

*Made
to Measure*



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DOCSIS
CATV

75Ω
"F"
CONNECTOR

50Ω
"N"
CONNECTOR

DAB+

S2M

T2

HEVC



OF INSTRUMENTS



ASI T.S.
ANALYZER

T2 MI
ANALYZER

IPTV
ANALYZER

OPTIC
ST/SC/FC



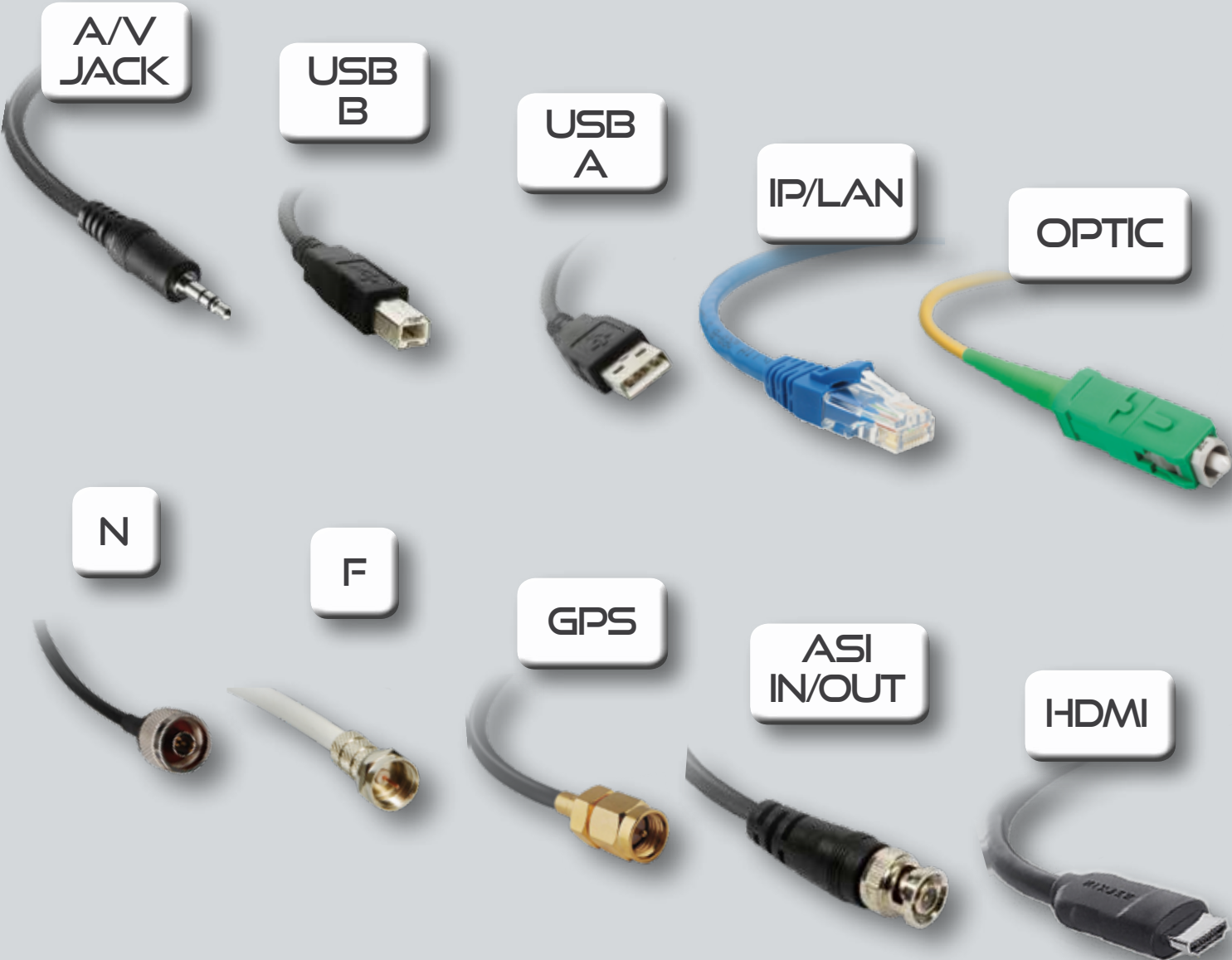
DOLBY
APPROVED



AVIONIC ALUMINIUM BODY



& TOTAL CONNECTIVITY



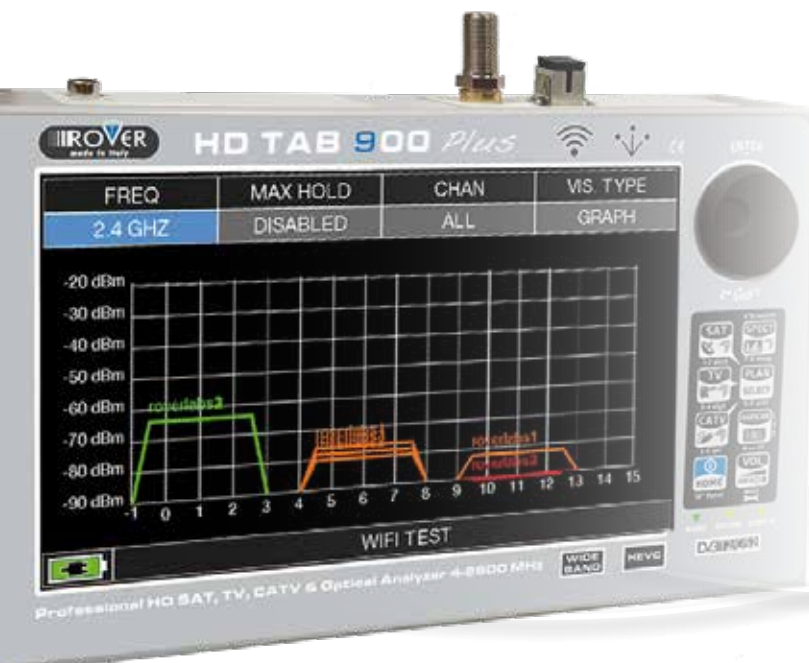
NEW NAVIGATION ICON MENU

A new user interface very intuitive.
It allow the fast selection of the
function and of the measure you
need with one click.

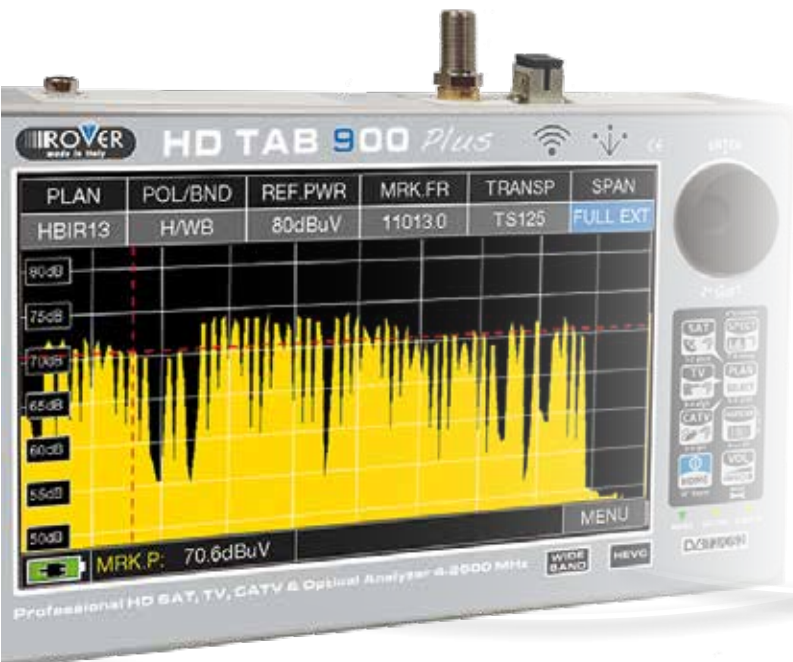


WI-FI ANALYSIS

Analyze all the wi-fi networks in the building
and than check the power of the signal.



WIDE BAND RECEPTION



Compatible with the new systems WIDE BAND LNB, our equipments are able to measure the full band from 230 to 2610 MHz.

SATELLITE FAST TEST



Thanks to this function the user can check up to 4 satellite transponders quality at the same time. Also usefull to check the correct function of the LNB in all the polarities.

NETWORK DELAY

The Network Delay measurement is indispensable when operating in DVB-T SFN networks. It measures the Transport Stream Network Delay and checks that it does not exceed the TS MIP packet maximum value.



ETR 101-290 T.S. ANALYZER

The meter has a built-in TS analyzer that provides complete ETR101-290 priority 1–2–3 alarms monitoring. It analyses the transport streams, either demodulated from one of the RF inputs, injected via the ASI input connector or received via the GbE interface.



GPS



The meter has an internal GPS receiver. It allows you to carry out the analysis of a GPS reception antenna quality. It also provides time reference for the Network Delay function and location data when performing on-field measurement loggers when driving in a car or standing on. This is practical for Network Operators because it allows signal verification coverage in specific areas and simultaneous comparison of several signals.

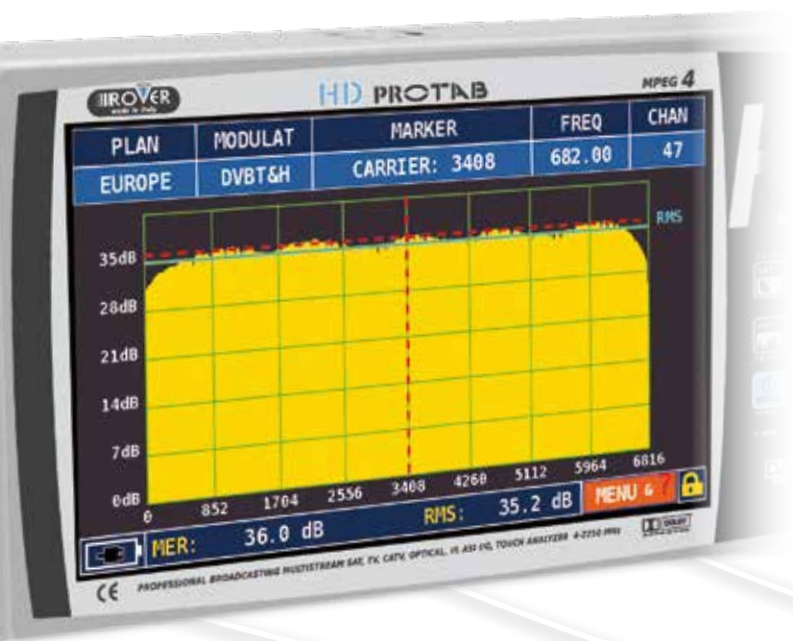


BARSCAN LEVEL GRAPH

Simultaneously check the level/power of all analog & digital channels. In TV standard canalization the meter displays the level/power of all channels as a bar graph. In AUTOMEMORY or MANUMEMORY PLAN the meter displays only the memorized channels and distinguishes Analog and Digital signals using two different colours (shows audio level).

