

# **Radiocommunication Service Monitor**

## **Signal Sources**

- RF synthesizer from 0.4 to 1000 MHz, resolution 10 Hz, with AM, FM, PM and multitone modulation capabilities
- Two independent modulation generators, from 20 Hz to 30 kHz each, resolution 0.1 Hz
- Selective-call encoder to all standards (also user-programmable)
- CDCSS coder
- ERMES coder
- DTMF coder
- 10 MHz reference frequency input/output
- VOR/ILS signal generator
- Signalling units for all main radio networks

## **Measuring Facilities**

- RF frequency counter, RF frequency-offset counter
- Power meter from 5 mW to 100 W
- Selective RF power meter down to -100 dBm
- RF spectrum monitor with wide dynamic range and filters which also allow modulation analysis (AM, FM, SSB)
- Tracking generator in frequency range from 400 kHz to 1000 MHz
- Adjacent-channel power meter with standard ETSI filters
- Modulation meter for AM, FM and PM
- Duplex modulation meter for duplex spacings of any size
- AF voltmeter
- SINAD meter
- S/N meter
- Distortion meter
- AF frequency counter
- Selective-call decoder
- DTMF decoder
- CDCSS decoder
- Oscilloscope
- DC ammeter/voltmeter
- Transient recorder for analysis of power and frequency transients
- Cable fault test

## **Filters**

- CCITT or C-message filters
- Continuously tunable bandpass filter from 50 Hz to 5 kHz
- Continuously tunable notch filter from 100 Hz to 5 kHz
- Highpass and lowpass filters

## **Other Facilities**

- Second RF input with high sensitivity for off-air measurements
- Built-in 600 ohm AF transformers for modulation generator and AF voltmeter
- Connector for battery (11V to 32V)
- 13 dBm RF output for off-air measurements
- Memory for storing complete instrument setups

## **Signaling - the CMS features built-in signaling units**

- Selective call to all international standards

- MPT 1327/1343 (trunked radio)
- POCSAG/Cityruf/Euromessage
- ZVEI digital, VDEW digital
- FMS-BOS
- User-programmable FFSK modem
- ERMES pager test
- ATIS coder/decoder (Rheinfunk)

**The following signaling routines are available for cellular networks:**

- C Net
- NMT 450 (SIS), NMT 450 I
- NMT 900 (SIS)
- AMPS, E-AMPS, N-AMPS
- TACS, E-TACS, N-TACS, TACS II
- Radiocom 2000
- NMT base station test