



## VHF-UHF Direction Finder PA 1555

### Mobile compact system for use in adverse environments

- Frequency range  
20 MHz to 1000 MHz
- Lightweight, compact design
- Ideal for temporary applications  
and when frequently changing  
between locations
- Can be integrated into radioloca-  
tion networks

PA 1555 from Rohde & Schwarz is a weatherproof, compact VHF-UHF direction finder featuring a foldable antenna system. It has been designed specially for use in adverse environments and at hard-to-get-at sites. Its high flexibility is enhanced by a low-drain DC supply. An RS-232-C interface allows the

system to be integrated into computer-controlled radiolocation networks.



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be taken of a transmitter with a known azimuth value and the nominal value for the transmitter entered. North adjustment will then be performed automatically.

PA 1555 allows the audio signal to be monitored also without any interference from the noise generated during antenna scanning. To this end, the direction finding

### Characteristics and operation

All operating states and results of the DF unit are clearly arranged on special, backlit LC displays. DF results are indicated on a three-digit numeric display, supported by a ring-shaped 72-segment coarse direction indicator (each segment corresponding to 5°) and a fan-shaped DF quality indicator similar to the tuning aid of valve radios used in the past. The front panel further shows the set frequency, level and level threshold (analog and digital), the demodulation type, bandwidth, and the selected north adjustment value.

The frequency can be entered via the numeric keypad or using the rotary knob. Tuning is facilitated by arrow markers in the Rx display field which indicate the frequency offset. Up to 100 frequencies together with the receiver settings can be stored and recalled. The DF unit can not only be tuned to individual frequencies, but it is also possible to trigger frequency scans either with a preset start/stop frequency and stepwidth or via the channels

stored in the memory. In the auto mode, the system is made to dwell for about 3 seconds on each signal that exceeds a preselected level threshold. In manual operation, the scan is advanced by pressing the ENT key. The user can select individual channels to be skipped in the memory scan.

For north adjustment of PA 1555, a correction value is entered via the numeric keypad. Alternatively, a bearing can

can be stopped by pressing the AF key. The volume can be adjusted by means of the rotary knob.

A self-test is performed by means of an internal test signal. If the test is not successful, a coded fault message is output.

All functions of the DF unit can be remotely controlled and queried. Moreover, a connector for an IF panoramic display is provided.

Antenna AP 1555 M was specially devised for use in vehicles and is of compact design. It covers the entire frequency range 20 MHz to 1000 MHz



## Operating modes

PA 1555 features four DF modes:

- **CONT**  
Direction finding of CW signals. The maximum integration time is 2.5 s.
- **SING**  
Squelch-controlled direction finding of individual signals with medium integration time – especially of simplex voice communication with a medium signal duration. The DF result is cleared at the end of the signal transmission.
- **GATE**  
Squelch-controlled direction finding of intermittent signals originating from the same source. The DF information remains stored during the intervals when no signal is received.
- **HIST**  
Squelch-controlled direction finding of signals of identical frequency but from different angles of incidence (eg simplex voice communi-



PA 1555 can be conveniently operated also in vehicles, using detachable Display Unit GB 1555

cation). Averaging in this mode is performed by means of histograms that discriminate up to ten angles of incidence.

## Options

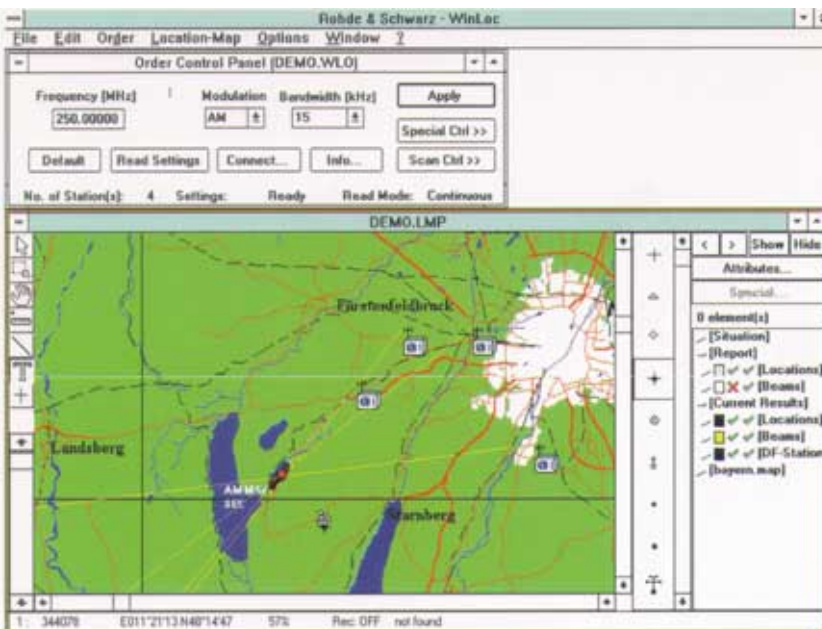
PA 1555 can be tailored to customer's requirements by means of a variety of options (see ordering information).