MER VS CARRIER

The MER measurement, performed for every single carrier in a DVB-T & T2 COFDM mux, is an indispensable tool to spot the impairments on the received digital signal.



MER vs CARRIER Reverse visualization.

Looking for HOTBIRD 13°

SAT EXPERT FUNCTION

The "SATEXPERT SW" function, is a valuable aid for a fast satellite antenna pointing to a wanted satellite.

Through text messages, which appear from time to time on the screen, the measuring instrument will indicate in which direction to move the satellite dish, to the east or to the west, until you reach the wanted satellite.



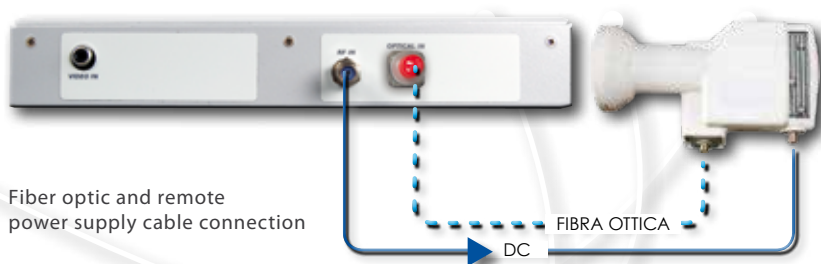
Found HOTBIRD 13°

Example pointing Hot Bird 13 ° East
The tool informs you that the dish is oriented on the correct satellite via the message HBIR13 FOUND!

OPTIC



The meter has an internal optical to RF converter. Can measures the OPTICAL POWER and OPTICAL ATTENUATION, carries out RF measurements (from the optical input), decodes the services and visualizes the spectrum.



Fiber optic and remote power supply cable connection



Measurements and pictures



Spectrum visualization

LONG TERM CHANNEL LOGGER OR QoS









Record the Quality of Service (QoS) using the WEEKLY CHANNEL LOGGER SW application (supplied with the ROVER HD Series).

This useful tool monitors and records the trend of the main parameters of a digital signal over time (from 30 minutes to 7 days): TV, Cable, Satellite, Radio or FM (DAB option available for specific models).

It is excellent for reception problems that occur occasionally.

The application allows you to measure, store and display (locally or remotely*) the parameters of the digital signals under test: DVB-S/T/C = Power, MER, ERROR, bBer, aBer; DVB-S2/T2/C2 = Power, MER, ERROR, aBer, Lber, PER, Ldcp. Each recorded parameter is graphically represented on the display using different colors for easy identification.

	HD TAB 9 <i>Plus</i>	HD TAB 900 <i>Plus</i>	TAB 7 <i>Ultra</i>	HD TAB 5 <i>Ultra</i>	HD TAB 5 <i>Lite</i>	HD TAB 5 <i>Sat</i>
						
FREQ. RANGE	4 - 2250 MHz	5 - 2610 MHz	5 - 2610 MHz	30 - 2700 MHz	30 - 2700 MHz	700 - 2700 MHz
LEVEL RANGE	28 - 130 dBµV	28 - 130 dBµV	28 - 130 dBµV	35 - 115 dBµV	35 - 115 dBµV	35 - 115 dBµV
STANDARD DVB-T/S2/C	•	•	•	•	•	S - S2
STANDARD DVB-T2/T2 LITE	•	•	•	•	•	-
STANDARD DVB-S2 MULTISTREAM	•	•	-	-	-	-
WIDE BAND IN	-	•	•	-	-	-
SAT EXTENSION up to 2.610 MHz	opt.	•	•	-	-	-
DAB & DAB+	opt.	opt.	opt.	-	-	-
CAM C.I.	•	-	-	-	-	-
LTE ANALYSIS	•	•	•	•	•	-
OPTICAL INPUT	•	•	opt.	opt.	-	opt.
H265 HEVC	opt.	opt.	opt.	opt.	-	opt.
SAT EXPERT	•	•	•	•	•	•
TS ANALYZER ETR 101 290	•	-	-	-	-	-
TS RECORDER	opt.	opt.	opt.	-	-	-
MER VS CARRIER	•	•	•	•	•	-
MER	•	•	•	•	•	•
CONSTELLATION	•	•	•	•	•	•
DISEQC - dCSS - SCR	•	•	•	•	•	•
REFLECTOMETER	•	•	•	opt.	opt.	-
MINISPECTRUM	•	-	-	-	-	-
ECHOES ANALYSIS	•	•	•	•	•	-
ANALOG TV	MEAS & PICT	MEAS & PICT	MEAS (PICT opt.)	MEAS only	MEAS only	-
Wi-Fi	-	opt.	opt.	opt.	-	opt.
GPS	opt.	-	-	-	-	-
NOISE MARGIN GRAPH	•	•	•	•	•	•
IPTV	opt.	opt.	opt.	-	-	-
ASI IN-OUT	•	-	-	-	-	-
LAN	•	•	•	-	-	-
REMOTE MONITORING	•	•	•	-	-	-
DRIVE TEST	opt.	-	-	-	-	-
DOLBY AC3DD +	opt.	opt.	opt.	opt.	opt.	opt.
VIDEO IN RCA (CVBS)	•	•	•	•	•	-
HDMI OUT	•	•	•	-	-	-
USB	A + B	A + B	A + B	B	B	B
TFT	9"	9"	7" High Brightness	5"	5"	5"
TOUCH SCREEN DISPLAY	•	•	•	•	•	•
WEIGHT & DIMENSIONS	2,6 Kg / 29,0 x 17,0 x 5,5 cm	1,8 Kg / 15,5 x 27,0 x 4,0 cm	1,8 Kg / 27,0 x 15,5 x 4,0 cm	1,4 Kg / 13,0 x 25,5 x 4,0 cm	1,4 Kg / 13,0 x 25,5 x 4,0 cm	1,4 Kg / 13,0 x 25,5 x 4,0 cm
BATTERY CAPACITY	from 2 to 4 hours	from 2 to 4 hours	from 2 to 4 hours	from 2 to 4 hours	from 2 to 4 hours	from 2 to 4 hours
BAG	RUGGED BAG	RUGGED BAG	RUGGED BAG	EASY BAG	EASY BAG	EASY BAG
DOCSIS	DOWN STREAM	DOWN STREAM	DOWN STREAM	DOWN STREAM	-	-

EASY & COMBINED FIELD METER

DVB-T2/C/S2

AUTOMATIC, FAST & EASY-TO-USE



5" HIGH
BRIGHTNESS
16:9 DISPLAY

FULL TOUCH
Excludable

EXCLUSIVE DUAL
COMMANDS

MECHANICAL
Keys & Encoder

75Ω
"F"
Connector

RF IN

- FREQ. RANGE 30-2700 MHz
- DVB-S/S2
- DVB-T, T2/T2 LITE MULT. PLP(OPT.) & C
- SPECTRUM
- GSM BAND
- **LTE ANALYZER**
- SAT EXTENSION 700-2700 MHz

APPS

- SAT EXPERT
- MER vs CARRIER
- REFLECTOMETER
- DOLBY AUDIO

MAIN FUNCTIONS

SPECIAL FUNCTIONS

- **Exclusive patented ROVER AUTODISCOVERY system:** auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode.
- **Automatically identifies all the signals with digital modulation SAT, TV and CATV.**
- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Barscan TV & CATV function from 10 to 100 channels on one screen.**
- **Buzzer & Noise Margin real time graph for digital signals microinterruptions.**
- **Reflectometric measurements APP** (opt.).
- **SATELITE:** DiSEqC, SCR, dCSS & Motorized antenna commands, SAT FINDER & SAT EXPERT
- **Custom Channel Plans:** 25 (199 ch. per plan), Programmable TV, SAT (or combined TV/SAT) by PC or Local Keyboard.
- **Loggers:** TV, SAT & combined with stop & go function.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
- **Free SMART PC interface program and FW upgrades.**
- **OPTIONS*:** check the Cross reference on page 12.

SPECIFICATIONS: MEASUREMENTS, SPECTRUM ANALYSIS & PICTURES

- **Frequency Range:** TV, CATV & Radio: 30-1000 MHz; SAT: 700-2700 MHz.
- **Frequency Resolution:** TV & CATV 25 KHz; SAT: 5 MHz.
- **Power range Meas.:** TV 35 to 115 dBμV, SAT 5 to 105 dBμV.
- **Digital Meas:** Digital Power, MER (36 to 40 dB max depending on modulation), BER, PER, LDPC, BCH, Noise Margin, MER versus CARRIER.
- **Measurement Resolution:** 0.1 dB.
- **Level Measurement Accuracy:** 1 dB typ. (2 dB max.)
- **Resolution Filter Bandwidth:** TV & CATV: 100 KHz @ -3 dB; SAT: 5 MHz @ -3 dB.
- **Constellation:** for TV/CATV and SAT signals.
- **Spectrum:** Fast spectrum, Max Hold and spectrum memorization with real time compare function.
- **Net-id on board:** Net-id, NID, TSID, LCN, SAT Orbit Position.
- **Echoes, Pre-echoes, Micro-echoes:** Representation in real Time.
- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **Digital Pictures:** MPEG2-4 SD & HD, pictures with Program List, Audio Video PIDs, LCN, Video bit Rate all on one screen.

