



End of the Year Demo Instrument Sale

Are you also looking for new test- and measurement equipment? Or do some of your old equipment need a replacement? Then don't miss this opportunity where you can find demo instruments with up to 95% discount for sale!

We have several instruments with different configurations, so we can most likely find something suitable for your requirements. Of course, the instruments can in most cases be supplemented with additional options.

Prices given are for the instruments as is. Please contact us for additional options, warranty and calibration discussion.

Please note, **first come, first served**. Contact us to check availability.

Rohde & Schwarz Sverige AB, +46 8 605 19 00, info.sweden@rohde-schwarz.com

We offer demo units within the following categories:

- [Oscilloscopes](#)
- [Signal & Spectrum Analysis](#)
- [Network Analysis](#)
- [Function & Signal Generators](#)
- [EMC & Field Strength](#)
- [Broadcasting T&M](#)
- [Meters & Counters](#)
- [Radio Communication Test](#)

The demo catalogue on the following pages is a static document. The catalogue is to be updated throughout the demo campaign, which will run until December 31, 2018.

Oscilloscopes

Article 1

[RTH1004 Handheld Digital oscilloscope, 4 channels](#)**Key facts:**

- Handheld digital oscilloscope,
- 500 MHz bandwidth
- 4 channels
- Sampling rate 5 GSa/s
- Memory depth 500 kSa
- CAT IV 600 V
- Standard accessory: 4 passive 500 MHz probes (RT-ZI10), power adapter, battery

Serial No.

100948
100933

Options included:

RTH-B244 500MHz Bandwidth
HA-Z220: Soft carrying bag

Warranty: 12 months

30%
Discount

~~75 786 SEK~~

53 050 SEK

Article 2

[RTB2004 Digital Oscilloscope, 4 channels](#)**Key facts:**

- Display: 10.1" capacitive touch screen
- Bandwidth: 300 MHz
- Sampling rate: up to 2,5 Gsample/s
- Memory depth: up to 20 Msample
- ADC resolution: 10 bit
- MSO: 16 digital channels optional, also as retrofit

Serial No.

104134

Options Included:

RTB-B241 100 MHz Bandwidth upgrade for
the R&S®RTB2004
RTB-Z1 Front Cover
RTB-Z3 Transport Case

Warranty: 12 months

25%
Discount

~~26 335 SEK~~

19 751 SEK

Signal & Spectrum Analysis

Article 3

[R&S®FPC1000 Entry-Level Spectrum Analyzer](#)**Key facts:**

- 5kHz-1GHz frequency range
- Sensitivity level, typical - 165 dBm
- Frequency upgradeable by software to 2 GHz or 3 GHz
- Phase Noise @100KHz, typical -103dBc

Serial No.

101147

101146

Options Included:

No additional options included

Warranty: 12 months
25%
Discount
~~17 204 SEK~~**12 903 SEK**

Article 4

[HMS-X Spectrum Analyzer, 3GHz](#)**Key facts:**

- 100kHz to 1.6GHz, -104dBm to +20dBm
- RBW: 10kHz to 1MHz, VBW: 1kHz to 1MHz
- AM/FM demodulator, 6.5" VGA TFT
- USB/RS-232, incl. software

Serial No.

101239

Options Included:

HMS-3G: 3GHz extension

HMS-EMC: EMC option incl. preamplifier

HMS-TG: Tracking generator

Warranty: 12 months
60%
Discount
~~51 938 SEK~~**20 776 SEK**

Article 5

[FSIQ26 Signal Analyzer](#)**Key facts:**

- 20 Hz to 27 GHz
- Resolution bandwidth 1 Hz to 10 MHz in 1/2/3/5 steps
- 5-pole resolution filters with high selectivity
- FFT filter with 1 Hz to 1 kHz RBW for fast measurements
- Displayed average noise floor typ. -150 dBm in 10 Hz bandwidth
- Third-order intercept +20 dBm with FSIQ 7, +22dBm with FSIQ26
- Phase noise -150 dBc/Hz at 5 MHz offset
- 75 dB ACPR dynamic range for W-CDMA (4.096 MHz integration BW)

**Alternative #1**

Serial No.
100073/027

Options included:
-B4, -B5, -B7, -b13, -K11, -K21

Alternative #2

Serial No.
840061/0019

Options included:
-B4, -B5, -B7, -B13

Warranty: Exchange right within 2 weeks.

