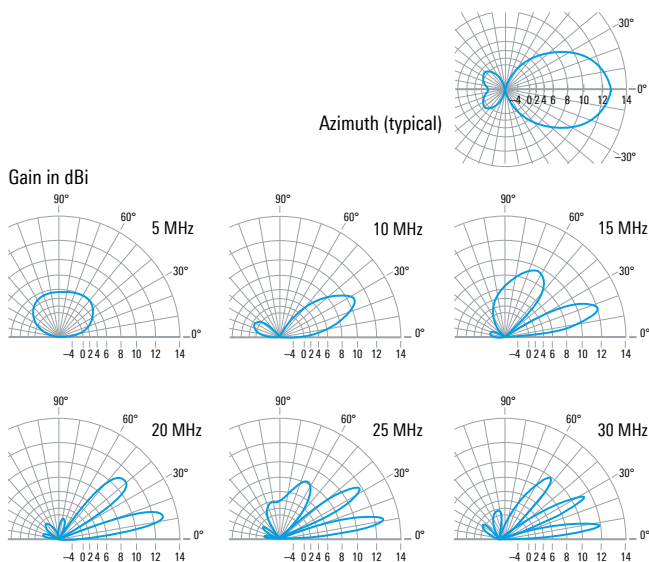
Reception		2 MHz to 30 MHz
Transmission		5 MHz to 30 MHz
Polarization		linear/horizontal
Input impedance		50 Ω
VSWR	5 MHz to 30 MHz	≤ 2
Maximum input power		1 kW (CW)/2 kW (PEP)
Gain (on 15 m mast)	5 MHz to 30 MHz	6 dBi to 12.5 dBi (typ.)
Maximum wind speed	without ice deposit	180 km/h (survival)
Connector		N female
MTBF		> 100 000 h
Operating temperature range		-30°C to +50°C
Dimensions of antenna array	W × L	approx. 16 m × 15 m (53 ft × 49 ft)
Weight of antenna array		approx. 260 kg (573 lb)

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Ordering information	Type	Order No.
Log-periodic HF antenna	R&S®HL451	0733.8507.02

Recommended extras		
Lattice mast, length: 15 m (standard)	R&S®KM451B2	4028.3400.04
Lattice mast, length: 10 m (for roof mounting)	R&S®KM451B1	4028.3351.02
Hazard light	R&S®KM451F1	4028.3500.02
Antenna rotator	R&S®RD130	4059.8503.02
Rotary joint/adaption set	R&S®RD008Z1	0720.6400.02
Control unit	R&S®GB130	4059.8755.02
Set of cables (connecting R&S®GB130 to R&S®RD130, lengths: 50/80/120/200 m)	R&S®GK130	4059.8855.0x (x = 2/3/4/5)
Other configurations on request.		

**Typical radiation patterns on a 15 m mast**



**Typical gain**