COMM. PORTS AND OUTPUTS

- **RF Input** : 75 ohm (interchangeable "F").
- **USB 2.0**: Type B (PC Interface).
- **Audio**: AAC supplied, DOLBY (opt.).
- **Video**: Composite Video input.

GENERAL SPECIFICATIONS

- **5" TFT TOUCH display**: 16:9 high resolution and high brightness.
- **Power Supply**: Built in LiPo battery with 2 to 4 hours duration (depending on the function) & Battery Test function.
- **DC voltage at RF input**: 5 - 12 - 18 - 24 V, DC DiSEqC, SCR & dCSS commands.
- **PC Interface**: USB-B.
- **Front-Panel**: Alpha numeric keypad.
- **Power Save**: TFT backlight timer, brightness adj.
- **PC Management**: SMART software.
- **Weight**: only 1,4 Kg with batteries.
- **Size**: H 13,0 x W 25,5 x D 4 cm.
- **Housing**: Aluminium and Steel and Light bag. (Elite bag with extra padding Optional.)

NOTE: Some options must be requested when ordering the instrument.

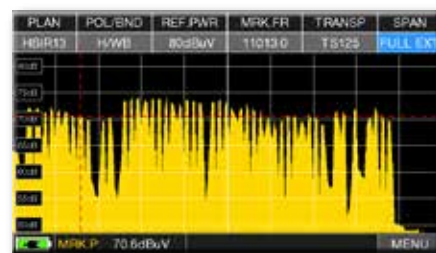
Visit WWW.ROVERSHOP.IT
to check the available accessories.

Features and functions may change without notice.

MEASUREMENT EXAMPLES



New Icon Navigation Menu



SAT Spectrum



New Meas. & Pict. Super fast

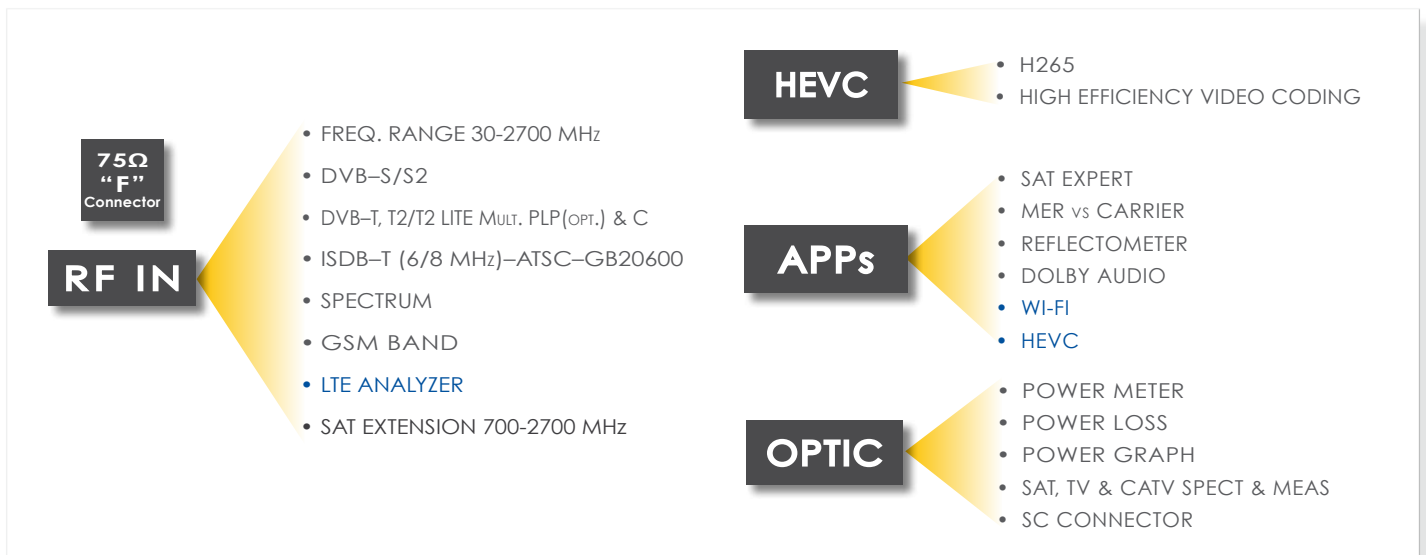


SAT FINDER

THE MOST EASY & COMBINED FIELD METER WITH HEVC

DVB-T2/C/S2
H265 - HEVC

AUTOMATIC, FAST & EASY-TO-USE



MAIN FUNCTIONS

SPECIAL FUNCTIONS

- **Exclusive patented ROVER AUTODISCOVERY system:** auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode.
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- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Barscan TV & CATV function from 10 to 100 channels on one screen.**
- **Buzzer & Noise Margin real time graph for digital signals microinterruptions.**
- **Reflectometric measurements APP (opt.).**
- **Optical Input (opt.).**
- **WI-FI analyzer (opt.).**
- **HEVC H265 decoder (opt.).**
- **SATELITE:** DiSEqC, SCR, dCSS & Motorized antenna commands, SAT FINDER & SAT EXPERT
- **Custom Channel Plans:** 25 (199 ch. per plan), Programmable TV, SAT (or combined TV/SAT) by PC or Local Keyboard.
- **Loggers:** TV, SAT & combined with stop & go function.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
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- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **Digital Pictures:** MPEG2-4 SD & HD, HEVC (opt.) pictures with Program List, Audio Video PIDs, LCN, Video bit Rate all on one screen.

OPTICAL MEASUREMENTS

- **SC input connector.**
- **Automatic loss calculation.**
- **Wavelengths (nm):** 1310, 1490, 1550.
- **Range:** -25 to +6 dBm.
- **Resolution:** 0.1 dB.
- **Accuracy:** +/- 0.5 dB.
- **Optical to RF conversion.**

COMM. PORTS AND OUTPUTS

- **RF Input :** 75 ohm (interchangeable "F").
- **USB 2.0:** Type B (PC Interface).
- **Audio:** AAC supplied, DOLBY (opt.).
- **Video:** Composite Video input.

GENERAL SPECIFICATIONS

- **5" TFT TOUCH display:** 16:9 high resolution and high brightness.
- **Power Supply:** Built in LiPo battery with 2 to 4 hours duration (depending on the function) & Battery Test function.
- **DC voltage at RF input:** 5 - 12 - 18 - 24 V, DC DiSeqC, SCR & dCSS commands.
- **PC Interface:** USB-B.
- **Front-Panel:** Alpha numeric keypad.
- **Power Save:** TFT backlight timer, brightness adj.
- **PC Management:** SMART software.
- **Weight:** only 1,4 Kg with batteries.
- **Size:** H 13,0 x W 25,5 x D 4 cm.
- **Housing:** Aluminium and Steel and padded bag.

OPTIONS

- Optic Ingress
- Decoding HEVC H265 images
- Wi-Fi analyzer
- Dolby Audio AC3 DD+
- Elite bag with extra padding

NOTE: Some options must be requested when ordering the instrument.

Visit WWW.ROVERSHOP.IT to check the available accessories.

Features and functions may change without notice.

MEASUREMENT EXAMPLES



New Icon Navigation Menu



Wi-Fi Analyzer



New constellation diagram



SAT Spectrum



New Meas. & Pict. Super fast



SAT FINDER

THE MOST INNOVATIVE TABLET FIELD METER COMBINED WITH HEVC

DVB-T2/C/S2
H265 - HEVC

**AUTOMATIC, FAST
& EASY-TO-USE**

**7" HIGH
BRIGHTNESS
16:9 DISPLAY**

**NEW
OPTIONS**



**HEVC
H265**



**WIDE
BAND**

IPTV

**FULL TOUCH
Excludable**

**EXCLUSIVE DUAL
COMMANDS**

**MECHANICAL
Keys & Encoder**

RF IN

**75Ω
"F"
Connector**

- FREQ. RANGE 4-2610 MHz
- DVB-S/S2
- DVB-T, T2/T2 LITE MULTI PLP(OPT.) & C/C2
- ISDB-T (6/8 MHz)-ATSC-GB20600
- ANALOG TV (OPT.)
- FM RADIO (OPT.)
- **DAB & DAB + (OPT.)**
- REAL TIME SPECTRUM (4-2610 MHz)
- GSM BAND
- LTE ANALYZER
- SAT DiSEqC, SCR & dCSS
- **WIDE BAND**

LAN

- REMOTE CONTROL
- **HTTP**

HEVC

(OPT.)

- H265
- HIGH EFFICIENCY VIDEO CODING

OPTIC

SC CONNECTOR
(OPT.)

- POWER METER
- POWER LOSS
- POWER GRAPH
- SAT, TV & CATV SPECT & MEAS

APPS

- SAT EXPERT
- MER vs CARRIER
- REFLECTOMETER
- REMOTE CONTROL
- Optional:
 - FM RADIO & Analog TV
 - TS Streaming
 - **WI-FI**
 - **HEVC**
 - **IPTV**

MONITORING

(OPT.)