Please note that this is a discontinued product.

20 000
SEK

Signal & Spectrum Analysis Accessories

Article 6

[FS-Z60 Harmonic mixer 40-60 GHz](#)



Key facts:

- Extend the frequency range of Rohde & Schwarz analyzers
- Low conversion loss
- High 1 dB compression point
- High LO frequency range
- No biasing required
- Conversion loss data provided in file format
- Frequency range 40 GHz to 60 GHz

Serial No.

100174

Options Included:

No additional options included

Warranty: 12 months

35%

Discount

~~66 358 SEK~~

43 133 SEK

Article 7

[FS-Z90 Harmonic mixer 60-90 GHz](#)



Key facts:

- Extend the frequency range of Rohde & Schwarz analyzers
- Low conversion loss
- High 1 dB compression point
- High LO frequency range
- No biasing required
- Conversion loss data provided in file format
- Frequency range 60 GHz to 90 GHz

Serial No.

101672

Options Included:

No additional options included

Warranty: 12 months

35%

Discount

~~80 846 SEK~~

52 550 SEK

Network Analysis

Article 8

[R&S®ZNL3 Network Analyzer, 5 kHz to 3 GHz, 2 ports](#)**Key facts:**

- Vector-Network Analyzer, 2 ports,
- 5 kHz to 3 GHz, N(f) connectors
- Combined Network and Spectrum Analyzer

Serial No.
101358

Options Included:

FPL1-B4 OCXO frequency reference (HW opt.)
FPL1-B5 Additional interfaces (plug-in unit) (HW opt.)
ZNL3-B1 Spectrumanalysis function up to 3 GHz
ZNL3-B22 Extended power range down to -40 dBm
ZNL3-B32 Receiver step att., port 2, elect., 30 dB, 10 dB steps

Warranty: 12 months

30%
Discount

~~276 456 SEK~~

193 519 SEK

Article 9

[R&S®ZNL6 Network Analyzer, 5 kHz to 6 GHz, 2 ports](#)**Key facts:**

- Vector-Network Analyzer, 2 ports,
- 5 kHz to 6 GHz, N(f) connectors
- Two-port vector network analyzer for bidirectional measurements

Serial No.
101385

Options Included:

FPL1-B4 OCXO frequency reference (HW opt.)
FPL1-B5 Additional interfaces (plug-in unit) (HW opt.)
ZNL6-B22 Extended power range down to -40 dBm for R&S®ZNL6
ZNL6-B32 Receiver step att., port 2, elect., 30 dB, 10 dB steps

Warranty: 12 months

30%
Discount

~~274 157 SEK~~

191 910 SEK

Article 10

[ZNB20 – Vector network analyzer, 4 ports](#)**Key facts:**

- Frequency range from 9 kHz up to 20 GHz
- Wide dynamic range of up to 140 dB
- Short sweep times, e.g. 4 ms for 401 points
- High temperature stability of typ. 0.01 dB/°C
- Wide power sweep range of 98 dB
- Wide range of IF bandwidths from 1 Hz to 10 MHz
- Manual and automatic calibration
- Large, high-resolution 12.1" screen
- Touchscreen user interface

**Serial No.**

101925

Options Included:

ZNB-B10 GPIB interface

ZNB-B12 PCIe and Direct CTRL interface (HW opt.)

ZNB-B81 4 DC inputs, voltage ranges 100mV, 1V, 10V

ZNB20-B2 Second internal generator (HW opt.)

ZNB20-B24 Extended power range down to -60dBm (HW opt.)

ZN-Z52 Calibration Unit, 4 ports, 3.5 mm (f), 100 kHz to 26.5 GHz

ZN-Z52 Calibration Unit, 4 ports, 3.5 mm (f), 100 kHz to 26.5 GHz

ZV-Z135 Calibrat.kit, 3.5mm(f), 15GHz, Open, Short, Match, Through(acc.)

ZV-Z135 Calibrat.kit, 3.5mm(m), 15GHz, Open, Short, Match, Through(acc.)

