

R&S®HE300 Active Directional Antenna

20 MHz (optional 9 kHz) to 7.5 GHz

Portable directional antenna for locating transmitters and interference sources



The practical and very wideband R&S®HE300 active directional antenna locates transmitters and interference sources when combined with portable receivers (e.g. R&S®PR100). The three exchangeable antenna modules supplied with the antenna cover the 20 MHz to 7.5 GHz frequency range. An additional module (R&S®HE300HF for 9 kHz to 20 MHz) is available as an option. The modules can be plugged into the handle with the correct orientation for vertical or horizontal polarization and then mechanically locked in place.

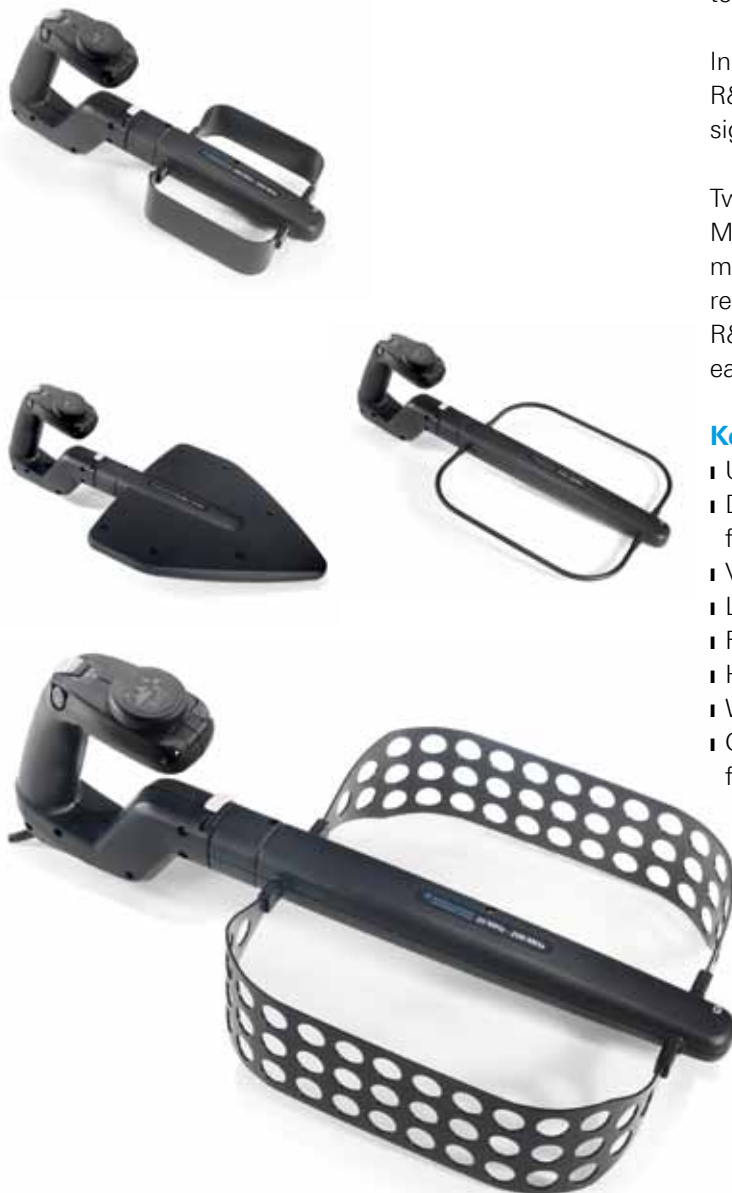
A built-in, low-noise wideband amplifier can be activated to enhance system sensitivity (active mode).

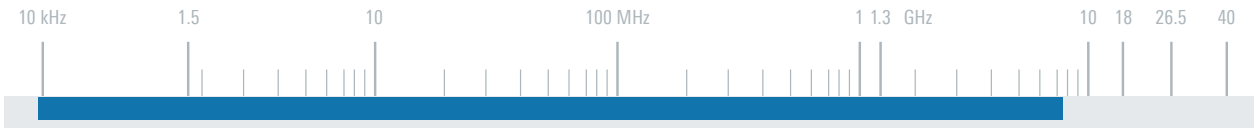
In passive mode, the amplifier is bypassed so that the R&S®HE300 can also be used in the vicinity of strong signal sources.