- 7 DAYS CHANNEL MONITORING
- LOGGER
- REMOTE PC/TABLET CONTROL
- USB ON THE GO FOR LONG TERM LOGGING
- **QOS 24 H WITH NMS**

MAIN FUNCTIONS

SPECIAL FUNCTIONS

- **NEW** Intuitive navigation system with direct access to functions.
- **Exclusive patented ROVER AUTODISCOVERY system:** auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode.
- **Automatically identifies all the signals with digital modulation SAT, TV and CATV.**
- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Barscan TV & CATV function from 10 to 100 channels on one screen.**
- **Buzzer & Noise Margin real time graph for digital signals microinterruptions.**
- **Reflectometric measurements APP.**
- **Optical Input** (opt.).
- **WI-FI analyzer** (opt.).
- **HEVC H265 decoder** (opt.).
- **SATELITE:** DiSEqC, SCR & dCSS, SAT FINDER & SAT EXPERT Functions.
- **Custom Channel Plans:** 25 (199 ch. per plan), Programmable TV, SAT (or combined TV/SAT) by PC or Local Keyboard.
- **Loggers:** TV, SAT & combined with stop & go function.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
- **Free SMART PC interface program and FW upgrades.**

SPECIFICATIONS: MEASUREMENTS, SPECTRUM ANALYSIS & PICTURES

- **Frequency Range:** TV Tuner & CATV extended band 4-1250 MHz; SAT TUNER extended band 930-2610 MHz; GSM extended band 860-1000 MHz for telephone repeater installations.
- **Wide Band:** 230-2610 MHz
- **Frequency Resolution:** TV & CATV: 25 KHz; SAT: 5 MHz.
- **Power Range Meas.:** TV 35 to 115 dBμV, SAT 5 to 105 dBμV.
- **Digital Meas:** Digital Power, MER (36 to 40 dB max depending on modulation), BER, PER, LDPC, BCH, Noise Margin, MER versus CARRIER.
- **Measurement Resolution:** 0.1 dB.
- **Level Measurement Accuracy:** 1 dB typ. (2 dB max.)
- **Resolution Filter Bandwidth:** TV & CATV: 100 KHz @ -3 dB; SAT: 1 MHz @ -3 dB.
- **Constellation:** for TV/CATV and SAT signals.
- **Spectrum:** Fast spectrum, Max Hold and spectrum memorization with real time compare function.
- **Net-id on board:** Net-id, NID, TSID, LCN, SAT Orbit Position.
- **Echoes, Pre-echoes, Micro-echoes:** Representation in real Time.
- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **Digital Pictures:** MPEG2-4 SD & HD, HEVC (opt.) pictures with Program List, Audio Video PIDs, LCN, Video bit Rate all on one screen.
- **Audio:** AAC supplied, DOLBY AC3 DD+ (opt.).

OPTICAL MEASUREMENTS

- **Maximum Ingress Power:** 5 dBm.
- **SC input connector.**
- **Automatic loss calculation.**
- **Wavelengths (nm):** 1310, 1490, 1550.
- **Range:** -25 to +6 dBm.
- **Resolution:** 0.1 dB.
- **Accuracy:** +/- 0.5 dB.
- **Optical to RF conversion:** SAT, TV & CATV Measurements and Spectrum.

COMM. PORTS AND OUTPUTS

- **RF Input** : 75 ohm (interchangeable "F").
- **SC optic ingress** (opz.)
- **USB 2.0**: Type B (PC Interface), Type B (for Memory stick).
- **Composite Video input**.
- **HDMI**: Images output & OSD
- **LAN**: ETHERNET Gbit
- **WIFI**: 2,4 & 5,0 GHz Analyzer

GENERAL SPECIFICATIONS

- **7" TFT TOUCH display**: 16:9 high resolution and high brightness.
- **DC voltage at RF input**: 5 - 12 - 18 - 24 V, DC DiSEqC, SCR & dCSS commands.
- **PC Interface**: USB-B.
- **Front-Panel**: Alpha numeric keypad + Multifunction Encoder.
- **Power Save**: TFT backlight timer, brightness adj.
- **PC Management**: SMART software.
- **Power Supply**: Built in LiPo battery with 2 to 4 hours duration (depending on the function) & Battery Test function.
- **Battery**: Integrated lithium polymers from 2 to 4 hours of duration (depending on the function) and BATTERY TEST function.
- **Battery door**: removable battery door for quick and easy replacement without the need for assistance
- **Weight**: only 1,8 Kg.
- **Size**: H 27,0 x W 15,5 x D 4,0 cm (meter only).
- **Aluminium and Steel Housing**.
- **Elite bag with extra padding and storage pocket**.

OPTIONS

- **DAB & DAB+ (HW)**.
- **Optic Ingress (HW)**.
- **Decoding HEVC H265 images (HW)**.
- **Wi-Fi Analyzer (HW)**.
- **Radio FM & TV Analogico (HW)**.
- **Dolby Audio AC3 DD+ (SW)**.
- **IPTV (SW)**.
- **TS STREAMING (SW)**.

Visit **WWW.ROVERSHOP.IT**
to check the available
accessories.

NOTE: Some options must be
requested when ordering the instrument.

Features and functions may change without notice.

MEASUREMENT EXAMPLES



New Icon Navigation Menu



Wi-Fi Analyzer



New constellation diagram



SAT Spectrum

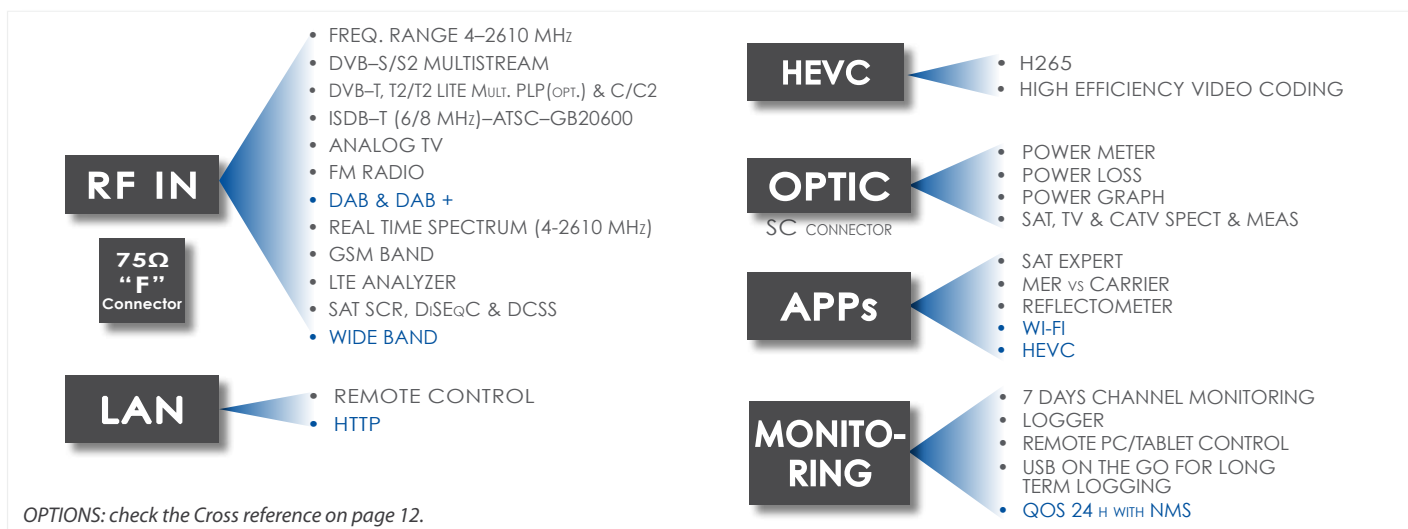


New Measures
& Pictures Super fast



DVB-T2 HEVC
Measurements and Pictures

THE NEW GENERATION OF **TABLET** ANALYZERS



SPECIAL FUNCTIONS

- **Exclusive patented ROVER AUTODISCOVERY system:** automatically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode.
- **NEW:** Exclusive Easy navigation menu.
- **HELP function:** automatically identifies all the signals with digital modulation SAT, TV and CATV.
- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Barscan TV & CATV function from 10 to 100 channels on one screen.**
- **Buzzer & Noise Margin real time graph.**
- **Exclusive included APP: SAT Expert.**
- **MER versus CARRIER**
- **Reflectometric measurements APP**
- **LAN Interface:** for remote web browser internet Monitoring with opt. APP.

MAIN FUNCTIONS

MEASUREMENTS & SPECTRUM ANALYSIS

- **Freq. Range:** TV and CATV TUNER, extended band, 4-1250 MHz; SAT TUNER, extended band, 930-2610 MHz; GSM extended band, 860-1000 MHz for telephone repeater installation.
- **Input Impedance:** 75 ohm (interchangeable "F" connector).
- **Digital Meas:** Digital Power, MER, BER, PER, LDPC, BCH, Noise Margin, MER versus CARRIER.
- **Analog Meas & Picture:** Analog level, V/A ratio.
- **Power range Meas.:** TV 28 to 130 dBμV, SAT 30 to 130 dBμV.
- **Net-id on board:** Net-id, NID, TSID, LCN, SAT Orbit Position.
- **Fast spectrum with MAX HOLD:** full spect. capabilities with memory peak, variable span and automatic reference level.
- **Constellation:** for TV/CATV and SAT signals.
- **Echoes, Pre-echoes, Micro-echoes:** Representation in real Time.
- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **Digital Pictures:** MPEG2-4 SD & HD pictures with Program List, Audio Video PIDs, LCN, Video bit Rate all on one screen.
- **TV Memory plan:** World Wide countries with related channels plans pre-memorized.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
- **Manual Memory Plan:** Programmable TV, SAT (or combined TV/SAT) by PC or Local Keyboard.
- **Loggers:** TV, SAT & combined with stop & go function.
- **Audio:** AAC supplied, DOLBY (opt.).
- **Optical Power meter:** with SC connector for fiber optic testing (FTTH & FTTX).
- **Free SMART PC interface program and FW upgrades.**
- **OPTIONS*:** check the Cross reference on page 12.

GENERAL SPECIFICATIONS

- **9" TFT TOUCH display:** 16:9 high resolution.
- **DC voltage at RF input:** 5 - 12 - 18 - 24 V, DiSEqC, SCR, dCSS.
- **Battery:** Li-Po battery pack, 3 h duration & Battery Test function
- **Power supply & Battery charger:** 12 Vdc, 2A.
- **USB PC Interface:** For SW upgrade on-line and memory plan management.
- **USB PC Interface:** For storage memory stick.
- **Housing:** Metal box and bag elite. Padded bag optional.
- **Weight:** only 1,8 Kg. **Size:** H 27,0 x W 15,5 x D 4,0 cm (meter only).

* Some options must be requested when ordering the instrument.

Visit
WWW.ROVERSHOP.IT
to check the
available
accessories.

Features and functions may change without notice.