4 x ZV-Z193 RF Cable 50 Ohm; 3.5mm(f)-3.5mm(m); DC

26.5GHz, 610mm(24in)

Warranty: 12 months

30%

Discount

~~1 363 133 SEK~~**954 193 SEK**

Function and Signal Generators

Article 11

[SMB100A RF and Microwave Signal Generator 9kHz to 6GHz](#)**Key facts:**

- Excellent signal characteristics with low SSB phase noise of typ. – 128 dBc (at 1 GHz, 20 kHz offset)
- High output power of typ. up to +27 dBm
- All important analog modulations with AM, FM/φM and pulse modulation supported
- Compact size with only two height units and low weight

Serial No.

114654

Options Included:

SMB-B106 Frequency range 9kHz to 6GHz

Warranty: 12 months25%
Discount~~203 985 SEK~~**152 989 SEK**

Article 12

[SMB100A RF and Microwave Signal Generator 100kHz to 40GHz](#)**Key facts:**

- Excellent signal characteristics with low SSB phase noise of typ. – 128 dBc (at 1 GHz, 20 kHz offset)
- High output power of typ. up to +27 dBm
- All important analog modulations with AM, FM/φM and pulse modulation supported
- Compact size with only two height units and low weight

Serial No.

180542

Options Included:

SMB-B1H OCXO high performance

SMB-B140 Frequency range : 100kHz to 40GHz

SMB-B26 Low harmonic filter for R&S®SMB-B140,-B140L

SMB-B32 High output power for R&S®SMB-B140/-B140L

Warranty: 12 months25%
Discount~~518 245 SEK~~**388 684 SEK**

Article 13

[SMA100B RF and Microwave Analog Signal Generator](#)**Key facts:**

- Frequency range from 8 kHz to 20 GHz
- Excellent SSB phase noise of -152 dBc (typ.) at 1 GHz and -132 dBc (typ.) at 10 GHz, each at 20 kHz offset
- Virtually no wideband noise -162 dBc (meas.) at 10 GHz and an offset of 30 MHz
- Ultra high output power
- Up to 38 dBm with the 6 GHz instrument
- Up to 32 dBm in the microwave frequency range with the 20 GHz instrument
- Exceptionally low harmonics
- State-of-the-art GUI with touchscreen

Serial No.

101139

Options Included:

SMAB-B120 Frequency range: 8 kHz to 20 GHz (HW opt.)

SMAB-B711 Ultra low phase noise (HW opt.)

SMAB-B86 Remote control GPIB/USB (HW opt.)

SMAB-B93 Height unit 3 HU (HW opt.)

Warranty: 12 months**25%**
Discount~~500 816 SEK~~**375 612 SEK**

Article 14

[SMW200A – Vector signal generator](#)**Key facts:**

- Options for all important digital communications standards
- Optional integrated fading simulator with up to 160 MHz bandwidth
- Support of all key MIMO modes including 3x3, 4x4, 8x4, 4x8 and 4x2x2

Alternative #1**Serial No.**

103643

Options Included:

2x SMW-B10 Baseband generator with realtime coder and ARB

SMW-B106 Frequency range : 100kHz to 6GHz for RF path A

SMW-B206 Frequency range : 100kHz to 6GHz for RF path B

B

SMW-B13T Baseband main module, two I/Q paths to RF section

SMW-B14 Fading simulator

SMW-B90 Phase coherence

30%

Discount

~~1 121 272 SEK~~**784 890 SEK****Alternative #2****Serial No.**

103456

Options included:

SMW-B13XT Wideband baseband main module, 2 I/Q paths to RF

SMW-B140 Frequency range: 100kHz to 40GHz, for RF path A

2 x SMW-B9 Wideband baseband generator, 500 MHz, 256 MS

30%

Discount

~~2 079 053 SEK~~**1 455 337 SEK****Warranty:** 12 months

Article 15

[SMIQ03 Signal Generator](#)**Key facts:**

- Frequency range 300 kHz to 3.3 GHz
- Analog and digital modulation
- Versatile and broadband generation of digitally modulated signals up to 18 Msymbol/s
- Generation of TDMA, CDMA, WCDMA and CDMA2000 standard signals to all main mobile radio standards
- Broadband I/Q modulator with outstanding vector accuracy

**Serial no:**

847867/0003
838241/0049
832102/0063
836207/0018
838234/0047
100946/0003
838965/0007
835034/0019

Options Included:

Several models available contact us to find your configuration

Warranty: Exchange right within 2 weeks.