Two different models of the R&S®HE300 are available. Model .02 contains an analog compass for bearing determination; model .03 is equipped with an integrated GPS receiver and an electronic compass. When used with the R&S®PR100 portable receiver, the potential target can easily be located on a map using the triangulation feature.

Key facts

- Unambiguous radiation pattern
- Direction finding by orienting antenna toward maximum field strength
- Very wideband performance in a compact size
- Low weight due to optimized selection of materials
- Fatigue-proof handling
- Horizontal and vertical polarization
- Wide dynamic range
- GPS positioning, compass bearing and triangulation feature (model .03)

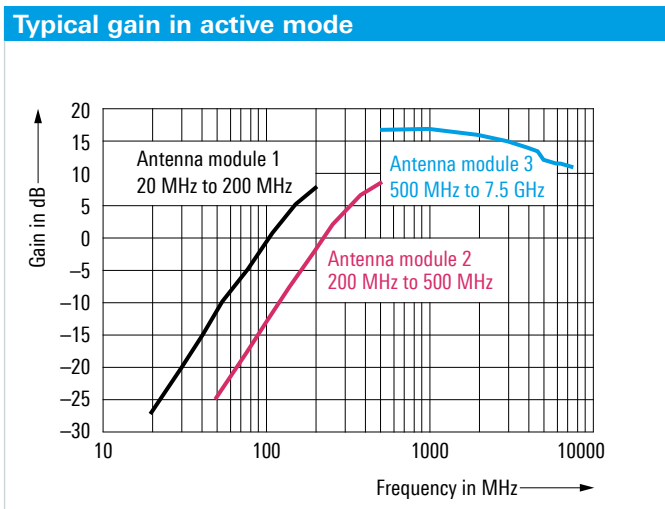




Specifications	
Frequency range	9 kHz to 7.5 GHz
Antenna module 1	20 MHz to 200 MHz
Antenna module 2	200 MHz to 500 MHz
Antenna module 3	500 MHz to 7.5 GHz
Optional antenna module (R&S®HE300HF)	9 kHz to 20 MHz
Polarization	horizontal and vertical (by rotating the module before plugging in)
Input impedance	50 Ω
VSWR	typ. < 2.5 (except R&S®HE300HF)
Power supply	
Batteries	1.5 V AA cells (6 ×)
Rechargeable cells	1.2 V (6 ×)
External supply	7 V to 9 V DC via plug
Current drain	approx. 100 mA at +25°C
Connector	N male on cable (approx. 1 m emerging from handle)

MTBF	> 50 000 h, in line with MIL-HDBK-217E, ground fixed, +25°C
Operating temperature range	-30°C to +55°C
GPS/electronic compass unit (only applicable for model .03 and R&S®HE300UK)	
Power supply (via R&S®PR100)	5 V DC ± 0.2 V
Current drain	max. 100 mA
GPS acquisition time	approx. 40 s
Electronic compass accuracy	typ. 2° RMS for 0° elevation, typ. 4° RMS for ± 60° elevation
Compass resolution	1°
Dimensions with antenna module 1 (W × H × L)	approx. 310 mm × 90 mm × 580 mm (12.2 in × 3.5 in × 22.8 in)
Weight	
Antenna with antenna module 1	approx. 1.5 kg (3.3 lb)
Antenna, including transit case	approx. 7 kg (15.4 lb)

Ordering information	Type	Order No.
Active Directional Antenna, including analog compass	R&S®HE300	4067.5900.02
Active Directional Antenna, including GPS/electronic compass	R&S®HE300	4067.5900.03
GPS/Electronic Compass Upgrade Kit	R&S®HE300UK	4080.9011.02
Recommended extras		
Portable Receiver	R&S®PR100	4071.9006.02
HF Option (9 kHz to 20 MHz)	R&S®HE300HF	4067.6806.02
Wooden Tripod	R&S®HZ-1	0837.2310.02



Map triangulation with R&S®HE300 and R&S®PR100.