ICON MENU



New Icon Navigation Menu



Wi-Fi Analyzer



New constellation diagram



Wide Band Measure & spectrum



New Meas. & Pict. Super fast

SAT FINDER			
POWER	17.28dBV	TP124	VL
MOD	QAM 64	TS125	HL
POWER	12.58dBV	TP100	VH
MOD	QAM 64	TS101	HH
POWER	10.58dBV		
MOD	QAM 64		

SAT FINDER

THE PROFESSIONAL & ACCURATE TOUCH SCREEN ANALYZER

DVB-T2/C2/S2
H265 - HEVC

AUTOMATIC, FAST & EASY-TO-USE

9" HIGH
BRIGHTNESS
16:9 DISPLAY



FULL TOUCH
Excludable

EXCLUSIVE DUAL
COMMANDS

MECHANICAL
Keys & Encoder

50Ω
"N"
Connector

RF IN

75Ω
"F"
Connector

ASI T.S.

- FREQ. RANGE 4-2610 MHz
- DVB-S/S2 MULTISTREAM
- DVB-T, T2/T2 LITE Mult. PLP(OPT.) & C/C2
- ISDB-T (6/8 MHz)-ATSC-GB20600
- ANALOG TV
- FM RADIO
- DAB & DAB +
- REAL TIME SPECTRUM (4-2610 MHz)
- MINI SPECT. WITH PICTURES
- GSM BAND
- LTE FILTER
- ITU QUALITY COVERAGE
- LTE ANALYZER
- T2 MI ANALYZER
- ASI INPUT/OUTPUT
- DVB-T SFN NETWORK DELAY MEAS
- ETR 101-290 T.S. ANALYZER
- RECORD/READER

HEVC

- H265
- HIGH EFFICIENCY VIDEO CODING

IP TV

- IP to ASI DENCAP.
- ASI to IP ENCAP.
- IPTV ANALYZER

LAN

- T.S. LIVE STREAMING
- T.S. RECORDING
- REMOTE CONTROL
- SNMP & HTTP

OPTIC

FC-ST-SC
INTERCHANGEABLE
CONNECTOR

- POWER METER
- POWER LOSS
- POWER GRAPH
- SAT, TV & CATV SPECT & MEAS

GPS

- POSITION LOGGING
- 10 MHz & 1 PPS TIME REFERENCE
- GPS ANTENNA QUALITY TEST

MONITORING

- 7 DAYS CHANNEL MONITORING
- LOGGER WITH GPS
- REMOTE PC/TABLET CONTROL
- USB ON THE GO FOR LONG TERM LOGGING
- PRODRIVE TEST
- QOS 24 H WITH NMS

OPTIONS: check the Cross reference on page 12.

MAIN FUNCTIONS

SPECIAL FUNCTIONS

- **ETR 101-290 T.S. Analyzer.**
- **Exclusive patented ROVER AUTODISCOVERY system:** auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode.
- **HELP function:** automatically identifies all the signals with digital modulation SAT, TV and CATV.
- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Barscan TV & CATV function from 10 to 100 channels on one screen.**
- **Buzzer & Noise Margin real time graph for digital signals microinterruptions.**
- **Reflectometric measurements APP.**
- **PRODRIVE TEST:** REMOTE MONITORING and LOGGING: TS, measurements, spectrum, thumbnails.
- **Optical Input signals.**
- **SATELITE:** SAT SCR, DiSEqC, SCR & dCSS, Motorized antenna, Dual LNB, SAT FINDER, SAT EXPERT
- **Custom Channel Plans:** 25 (199 ch. per plan), Programmable TV, SAT (or combined TV/SAT) by PC or Local Keyboard.
- **Loggers:** TV, SAT & combined with stop & go function.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
- **Free SMART PC interface program and FW upgrades.**
- **OPTIONS*:** check the Cross reference on page 12.

SPECIFICATIONS: MEASUREMENTS & SPECTRUM ANALYSIS

- **Frequency Range:** TV, CATV & Radio: 4-1250 MHz (TAB 9 PLUS); SAT: 950–2250 MHz (2610 with Sat extension opt.).
- **Frequency Resolution:** TV & CATV 25 KHz; SAT: 5 or 1 MHz selectable.
- **Power range Meas.:** TV 28 to 130 dBμV, SAT 30 to 130 dBμV.
- **Digital Meas:** Digital Power, MER (32 to 42 dB depending on modulation), BER, PER, LDPC, BCH, Noise Margin, MER versus CARRIER.
- **Analog Meas & Picture:** Analog level, V/A ratio.
- **Measurement Resolution:** 0.1 dB.
- **Level Measurement Accuracy:** 1 dB typ. (2 dB max.)
- **Resolution Filter Bandwidth:** TV & CATV: 100 KHz @ -3 dB; SAT: 1 MHz or 5 MHz @ -3 dB selectable.
- **Constellation:** for TV/CATV and SAT signals.
- **Spectrum:** Real time, Max Hold and spectrum memorization with real time compare function.
- **Net-id on board:** Net-id, NID, TSID, LCN, SAT Orbit Position.
- **Echoes, Pre-echoes, Micro-echoes:** Representation in real Time.
- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **TS:** TR 101-290 v1.2.1 ANALYSIS, SI, PMT, bit rate, network delay, MPEG services and tables.
- **IPTV:** measurements and picture decoding.

OPTICAL MEASUREMENTS

- **FC-ST-SC interchangeable input connectors.**
- **Automatic loss calculation.**
- **Wavelengths (nm):** 1310, 1490, 1550.
- **Range:** -25 to 10 dBm.
- **Resolution:** 0.1 dB.
- **Accuracy:** +/- 0.5 dB.
- **Optical to RF conversion.**

COMM. PORTS AND OUTPUTS

- **RF Input** : 75 ohm (interchangeable "F").
- **LAN**: RJ45 10/100 base Ethernet.
- **USB 2.0**: Type B (PC Interface).
- **USB 2.0**: Type A (USB drive).
- **Digital Pictures**: MPEG2-4 SD & HD pictures with Program List, Audio Video PIDs, LCN, Video bit Rate all on one screen.
- **Audio**: AAC supplied, DOLBY (opt.).
- **Asynchronous Serial Interface (ASI)**: ASI input on 75Ω BNC connector, ASI output on 75Ω BNC connector.
- **Audio / Video**: Composite A/V input, HDMI output.
- **Common Interface**: PCMCIA slot for single/multi-service CAM modules.

GENERAL SPECIFICATIONS

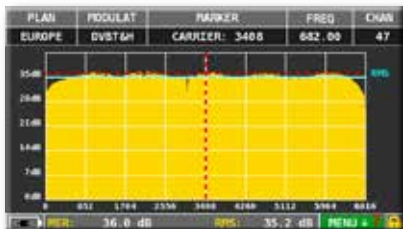
- **9" TFT TOUCH display**: 16:9 high resolution and high brightness.
- **Power Supply**: Built in LiPo battery with up to 6 hours duration & Battery Test function.
- **DC voltage at RF input**: 5 - 12 - 18 - 24 V, DiSEqC, SCR, dCSS.
- **PC Interface**: USB.
- **Front-Panel**: Alpha numeric keypad.
- **Power Save**: TFT backlight timer, brightness adj.
- **PC Management**: SMART software.
- **Weight**: only 2,6 Kg with batteries.
- **Size**: H 29,0 x W 17,0 x D 5,5 cm.
- **Housing**: Aluminium and Steel and padded bag.

Visit WWW.ROVERSHOP.IT
to check the available
accessories.

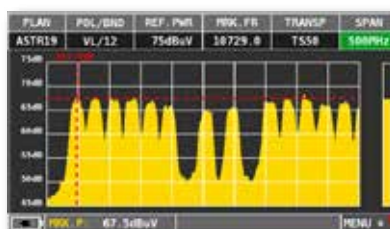
* Some options must be requested when ordering the instrument.

Features and functions may change without notice.

MEASUREMENT EXAMPLES



MER vs CARRIER: normal visualization



Spectrum SAT 500 MHz span



Single channel monitoring: 30 minutes



Spectrum TV 100 MHz span



DVB-T2 (opt.) rotated Constellation
256 QAM mod., on the right relative
modulation parameters & M-PLP



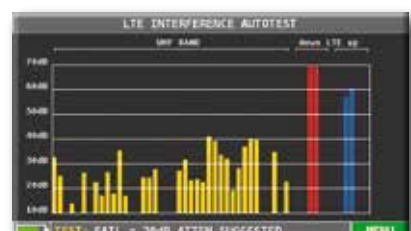
ECHO MEASUREMENT in SFN networks,
with impulse response in real time,
green area shows the guard interval



ETR 101290
Transport Stream Analyzer



GPS antenna Quality, constellation
& Position.



LTE Interference Autotest



CATV OR SAT INSTRUMENTS





THE MOST COMPLETE SATELLITE METER

DVB-S/S2
H265 - HEVC

AUTOMATIC, FAST & EASY-TO-USE



RF IN

75Ω
"F"
Connector

- FREQ. RANGE 700-2700 MHz
- DVB-S/S2
- SPECTRUM
- GSM BAND

APPS

- SAT EXPERT
- DOLBY AUDIO
- WI-FI
- HEVC

HEVC

- H265
- HIGH EFFICIENCY VIDEO CODING

OPTIC

- POWER METER
- POWER LOSS
- POWER GRAPH
- SAT, TV & CATV SPECT & MEAS
- SC CONNECTOR

MAIN FUNCTIONS

SPECIAL FUNCTIONS

- **Automatically identifies all the signals with digital modulation DVB-S & DVB-S2.**
- **Automatic Assistant:** Signal Quality analysis, Channel Scan memorization.
- **Buzzer & Noise Margin real time graph for digital signals microinterruptions.**
- **Optical Input** (opt.).
- **WI-FI analyzer** (opt.).
- **HEVC H265 decoder** (opt.).
- **SATELITE:** DiSEqC, SCR, dCSS & Motorized antenna commands, SAT FINDER & SAT EXPERT
- **Custom Channel Plans:** 25 (199 ch. per plan), Programmable SAT by PC or Local Keyboard.
- **Loggers:** with stop & go function.
- **SAT Memory Plan:** More than 2.000 transponders prememorized for world wide Satellite.
- **Free SMART PC interface program and FW upgrades.**

SPECIFICATIONS: MEASUREMENTS, SPECTRUM ANALYSIS & PICTURES

- **Frequency Range:** 700–2700 MHz.
- **Frequency Resolution:** 5 MHz.
- **Power range Meas.:** 5 to 105 dBμV.
- **Digital Meas:** Digital Power, MER (20 dB max depending on modulation), BER, PER, LDPC, BCH, Noise Margin.
- **Measurement Resolution:** 0.1 dB.
- **Level Measurement Accuracy:** 1 dB typ. (2 dB max.)
- **Resolution Filter Bandwidth:** 5 MHz @ -3 dB.
- **Constellation:** Yes.
- **Spectrum:** Fast spectrum, Max Hold and spectrum memorization with real time compare function.
- **Net-id on board:** Net-id, NID, TSID, SAT Orbit Position.
- **Quality:** Digital Auto quality Test: PASS-MARGINAL-FAIL.
- **Digital Pictures:** MPEG2-4 SD & HD, HEVC (opt.) pictures with Program List, Audio Video PIDs, Video bit Rate all on one screen.