Please note that this is a discontinued product.

5 000
SEK

Article 16

SMT03 Signal Generator

Key facts:

- 5 kHz to 3 GHz
- Ideal EMS signal source with specified frequency range from 5 kHz
- AM, FM, ϕ M, pulse modulation
- FM DC with high carrier frequency accuracy
- Broadband FM from DC to 8 MHz, broadband ϕ M from DC to 2 MHz
- Convenient RF/LF/level sweep
- Programmable level correction (compensation of external frequency response)



Serial No,
844683/025

Options Included:

No additional options included

Warranty: Exchange right within 2 weeks.

Please note that this is a discontinued product.

5 000
SEK

Article 17

[SMA100A Signal Generator](#)**Key facts:**

- Frequency options from 9 kHz to 3 GHz
- Very low SSB phase noise of typ. -141 dBc (at 1 GHz, 20 kHz offset, 1 Hz measurement bandwidth) with option
- Nonharmonics <-96 dBc (f < 750 MHz, carrier offset > 10 kHz) with option
- High output power of up to +18 dBm (+28 dBm in overrange)
- Emulation of legacy instruments
- Electronic attenuator with built-in overvoltage protection over entire frequency range

Alternative #1**Serial No.**

103168-mN
102100
102493-Yp

Options Included:

SMA-B103 Frequency range 9kHz-3GHz, electronic attenuator.

82%

Discount

Alternative #2~~199 360 SEK~~**Serial No.**

101955
101977
101097
102221
101888

35 000 SEK

84%

Discount

Options Included:

SMA-B103 Frequency range 9kHz-3GHz, electronic attenuator.
SMA-B22 Enhanced phase noise performance and FM/PHM modulator

Warranty: Exchange right within 2 weeks.

~~249 068 SEK~~

40 000 SEK

EMC & Field Strength

Article 18

[HM6050-2D Line Impedance Stabilization Network](#)



Key facts:

- Single-phase V-network to measure line-conducted interferences from 10 kHz to 30 MHz (based on CISPR 16, amplitude/frequency characteristics)
- Selectable transient limiter
- Artificial hand connector

Serial No.
19778170

Options Included:
No additional options included

Warranty: 12 months

25%
Discount

~~12 540 SEK~~

9 405 SEK

Article 19

[BBA150 – Broadband Amplifier 690 MHz – 6 GHz, 100 W](#)



Key facts:

- Frequency bands:
 - 690 kHz to 3,2 GHz, 110W
 - 2,5 GHz to 6 GHz, 100 W
- 100 % mismatch tolerance
- Suitable for amplitude, frequency, phase and pulse modulation

Serial No.
102073

Options Included:
BBA 150 / BBA-B110 / BBA-B120 / BBA-B130 / BBA-B140 / BBA-B142 /
BBA-B160 / BBA-B101 / BBA-B132

Warranty: 12 months

40%
Discount

~~700 000 SEK~~

420 000 SEK

Broadcasting T&M

Article 20

EFL340 Portable TV Test Receiver**Key facts:**

- Cable, satellite and terrestrial TV
- DVB-T2/T/H, DVB-C, DVB-S2/S, analog TV,
- MPEG-2 and MPEG-4 decoding
- ASI and LAN interface

Serial No.

101358

101528

Options Included:

No additional options

Warranty: Exchange right within 2 weeks50%
Discount~~79 525 SEK~~**39 763 SEK**

Article 21

R&S®EFL-Z100 VHF/UHF Directional Antenna**Key facts:**

- To R&S®EFL110/R&S®EFL210/ R&S® 340 Cable TV Analyzer and Leakage Detector

Serial No.

