

Rohde & Schwarz

Interference Hunting Solution

Operator training

The fast-paced developments in wireless communications have led to an increase in the number of wireless devices worldwide, with an associated high demand for wireless connectivity anytime and anywhere. Faulty, poorly shielded or incorrectly configured electronic devices can unintentionally emit electromagnetic waves and degrade network performance or even disrupt radiocommunications. Consequently, it is necessary to quickly locate the building or specific room in a building from which the radio interference originates. Unfortunately, the buildings of interest are often in densely built-up areas. Successful interference hunting and mitigation requires more than operator experience and technique – proper use of the tools and technique is just as important.

These interference hunting courses are a combination of classroom based theory lessons and practical exercises. They cover most of the key topics to help users effectively carry out their interference hunting task.

In these courses, the participants will learn which types of interference can occur in radio and communications networks and how they affect network performance and user experience. The participants will analyze typical sources of interference and identify them in the spectrum. They will study fundamentals of radio wave propagation in an urban environment and develop strategies to localize sources of interference, including the use of an automatic direction finding (DF) system to search a wide area.

In the R&S®IH-Basic basic operator training, the participants will learn how to configure a portable monitoring receiver, e.g. the R&S®PR100, and use its scanning and spectrum measurement functions to detect interference signals. They will use the R&S®HE400 handheld directional antenna to localize sources of interference using both homing and triangulation.

In the R&S®IH-ADVND advanced operator training, the participants will additionally learn how to configure and set up the portable monitoring receiver (e.g. the R&S®PR100/DDF007), the R&S®ADD207 compact DF antenna and the R&S®MobileLocator software for automatic localization of interference signals with a vehicle.

All courses are instructor-led with an interactive approach. The instructor uses a mixture of question and answer sessions, continuous assessment and a final exam to ensure effective knowledge transfer. Extensive hands-on exercises for all functions will enhance familiarity and knowledge of the test equipment.

There are no prerequisites for participating in the courses.

Course overview

Course title	Target audience	Aim	Duration
R&S®IH-Basic basic operator training	Operators of: <ul style="list-style-type: none"> ▮ R&S®PR100 	Participants learn typical causes and effects of interference in radio and communications networks and how to localize a source of interference with the R&S®PR100 and the R&S®HE400.	1 day
R&S®IH-ADVND advanced operator training	Operators of: <ul style="list-style-type: none"> ▮ R&S®PR100 ▮ R&S®DDF007 	Participants learn typical causes and effects of interference in radio and communications networks and how to localize a source of interference with the R&S®PR100/DDF007, the R&S®ADD207, R&S®MobileLocator and the R&S®HE400.	2 days

Course syllabus

R&S®IH-Basic basic interference hunting training

Interference hunting basics:

- ▮ Types of interference in radio and communications networks
- ▮ Typical sources of interference
- ▮ Tools and methods for detecting and localizing interference

Hands-on training:

- ▮ Operating concept of the R&S®PR100 and basic settings
- ▮ Spectrum measurements in fixed frequency mode and scanning
- ▮ Using the R&S®HE400 handheld directional antenna
- ▮ Homing and triangulation with the R&S®HE400 handheld directional antenna

Course syllabus

R&S®IH-ADVND advanced interference hunting training

Day 1

Interference hunting basics:

- ▮ Types of interference in radio and communications networks
- ▮ Typical sources of interference
- ▮ Tools and methods for detecting and localizing interference

Hands-on training:

- ▮ Operating concept of the R&S®PR100/DDF007 and basic settings
- ▮ Spectrum measurements in fixed frequency mode and scanning
- ▮ Using the R&S®HE400 handheld directional antenna
- ▮ Homing and triangulation with the R&S®HE400 handheld directional antenna

Day 2

DF basics:

- ▮ DF technology
- ▮ DF under real-world conditions

Hands-on training:

- ▮ Setup and configuration of the R&S®MobileLocator system
- ▮ Signal localization with the R&S®MobileLocator system

Ordering information

Designation	Type	Order-No.
Basic operator training	R&S®IH-BASIC	3641.2990.02
Advanced operator training	R&S®IH-ADVND	3641.2654.02

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