OPTICAL MEASUREMENTS

- **SC input connector.**
- **Automatic loss calculation.**
- **Wavelengths (nm):** 1310, 1490, 1550.
- **Range:** -25 to +6 dBm.
- **Resolution:** 0.1 dB.
- **Accuracy:** +/- 0.5 dB.
- **Optical to RF conversion.**

COMM. PORTS AND OUTPUTS

- **RF Input :** 75 ohm (interchangeable "F").
- **USB 2.0:** Type B (PC Interface).
- **Audio:** AAC supplied, DOLBY (opt.).
- **Video:** Composite Video input.

GENERAL SPECIFICATIONS

- **5" TFT TOUCH display:** 16:9 high resolution and high brightness.
- **Power Supply:** Built in LiPo battery with 2 to 4 hours duration (depending on the function) & Battery Test function.
- **DC voltage at RF input:** 12 - 18 V, DC DiSEqC, SCR & dCSS commands.
- **PC Interface:** USB-B.
- **Front-Panel:** Alpha numeric keypad.
- **Power Save:** TFT backlight timer, brightness adj.
- **PC Management:** SMART software.
- **Weight:** only 1,4 Kg with batteries.
- **Size:** H 13,0 x W 25,5 x D 4 cm.
- **Housing:** Aluminium and Steel, bag.

OPTIONS

- Optic Ingress
- Decoding HEVC H265 images
- Wi-Fi analyzer
- Dolby Audio AC3 DD+
- Elite bag with extra padding

NOTE: Some options must be requested when ordering the instrument.

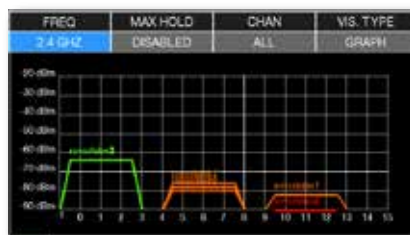
Visit WWW.ROVERSHOP.IT
to check the available
accessories.

Features and functions may change without notice.

MEASUREMENT EXAMPLES



New Icon Navigation Menu



Wi-Fi Analyzer



New constellation diagram



SAT Spectrum



New Meas. & Pict. Super fast



SAT FINDER

THE NEW FRONTIER: WIDE BAND **LNB** 230-2340 MHz



Features and functions may change without notice.

- WIDE BAND 230 - 2340 MHz with dSCR (dCSS), SCR & DiSEqC
- Drives standard & wideband LNBs
- Orbit position & programme listing & data
- MPEG 2-4 with SD-HD Picture
- Spectrum with MAX HOLD for precise dish alignment
- Full Logging capabilities
- SAT EXPERT: the fastest SAT identification APP
- PC Interface for free updates
- WiFi Network test (optional)
- Free basic SW upgradeable on-line

MEASUREMENT EXAMPLES

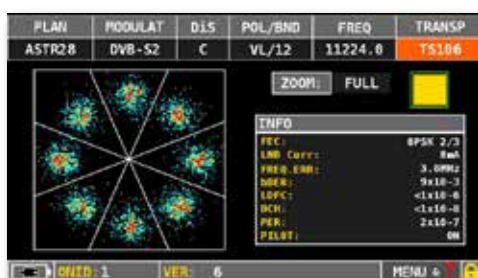


Main measurements and live picture

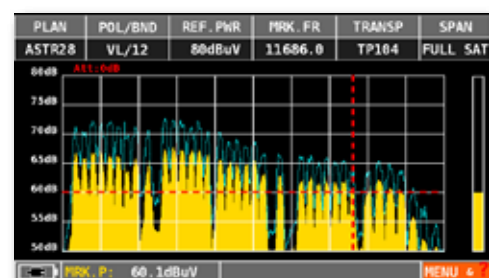
ZOOM



Navigate to the picture to zoom, enter to return to measurements



8PSK Constellation



Fast spectrum with peak memory "MAX H" for perfect dish alignment

MAIN FUNCTIONS

DVB-S/S2 (Demodulation)

- **Frequency band:** 230–2340 MHz for standard and Wide Band LNBs.
- **Interchangeable input connector:** "F type".
- **Power Supply at RF input:** OFF, +13, +18 V, 22 kHz (0.3 A), DiSEqC, dSCR/SCR, WIDE-BAND LNB.
- **Digital power measurement dynamic range at RF input:** from 30 to 115 typ. dBuV.
- **Noise Margin Measurements.**
- **DVB-S/S2 Symbol Rate setting:** 2–45 MS/s, in 1 kS/s steps.
- **Measurement Parameters:**
 - bBER up to 2×10^{-6} (before Viterbi)
 - aBER up to 2×10^{-8} (after Viterbi)
 - MER 2-25 dB resolution 0.1 dB
 - PER 10-2 to 10-7 (DVB S2)
 - BCH 10-2 to 10-8 (DVB S2)
 - LDPC 10-2 to 10-8 (DVB S2)
- **FEC:** DVB-S: 1/2, 2/3, 3/4, 5/6, 7/8; DVB-S2: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10.
- **Automatic quality test:** FAIL, MARGINAL, PASS.
- **Noise Margin Measurements:** from –1 to 12 dB with built in FEC compensation.
- **NET. ID.** Shows bouquet and transponder names, the encryption system, orbital position and date.

AUDIO & VIDEO OUTPUT

- **4,3" color TFT** 16:9 high resolution monitor with Auto-Off timer: after 5 or 10 min without use.
- **MPEG2 & MPEG4 SD & HD.**
- **Audio decoding:** AC3 - EC3 (Dolby Digital - Dolby Digital Plus) opt.; AAC - HEAAC opt.

SAT SPECTRUM ANALYSIS

- **Frequency band:** 230–2340 MHz.
- **Span:** 50–100–200–500–FULL - WIDEBAND-LOW BAND-HIGH BAND.
- **dB/div:** 5.
- **Display dynamic range:** >30 dB.
- **Marker measurement resolution:** 0.1 dB.
- **Measurement filter bandwidth:** 5 MHz at –3 dB.
- **Reference level:** from 30 to 120 dBuV, from –60 dBmV to +60 dBmV.
- **Reference level settings:** automatic and manual adjustable.
- **MAX HOLD** (peak hold).

SOFTWARE and FIRMWARE:

- "SMART" PC interface program for SOFTWARE (FW-Firmware) and MEM plan editing is available free of charge on Rover Instruments web site.

- **SOFTWARE** (FW) upgrades are available free of charge. Check periodically Rover Instruments web site.
- **MEM:** Satellite transponder list file (MEM PLAN) upgrades are available free of charge. Check periodically Rover Instruments web site.

MEMORY:

99 available Memory Plans & Datalogger function.

POWER SUPPLY:

- **External power supply** 12 V 1A.
- **Battery** 7,2 V 4,3 Ah.
- **Built in rechargeable batteries** with option for field serviceable module for battery replacement.
- **Li battery technology**, where user serviceable module supported instrument to be supplied with two battery modules as standard.
- **Battery duration at 25°C:**
 - 3 hours in satellite alignment mode
 - >4 hours in Wi-Fi mode where supported
- **Low Battery indicator:** with acoustic signaling and visual indication on graphic display.
- **Automatic power management features**
 - Back panel illumination has user adjustable time out
 - Indication of battery status charge
- **Battery re-charge time:** 1 hour for approx. 50% capacity, <6 hours for full charge.
- **On-board battery recondition cycle** and condition reporting (battery test).
- **Meter power off** automatically after 5, 10 minutes user selectable, option for user selectable always on.

DIMENSIONS AND WEIGHT

- H 8,0 x W 22,5 x D 21,5 cm.
- 1.3 kg with batteries, bag and accessories.
- ABS plastic housing rain, dust & shockproof.

WI-FI (optional)

- WI-FI network testing: 2.4 GHz and 5 GHz.

ACCESSORIES

- **Carrying protective bag with side pocket bag and shoulder strap.**
- **TRASF-12V-1A0-G-UK:** AC/DC adapter: 100V-240V/12 VDC, 1A.
- **CNN-F-0153:** interchangeable F - F double female input connector.

Some options must be requested when ordering the instrument.

IT HAS NEVER BEEN SO SIMPLE, ACCURATE & COMPLETE



A well job done
in 3 seconds!

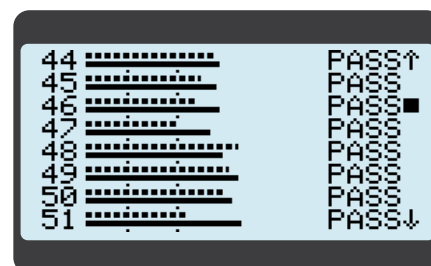
Connect the
CATV socket and
automatically SCAN
the Power and Quality
up-to 140 channels in
blocks of 8 channels.