101086

Warranty: 12 months25%
Discount~~17 556 SEK~~**13 167 SEK**

Article 22

[DVMS1 DTV Monitoring System](#)



Key facts:

- Simultaneous monitoring of up to four signals
- RF modules for DVB-T/DVB-T2 and DVB-S/DVB-S2
- IP module for electrical and optical (SFP) connections
- Support for DVB, ATSC and ISDB-T/ISDB-TB transport streams
- T2-MI and BTS support

Serial No.

101453

Options Included:

DVMS-B53 DVB-T / H receiver module
DVMS-PK01 Monitoring option package
DVMS-PK02 Analysis option package
DVMS-K1 TS Monitoring

Warranty: 12 months

60%
Discount

112 144 SEK

44 858 SEK

Article 23

[SFC-U USB Compact Modulator](#)



Key facts:

- USB Compact Modulator
- Basic instrument
- Coder option (s) required

Serial No.

101285

Options Included:

LIB-K70: DVB, ATSC, ISDB-T, Basic TS-library
SFC-U-K22: Transport stream player
SFC-U-K23: Analog TV video generator
SFC-U-K40: Noise generator AWGN
SFC-U-K80: Digital I/Q input
SFC-U-K84: Electronic attenuator, 0 to 110 dB
SFC-U-PK1: Option package terrestrial TV, realtime coders
SFC-U-PK2: Option package cable TV, realtime coders
SFC-U-PK4: Option package T2/C2, realtime coders

Warranty: 12 months

50%
Discount

96 995 SEK

48 498 SEK

Article 24

[SFC Compact Modulator](#)**Key facts:**

- Compact Modulator
- Basic instrument
- Coder option(s) required

**Serial No.**

100264

Options Included:

SFC-B15: Coder extension
LIB-K70: DVB, ATSC, ISDB-T, Basic TS-library (SL)
SFC-K1: DVB-T DVB-H, realtime coder
SFC-K2: DVB-C ISDB-C, realtime coder
SFC-K16: DVB-T2, realtime coder
SFC-K22: Transport stream player
SFC-K23: Analog TV video generator
SFC-K80: Digital I/Q input
SFC-K40: Noise generator AWGN
SFC-K84: Electronic attenuator, 0 to 110 dB

50%
Discount

~~179 683 SEK~~**Warranty:** 12 months**89 841 SEK**

Article 25

R&S®ETL TV Analyzer**Key facts:**

- Frequency range from 500 kHz to 3 GHz
- TV, FM (radio), video, audio, MPEG-2 transport stream and spectrum analysis in a single box
- FPGA and chip-based realtime demodulators for analog TV, DVB-T, DVB-T2, DVB-H, ATSC/8VSB, ATSC Mobile DTV, ISDB-T_(B), J.83/A/C, DVB-C, J.83/B, DTMB, T-DMB/DAB and FM (radio)
- Baseband outputs
- Preselection with additional 75 Ω RF input
- Video signal generator
- Audio signal generator
- MPEG-2 transport stream generator/recorder
- Support of power sensors
- DC input and rechargeable Li-ion battery

**Serial No.**

103733

Options Included:

ETL-B203 RF Preselector, 75 Ohm input, signal splitter for ETL-B10

ETL-B280 MPEG processing board

ETL-B281 Video and audio hardware decoder

ETL-B310 FPGA Ext. Board, High SNR FM

ETL-K110 FM(radio) Firmware

ETL-K240 DVB-T/H Firmware

ETL-K282 MPEG Analysis/Monitoring

ETL-K340 DVB-T2 Firmware

FSL-B4 OCXO reference frequency

FSL-B5 Additional interfaces, video/IF-output, power meter

FSL-B7 Narrow resolution filters 10 Hz-300 Hz

FSL-K9 Power sensor measurements with NRP power heads

40%
Discount

~~684 654 SEK~~**410 792 SEK****Warranty:** 12 months

Meters & Counters

Article 26

[HMC8012 Digital Multimeter](#)**Key facts:**

- Measurement range: DC to 100 kHz
- Resolution: 1 μ V, 100 nA, 1 m Ω , 1 pF, 1 Hz, 0.1 $^{\circ}$ C/F
- Basic accuracy: 0.015 % (DC)
- True RMS measurement, AC and AC+DC
- 5 $\frac{1}{4}$ -digit display (480 000 counts)

