



Your strong partner for enhanced security

Modern radiocommunications interception and intelligence

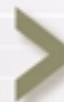


ROHDE & SCHWARZ

As threats escalate ...



Organized crime is increasing. National police authorities are often inadequately prepared to tackle this problem. Apart from ineffective legislation, it is mainly the lack of appropriate technology that limits the response authorities can make or even prevents any effective action being taken at all.



Terror groups are extending their reach globally. Their actions deeply distress large sections of the population in the countries affected and cause heightened international tensions.



Every day new means of communication come into use. Consequently, the detection and prosecution of criminal and terrorist activities is becoming more and more problematic. Government agencies risk being left in the dark about internal and external threats. Therefore, existing security systems have to be regionally and globally enhanced to modern technologies.

With its long-standing international experience in the field of radiomonitoring and communications intelligence, Rohde & Schwarz is able to offer a wide range of suitable equipment and systems.

Modular concepts allow the equipment and systems to be tailored to meet the customer's specific requirements and provide customized solutions for

- ◆ **National law enforcement agencies, such as the police, border guards, coastguards, customs, etc**
- ◆ **Rapid reaction forces and peacekeeping forces**
- ◆ **Intelligence services**

Systems like these are already successfully used worldwide by Rohde & Schwarz customers.

... providing security is ...



◆ Crisis management ...



◆ Information gathering ...



◆ Target downtracking ...

... our forte!

During missions in crisis areas beyond territorial limits, task forces are confronted with a new, unknown radio scenario. Threats must always be expected in the classic radio bands, but hostile forces are more likely to use any kind of regular communication equipment available. Equipment will be required for the following missions:

- ◆ Rescue and evacuation operations
- ◆ Special air/land operations
- ◆ Open and covert intelligence before and during missions



System MP190A in use

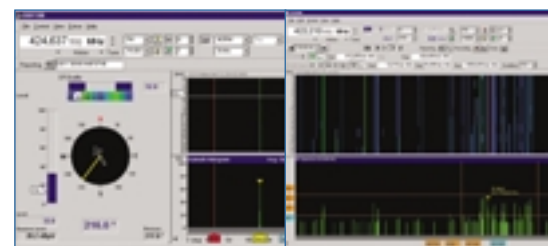
Tasks

- ◆ Safeguarding one's own task forces and radiocommunications
- ◆ Preparing an electronic radiocommunication scenario
- ◆ Searching for and monitoring occupied frequency channels
- ◆ Locating transmitters
- ◆ Determining foreign communication structures
- ◆ Searching for free channels for one's own communication networks

Solutions from Rohde & Schwarz

- System **MP190A**, consisting of
- Receiver EB200 (10 kHz to 3 GHz)
 - Digital Direction Finder DDF195 (20 MHz to 3 GHz)
 - Laptop and **RAMON** software

The system's main features are scalability based on COTS* components, high mobility, rapid deployability and suitability for use in all climatic zones.



RAMON software for receiver control, direction finding and result display

ESM systems** for warning one's own task forces about immediate threat and for exchanging information with allied forces.



*ESM**: displaying signals relative to one's own position in vehicles or on board ships*

*) Commercial off-the-shelf

**) Electronic support measures



Airport staff searching for suspicious emission with EB200



Digital direction finder in helicopter



It is hard to imagine our daily lives without modern communication technology, such as mobile and satellite phones. This technology, like classic VHF-UHF communications in the past, is also used by criminals to organize their activities and to evade telephone taps.



Tasks

- ◆ Supporting classic observation
- ◆ Securing evidence for use in court
- ◆ Gathering intelligence about planned criminal activities
- ◆ Protecting infrastructure (e.g. airports, power plants, water supplies)
- ◆ Supporting police forces in action
- ◆ Detecting criminal organizations (organized crime)
- ◆ Intensified reconnaissance to identify targets in shadowed areas
- ◆ Detecting mini jammers and bugs

Solutions from Rohde & Schwarz

Miniport Receiver EB200 (10 kHz to 3 GHz) with Directional Antenna HE200: e.g. used in border areas for covert investigations of drug smuggling and trafficking in human beings.

Mobile Direction Finder PP007 with digital map system: enables camouflaged tracking of vehicles on land or from the air (e.g. from a helicopter).

Direction Finders DDF195 and DDF0xM
These digital direction finders provide continuous coverage of the range from 500 kHz to 3 GHz and are able to detect signals of extremely short duration. They are suitable for stationary or mobile use. Two or more direction finders networked with the **MapView** software can be combined to form a radiolocation system.

INMARSAT Test System

At sea and in areas not covered by cell-phone, INMARSAT telephones are an alternative that is also used by criminals. The INMARSAT test system from Rohde & Schwarz provides the relevant authorities with surveillance facilities.

Cellphone intelligence

Rohde & Schwarz provides an effective solution in this field, too. Systems for DFing cellphones are also available





Modern workstations for computer-aided device control



The involvement of security agencies does not simply begin when there is a crisis or mission. To be thoroughly prepared for any emergency, a comprehensive amount of data must be collected well in advance.



Tasks

- ◆ Collecting information as a basis for political and military decisions
- ◆ Strategic intelligence
- ◆ Creating and updating databases for basic reference data
- ◆ Recognizing potential crises at an early stage
- ◆ Providing one's own government and allies with information

AMMOS (automatic modular monitoring of signals), an example of a VXI multichannel receiving system with 8 receivers and 2 DSP plug-ins for classification and decoding of data signals

Solutions from Rohde & Schwarz

AMMOS

Potential enemies are increasingly using modern radio data transmission methods. Therefore, an automated, highly integrated and extremely adaptable multichannel system is required to guarantee the interception of changing operating modes and to handle extremely difficult signal environments.



The latest multichannel monitoring systems use VXI* technology. Rohde & Schwarz offers a comprehensive range of HF and VHF-UHF receivers with the associated demodulators, data decoders, classifiers and control software, making it possible to configure automated systems of any size.

GIGOLO

Obtaining basic reference data from satellite communications means the interception and automatic filtering of all voice, fax and data channels of the visible satellites. GIGOLO is Rohde & Schwarz's efficient INMARSAT solution.

*) VME-bus extension for instrumentation (VME: Versa Modular Eurocard)

We are an independent manufacturer of electronic capital goods.

Our name is synonymous with innovation, precision and quality.

A leading position on the European market and worldwide presence

are the foundations of our success.

Who we are and what we do

Rohde & Schwarz is a company with an international presence in the fields of radiocommunications and test and measurement. For more than 60 years, the company group has been developing, producing and marketing a wide range of electronic products for the capital goods sector. The company is headquartered in Munich. With more than 5000 employees worldwide and subsidiaries and represen-

tatives in over 70 countries around the world, the Rohde & Schwarz group achieves an annual turnover in excess of Euro 1 billion. The company is highly export-oriented: more than 75% of the total turnover is achieved outside Germany. Thanks to the comprehensive know-how and creativity of its employees, Rohde & Schwarz is a technology and market leader in all its business areas.

Today the Rohde & Schwarz group of companies is active in the following areas:

- ◆ **Test and measurement**
- ◆ **Radiocommunications systems**
- ◆ **Mobile radio**
- ◆ **Broadcasting**
- ◆ **Radiomonitoring and radiolocation**
- ◆ **IT security**
- ◆ **Services**



Talk to us!

Just call us! We'll help you to close your security gap.

A confidential discussion with our experts will smooth the way to a customized solution that is fully satisfying.

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