- EASY TO USE FULLY AUTOMATIC
- **SIMULTANEOUS ANALYSIS
IN BLOCKS OF 8 DIGITAL
AND/OR ANALOG CHANNELS**
- FULLY AUTOMATIC MEASUREMENTS
- **FAST QUALITY MEASUREMENTS**
- WORLDWIDE TV
STANDARDS
- **LI-PO LONG BATTERY
DURATION**
- ROBUST METAL HOUSING
- **RAIN PROOF BAG**

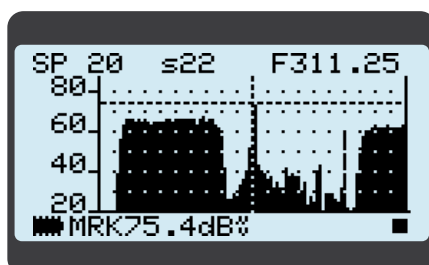
MEASUREMENT EXAMPLES



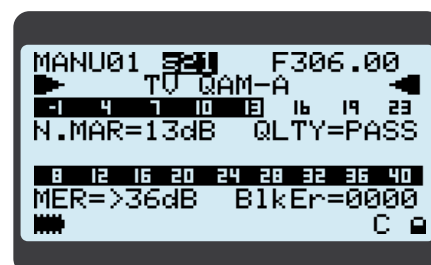
Icon menu



8 digital channels block analysis



Spectrum with Memory Peak



DVB-C Measurements

MAIN FUNCTIONS

MEASUREMENTS & SPECTRUM ANALYSIS

- Frequency Range: 5 MHz to 1000 MHz.
- Input Impedance: 75 ohm (interchangeable "F" connector).
- Power range MEAS.: 10 to 100 dBμV (-50 dBmV to 60 dBmV) 120 dBμV with ext. attenuator.
- Fast spectrum with MAX HOLD: Full spect. capabilities with peak memory, variable span and automatic reference level.
- Meas: All digital and analog measurements, see table below.
- Quality FAIL - MARGINAL - PASS: Measuring the quality and the power up-to 140 CHs in blocks of 8 Digital or Analog channels simultaneously.
- Barscan: TV analog and digital bars scan form 10 to 100 channels.
- Memory plan: World Wide countries with related channels plans are pre-memorized.
- Free basic SW upgradeable on-line.

Features and functions may change without notice.

SPECIFICATIONS

LEVEL MEASUREMENT & SPECTRUM ANALYSIS

- Frequency Range: TV, CATV and Radio 5-1000 MHz
- Frequency Resolution: 25 KHz
- RF Input Impedance: 75 Ω (interchangeable "F" connector)
- Dynamic Range: 1 dBuV to 125 dBuV
or -59 to +65 dBmV
or -112 to +16 dBm
- Measurement Resolution: 0.1 dB
- Level Measurement Accuracy: 1 dB typ. (2 dB max.)
- A/V Ratio: up to 22 dB, +/- 1.5 dB (2 dB max.)
- S/N Ratio: up to 45dB +/-1.5 dB Max; 45-50dB +/-2dB
- Resolution Filter Bandwidth: 100 KHz @ -3 dB
- Custom Channel Plans: 25 (199 ch. per plan)

POWER & DIGITAL MEASUREMENTS

- Frequency Band: 5-1000 MHz
- Power Meas. Dynamic Range: 25 to 125 dBμV, -45 to 65 dBmV
- BER Measurement: (pre) bBER up to 1×10^{-9}
(post) aBER up to 1×10^{-9}
- MER Measurement: up to 40 dB
(1 dB typ., 2 dB max.)

INGRESS MEASUREMENTS

- Ingress Scan Spectrum
- Frequency: 5 -65 MHz
- Level: 5 dBuV to 125 dBuV
- Accuracy: +/- 2dB
- BW: 100 KHz @ -3dB

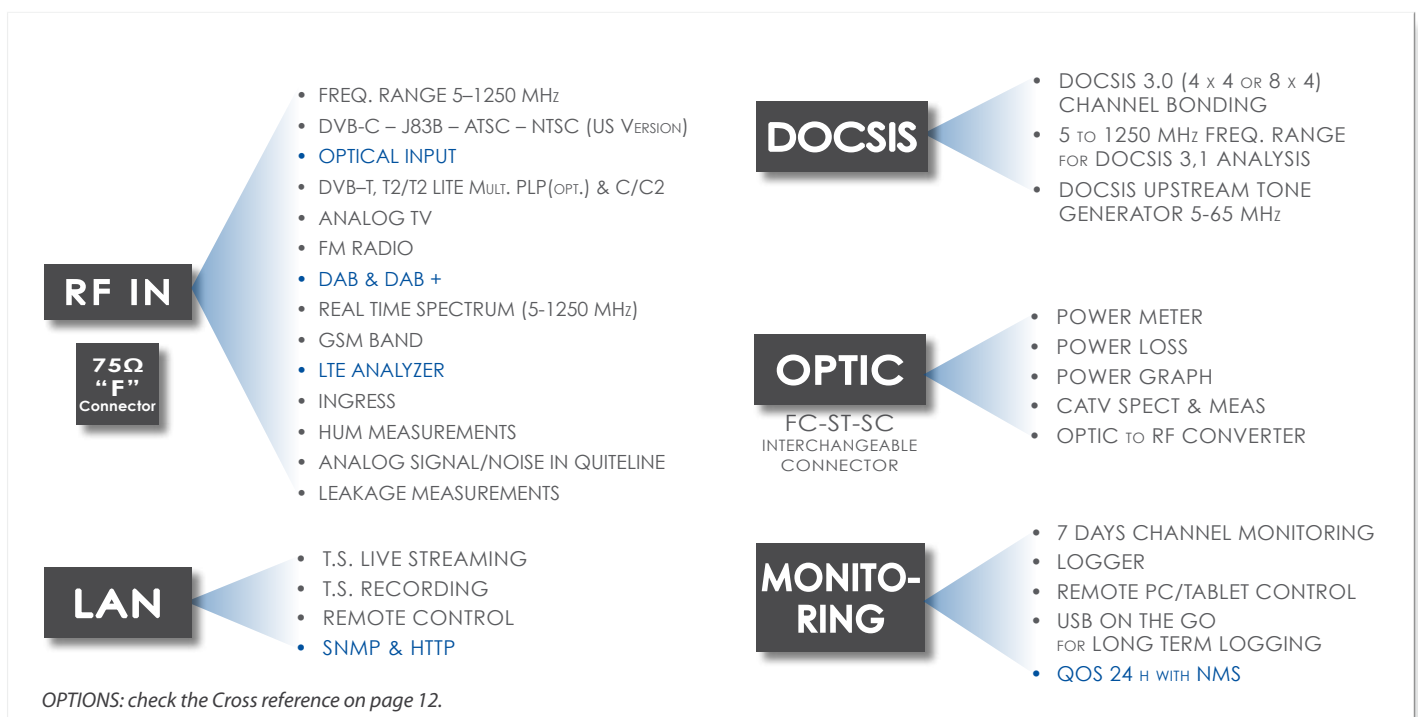
LEAKAGE MEASUREMENTS

- Frequency Range:
- 115-140 MHz (USA), 250-490 MHz (EUROPE)
- Resolution: 25 KHz
- Antenna type: selectable

GENERAL SPECIFICATIONS

- DC voltage at RF input: 5Vdc.
- Battery: Rechargeable Li-Po battery pack, 5 hour duration.
- USB Micro: For battery charge and PC interface for SW up-grade and memory plan management.
- Housing: Metal box and rain proof bag.
- Size: H 95 x W 160 x D 34 mm (meter only).
- Weight: 500 gr.

THE MOST ADVANCED & ACCURATE **TABLET** ANALYZER



MAIN FUNCTIONS

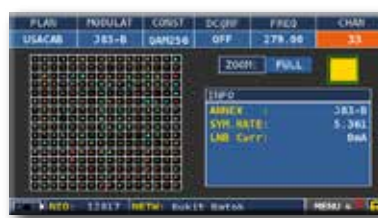
- Frequency range from 5 to 1250 MHz extended CATV and GSM telephone bands.
- Digital RF measurements 5 MHz to 1,25 GHz including average power/level, pre/post BER, MER versus CARRIER (opt.), Noise Margin, spectral analysis, and constellation.
- INGRESS mode, LEAKAGE mode, BARS SCAN and TILT.
- DOCSIS 3.0 upstream and downstream capabilities, 8 x 4 channel bonding with automatic lock to CMTS, for complete modem installation testing for both forward and return path analysis (opt.).
- Ping report, Network IP configuration.
- Lost Packet measurements, latency time and PER.
- DOCSIS upstream tone generator 5–65 MHz.
- OPTICAL POWER METER with interchangeable FC-ST-SC connector for fiber optic testing (FTTH & FTTX) and troubleshooting (opt.).
- User definable channel scan testing /logging with automatic quality analysis: FAIL-PASS-MARG.
- Assisted navigation, memory plans and automatic channel scan.
- Available with all world-wide channel plans .
- Alpha/numeric keypad for direct chan/freq selection.
- SMART software PC interface for meter upgrades, channel plans and AutoScan testing/logging management.
- Detects, measures and SHOWS pictures of MPEG 2 and 4 H264 HD High Definition programs.
- Automemory, Manual memory & Datalogger functions.
- Barscan TV & CATV function from 10 to 100 channels on one screen.
- Audio, AAC supplied, DOLBY opt.
- 7" TFT TOUCH display, 16:9, high resolution.
- Weighs only 1.6 kg, dim: H 14 x L 24 x D 4 cm.
- LI-POLIMER 4A battery with 4 hr battery capacity.
- Battery test function, to regenerate and measure the batteries and calibrate the battery indicator.
- Supplied with transport padded bag, accessories, mains and vehicle battery chargers.
- Free SMART PC interface program and FW upgrades.

Features and functions may change without notice.

