

R&S®HF907DC SHF DIRECTIONAL ANTENNA WITH DOWNCONVERTER

7.5 GHz to 18 GHz

Broadband directional antenna with downconverter

For locating transmitters and interference sources
when used with a portable receiver (e.g. the
R&S®PR100 portable receiver)



The R&S®HF907DC consists of a downconverter and an antenna fixed to it. In order to detect signal sources, the R&S®HF907DC must be connected to a receiver (e.g. the R&S®PR100 portable receiver).

Signal bearings are obtained by manually pointing the antenna in the direction of maximum field strength.

The operating frequency range is downconverted to the range below 7.5 GHz in two switchable frequency bands. Preselection filters for each frequency band suppress image frequency and IF breakthrough.

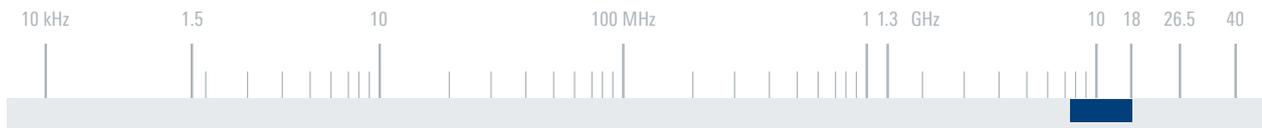
The interface and display panel contains all display and control elements and connectors and provides access to the battery compartment.

A version without integrated antenna is also available. It provides an RF input for connecting an external antenna.

Key facts

- ▶ Manual polarization switching (horizontal, vertical, 45°)
- ▶ Distinct directional pattern
- ▶ Battery operation for portable applications
- ▶ Automatic frequency switching (when used with the R&S®PR100)
- ▶ Excellent suppression of image frequency and IF breakthrough by means of switchable preselection filters





Specifications

Frequency range		7.5 GHz to 18 GHz
Input frequency range	band 1; band 2	7.5 GHz to 12.5 GHz; 12.5 GHz to 18 GHz
Intermediate frequency range	band 1; band 2	6.5 GHz to 1.5 GHz; 7.5 GHz to 2 GHz
Antenna polarization		horizontal, vertical or 45°, manually adjustable
Nominal impedance		50 Ω
VSWR	IF Out; ANT In	typ. < 2.5; < 3.5 (meas.; model .03 only)
Connector	IF Out; ANT In	N female; SMA female (model .03 only)
Frequency accuracy		< 25 kHz
Image frequency rejection		> 45 dB (meas.)
IF breakthrough	band 1; band 2	> 45 dB (meas.); > 55 dB (meas.)
Antenna gain (model .04 only)		8 dBi (meas.)
Conversion gain of downconverter	band 1; band 2	typ. 36 dB; typ. 34 dB
MTBF	excluding battery	> 75 000 h
Max. permissible field-strength	model .04 only	3 V/m
Max. input power	model .03 only	-17 dBm
Permissible temperature range		-10°C to +50°C
Dimensions (W × L × D)	model .03/ model .04	approx. 150 × 300 × 135 mm (6 × 12 × 5 in)/ approx. 150 × 355 × 175 mm (6 × 14 × 7 in)
Weight	model .03/model .04	approx. 3.2 kg (7 lb)/3.5 kg (8 lb)

Ordering information

Ordering information	Type	Order No.
SHF directional antenna with downconverter	R&S®HF907DC	4070.8006.04
SHF downconverter	R&S®HF907DC	4070.8006.03

Recommended extras

Portable receiver	R&S®PR100	4079.9011.02
Battery pack	R&S®HF907DC-BP	4079.3507.02
External battery charger	R&S®HF907DC-CH	4079.3707.02
Cable set	R&S®HF907DC-K1	4070.8958.02
Tripod adapter	R&S®HF907DC-Z1	4079.3113.02
Carrying case	R&S®HF907DC-Z2	4079.3207.02

Typical E field and H field patterns