The direction finder can be operated in vehicles using detachable Display Unit GB 1555.

PA 1555 can be used with the convenient WinLoc radiolocation software (see data sheet PD 757.1483) by connecting a PC to its RS-232-C interface

## Integration into radiolocation networks

Via its RS-232-C interface, PA 1555 can be integrated into radiolocation systems using the WinLoc software (see data sheet PD 757.1483). The WinLoc software contains a driver by which PA 1555 can be addressed.



## Specifications

<b>Frequency range</b>	20 MHz to 200/1000 MHz
<b>DF accuracy</b>	2° rms (DF antenna mounted on mast; siting effects not taken into account; averaging over azimuth and frequency)
<b>Sensitivity</b>	dependent on frequency and antenna used (see diagram)
<b>Minimum required signal duration</b>	approx. 50 ms, depending on modulation
<b>Modulation</b>	AM, FM, CW; selectable bandwidth 7.5/15/150 kHz
<b>Data interface</b>	V.24 (RS-232-C); baud rate: 50 bd to 9600 bd (internally selectable)

### DF antennas

AP 1555 G (20 MHz to 200 MHz)	6-dipole Doppler antenna, lightweight construction, 1 m in diameter, weight approx. 6.5 kg
AP 1555 U (200 MHz to 1000 MHz)	6-dipole Doppler antenna in weatherproof radome, weight approx. 4.5 kg
AP 1555 T (20 MHz to 1000 MHz)	(= AP 1555 G + AP 1555 U), max. wind speed 100 km/h
AP 1555 X (20 MHz to 100 MHz)	6-dipole Doppler antenna, lightweight construction, 2 m in diameter
AP 1555 M (20 MHz to 1000 MHz)	compact antenna in radome, 1.1 m in diameter, weight approx. 25 kg

### DF unit

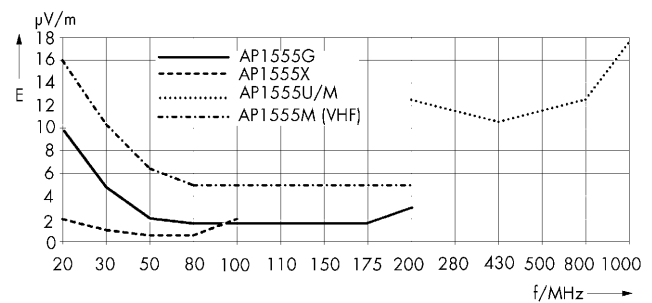
	accommodated in weatherproof, impact-resistant case; digital and analog DF-value and status indications on LC displays (with backlighting)
<b>Dimensions (W x H x D)</b>	254 mm x 152.4 mm x 268 mm
<b>Weight</b>	approx. 7.5 kg
<b>Power supply</b>	10 to 30 VDC, power consumption approx. 10 W
<b>Nominal temperature range</b>	
DF antenna	-40 °C to +55 °C
DF base equipment	-25 °C to +55 °C
<b>Shock</b>	to MIL-STD 810 D
<b>Vibration</b>	to MIL-STD 810 C
<b>Class of protection</b>	IP 65
<b>EMC</b>	to MIL-STD 461 D, CE 102, CS 101, RE 102