Serial No.
102190

Options Included:
No additional options included

Warranty: 12 months

30%
Discount

~~7 712 SEK~~

5 399 SEK

Article 27

[HM8123-X Universal Counter](#)**Key facts:**

- OCXO (temperature stability: $\pm 1.0 \times 10^{-8}$)
- Measurement range: DC to 3 GHz
- Input A/B (BNC): DC to 200 MHz
- Input C (SMA): 100 MHz to 3 GHz
- Input impedance A/B: 50 Ω or 1 M Ω (switchable), sensitivity 25 mV
- Input impedance C: 50 Ω , sensitivity 30 mV
- 10-digit resolution (at 10 s gate time)
- Nine measurement functions, external GATE and ARMING connectors (BNC)

Serial No.
101309

Options Included:
No additional options included

Warranty: 12 months

30%
Discount

~~24 140 SEK~~

16 898 SEK

Article 28

[NRP18AN Average Power Sensor](#)



Key facts:

- 8KHz-18GHz
- 100pW-200mW
- N(m)

Serial No.

100985

Options Included:

No additional options included

Warranty: 12 months

20%
Discount

~~64 879 SEK~~

51 903 SEK

Article 29

[NRP33SN Three-Path Diode Power Sensor](#)



Key facts:

- 10MHz-33GHz
- 100pW-200mW
- N(m)

Serial No.

100927

Options Included:

No additional options included

Warranty: 12 months

20%
Discount

~~129 758 SEK~~

103 806 SEK

NRP Power Meter series

Article 30

[R&S®NRP-Z21 Three-Path Diode Power Sensors](#)**Key facts:**

- Average power sensor for universal use
- 10 MHz - 18 GHz, 200 pW - 200 mW, N(m)
- Operation with R&S®NRP2 base unit or via USB on a Laptop/PC

35%

Discount

Serial No.
103177

~~45 989 SEK~~

Warranty: 12 months

29 893 SEK

Article 31

[NRP-Z81 Wideband Power Sensor](#)**Key facts:**

- Wideband Power Sensor
- 50MHz to 18GHz; 1nW to 100mW
- 30MHz video bandwidth
- N(m)

35%

Discount

Serial No.
101817

~~69 714 SEK~~

Warranty: 12 months

45 314 SEK

Article 32

[NRP-Z86 Average Power Sensor](#)**Key facts:**

- Measurement range: -60 dBm to +20 dBm (1 nW to 100 mW)
- Frequency range: 50 MHz to 40 GHz
- 2.4 mm connector

35%

Discount

Serial No.
104036

Options Included:

No additional options included

~~78 260 SEK~~

Warranty: 12 months

50 869 SEK

Article 33



[NRP-Z28 Level Control Sensor](#)

Key facts:

- Level Control Sensor 10MHz to 18GHz,N(m)
(for signal generators)

Serial No.

100135

Warranty: 12 months

25%

Discount

~~80 059 SEK~~

60 044 SEK

Article 34



[NRP-Z27 Power Sensor](#)

Key facts:

- Power sensor module DC to 18GHz, N(m) (for FSMR)

Serial No.

100174

Warranty: 12 months

25%

Discount

~~91 190 SEK~~

68 393 SEK

Radio Communication Test

Article 35

[R&S®CTH200A Portable Radio Test Set](#)**Key facts:**

- The R&S®CTH allows dependable testing of analog FM radio systems even under challenging environmental conditions. The radio test set was designed especially for outdoor use.
- Extensive measurement capabilities
- Handy and ergonomic
- Rugged and all-weatherproof

Serial No.
101609

Options Included:
No additional options included

Warranty: 12 months

50%
Discount

~~26 424 SEK~~

14 712 SEK

Terms and Conditions

Delivery terms

CIP to address INCOTERMS 2010

Delivery time

As soon as possible. Specific delivery time will be determined case by case and stated in the final order acknowledgement.

Warranty

Rohde & Schwarz delivers high quality test- & measurement equipment. Warranty is specified on each article above. Warranty starts upon date of delivery.

Payment terms

Individual payment terms are to be defined by local sales representatives.

Limitations and restrictions

The offers are subject to the equipment remaining unsold. First come, first served. For availability, contact your local sales representative. Additionally, errors and omissions are expected.