## Ordering information

<b>VHF-UHF Direction Finder</b>	<b>PA 1555</b>
(20 to 200 MHz)	4036.9555.40
(200 to 1000 MHz)	4036.9555.41
(20 to 1000 MHz)	4036.9555.42
(20 to 1000 MHz, compact design)	4036.9555.43

### Options

Display Unit	GB 1555	4031.7202.02
Plug-in Mast, including guy ropes, compass and mounting tools, for DF Antennas AP 1555G/U/T	KM 1555T	4036.9003.02
Mast Adapter for DF Antenna AP 1555U	KM 1555U	4036.8259.02
Vehicle Adapter for DF Antenna AP 1555M	AP502Z1	0515.1419.02
Mast Adapter for DF Antenna AP 1555M	AP502Z5	4015.2151.04
Cable Drum	PA 1555D	4036.9255.02
Headphones	PA 1555H	4036.9355.02
Loudspeaker	PA 1555L	4036.9561.02
Battery (rechargeable, 7.2 Ah)	PP 1555B	4037.0251.02
Transport bags for DF unit and antenna	PA 1555T	4036.9755.02



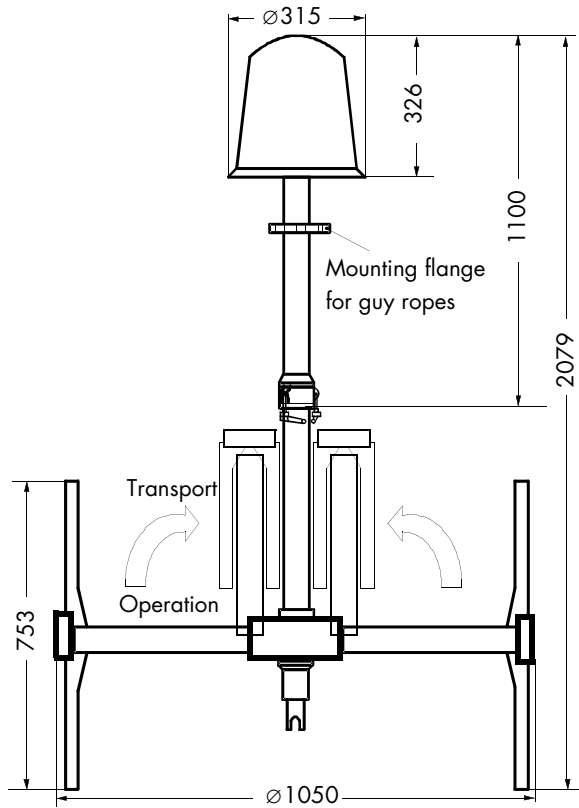
DF sensitivity with Antennas AP 1555 G/U, AP 1555 M and AP 1555 X (±2° display fluctuation, 1 s signal duration)

Certified Quality System  
**ISO 9001**

DQS REG. NO 1954

Certified Environmental System  
**ISO 14001**

REG. NO 1954-03

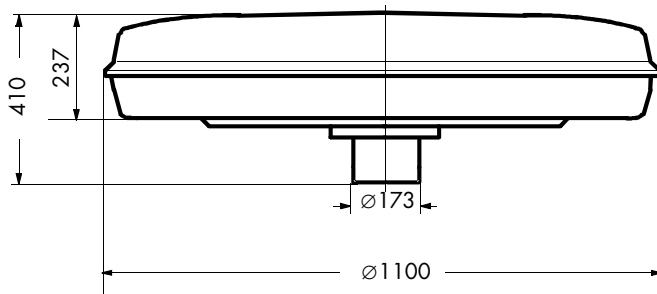


## VHF-UHF DF Antenna AP 1555 T\*)

DF Antenna AP 1555 T covers the frequency range 20 to 1000 MHz. It is made up of two antennas – AP 1555 G (20 to 200 MHz) and AP 1555 U (200 to 1000 MHz) – which can also be operated separately. AP 1555 G can be folded for transport.

UHF DF Antenna AP 1555 U can be disconnected from AP 1555 G mechanically and electrically to facilitate transport.

\*) Drawing not to scale



## VHF-UHF Compact Antenna AP 1555 M

Compact Antenna AP 1555 M covers the frequency range 20 through 1000 MHz. It was specially devised for use in vehicles.



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