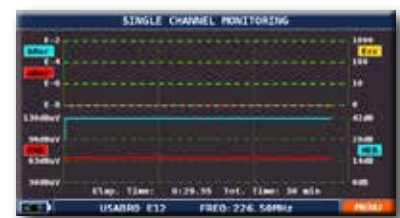
MEASUREMENT EXAMPLES



VSB constellation, on the right relative modulation parameters



J83-B constellation, on the right relative modulation parameters



Single channel monitoring (for example 30 minutes)



VSB signal, all the measurements, picture and settings on one screen



J83-B signal, all the measurements, picture and settings on one screen



TV spectrum in real time, fast and super-fast with memory peak. Detects and memorizes all the details for you

SPECIFICATIONS

LEVEL MEASUREMENT & SPECTRUM ANALYSIS

- Frequency Range: TV, CATV & and Radio 5-1250 MHz
- Frequency Resolution: 25 KHz
- RF Input Impedance: 75 Ω (interchangeable "F" connector)
- Dynamic Range: 1 dBuV to 125 dBuV
or -59 to +65 dBmV
or -112 to +16 dBm
- Measurement Resolution: 0.1 dB
- Level Measurement Accuracy: 1 dB typ. (2 dB max.)
- A/V Ratio: up to 22 dB, +/- 1.5 dB (2 dB max.)
- S/N Ratio: up to 45dB +/-1.5 dB Max; 45-50dB +/-2dB
- Resolution Filter Bandwidth: 100 KHz @ -3 dB
- Custom Channel Plans: 25 (199 ch. per plan)

POWER & DIGITAL MEASUREMENTS

- Frequency Band: 5-1250 MHz
- Power Meas. Dynamic Range: 25 to 125 dBuV, -45 to 65 dBmV
- BER Measurement: (pre) bBER up to 1×10^{-9}
(post) aBER up to 1×10^{-9}
- MER Measurement: up to 40 dB (1 dB typ., 2 dB max.)

OPTICAL MEASUREMENTS

- FC-ST-SC interchangeable input connectors
- Automatic loss calculation
- Wavelengths (nm): 850,1310, 1490, 1550
- Range: -25 to 10 dBm
- Resolution: 0.1 dB
- Accuracy: +/- 0.5 dB
- Optical to RF conversion

INGRESS & SPECTRUM MEASUREMENTS

- Ingress Scan Spectrum
- Frequency: 5 -65 MHz
- Level: 5 dBuV to 125 dBuV
- Accuracy: +/- 2dB
- BW: 100 KHz @ -3dB

LEAKAGE MEASUREMENTS

- Frequency Range:
- 115-140 MHz (USA), 250-430 MHz (EUROPE)
- Resolution: 25 KHz
- Antenna type: selectable

DOCSIS DOWNSTREAM MEASUREMENTS

- DOCSIS 3.0 Compliant Modem (8x4 CH BONDING)
- Frequency Band: 5-1000 MHz
- Input Impedance: 75 Ω (interchangeable "F" connector)

- Range: - 45 to + 65 dBmV
- Measurements Include: Level/Power, MER, Pre/Post BER, Lost Packet, Transmit Power, Transmitted Packets, Received Packets, PER, Latency Min/Max Avg, Channel Bonding Upstream Level and IP Status
- MAC Address: Default or user defined

DOCSIS UPSTREAM & GENERATOR/TESTING

- Tone Generator Frequency: 5-65 MHz
- Modulation: QPSK, QAM, 8,16,32,64
- Typical Range: 8 to 53 dBmV (1 dB typ., 2 dB max.)
- Channel Bonding: Up to 4 upstream channels bonding supported ingress scan spectrum
- Frequency range: 5-65 MHz

COMM. PORTS

- DOCSIS 3.0 and RF: F - Female
- LAN: RJ45 10/100 Ethernet
- USB 2.0: Type B (PC Interface)
- USB 2.0: Type A (USB drive)

GENERAL SPECIFICATIONS

- Power Supply: Built in LiPo rechargeable battery, external power supply 12 VDC 1A
- Battery Duration at 25°C: 4 hours
- Size: H 140 x W 240 x D 50 mm (meter only)
- PC Interface: USB
- Display: Color LCD 7" (480px x 800px)
- Front-Panel: Alpha numeric keypad
- Power Save: TFT backlight timer, brightness adj.
- PC Management: SMART software
- Standard Accessories:
 - Soft carry case and strap
 - USB 2.0 cable
 - AC adapter
 - 12V automotive charging cable
 - RF & optical interchangeable connectors
 - SMART software
- AVAILABLE OPTIONAL APPS: DVB-T/T2, DOCSIS 3.0 Cable Modem (4X4 or 8X4), Optic Input, HD DOLBY, HD MER Vs CARRIER, HD COAX Cable Reflectometer, HD Remote Control, DVB-C2.

WARRANTY

- According to your country's laws (12 to 24 months)
- All electronic parts, except batteries, bag and damage

Visit WWW.ROVERSHOP.IT
to check the available accessories.

Some options must be requested when ordering the instrument.

MOD. CNG 70 USB USB HIGH POWER WHITE NOISE SOURCE 4 - 2500 MHz



SPECIFICATIONS:

- Freq. Range : 4 – 2500 MHz
- Noise type : White Gaussian
- ENR: 70 dB 75 Ω 25°C
- Output power: – 56 dBm (Measured at 100 KHz spectrum RBW)

- Flatness: 1,5 dB typ. 2 max
- Impedance: 75 Ω , SMB, (50 Ω opt.)
- PSU: USB, 5 Vdc, 80 mA
- Size: USB stick

Turn your Commercial Spectrum Analyzer into a Scalar Network Analyzer to measure:

ACTIVE DEVICES

- GAIN
- FLATNESS
- BW
- VSWR *

PASSIVE DEVICES

- LOSS
- FLATNESS
- BW
- VSWR *

COAX CABLE/REFLECTOMETER

- LOSS
- LENGTH
- SHORT-CIRCUIT DISTANCE **
- OPEN CIRCUIT DISTANCE **
- IMPEDANCE MISMATCH

* With RF Bridge. ** With simple slide ruler, depending on Cable type

MOD. CNG 90 VERY HIGH POWER CALIBRATED & MODULATED NOISE GENERATOR

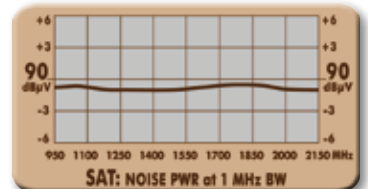
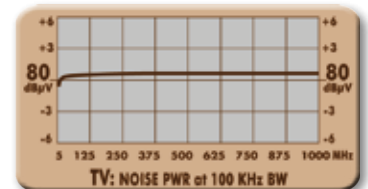


SPECIFICATIONS:

- RF Noise Signal : White Gaussian
- Freq. Range : 4-2150 MHz
- CH Power out : 97 dB μ V \pm 2 @ 8MHz BW
- TV Power out : 83 dB μ V \pm 2 @ 100KHz BW
- SAT Power out : 88 dB μ V \pm 2 @ 1MHz BW
- Noise Modulation : 50 Hz Flat (ON/OFF)
- RF Attenuator : 20 dB Flat
- Battery Capacity : 6-8 hours with low battery indication

The CNG 90 is the most powerful hand held noise generator currently available, in the frequency range from 4 to 2250 MHz, it allows passive coaxial cable networks testing, also of large size.

With 50 Hz modulation it is possible to measure the network C/N, without switching off the generator. A built in 20 dB RF flat attenuator also allows you to analyze and measure amplifiers or active coaxial CATV networks. The CNG 90 can be used in conjunction with any meter or spectrum analyzer, even from other brands.



MOD. MOS 4 MULTIPLE OPTICAL LASER SOURCE



SPECIFICATIONS:

- 1st wave length : 1310 n.m.
- 2nd wave length : 1490 n.m. (1625 for USA)
- 3rd wave length : 1550 n.m.
- 4th red Light : 650 n.m.
- Optical Connector : interchangeable FC-ST-SC
- Optical Power : 0 dBm Typ
- AWC : Automatic Wave Detection
- Battery Capacity : 4 - 6 hours with low Battery Indicator

The Multiple Optic laser Source "MOS 4" is suitable for any optical network, PON & FTTHx;

Used in combination with ROVER analyzers (fitted with the optical option), and thanks to the AWD, it allows you to automatically and accurately check the losses for various wavelengths.

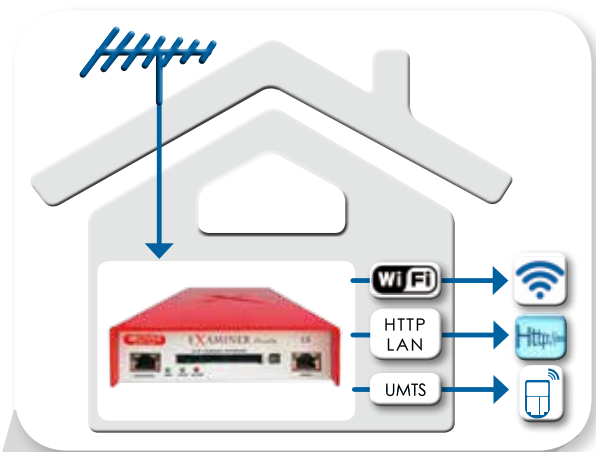
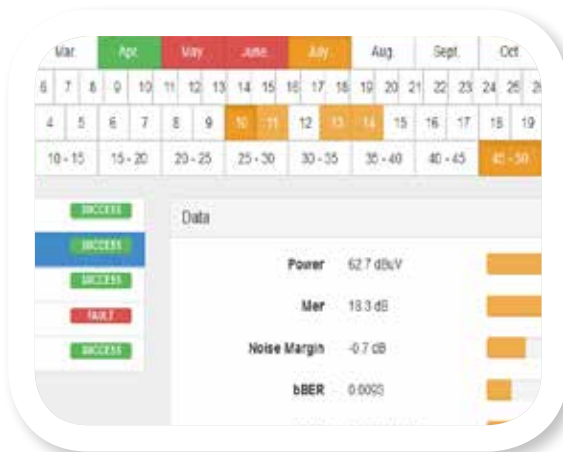
Furthermore, thanks to the red laser, the "MOS 4" will also allow the identification of any breaks in the optical fiber.

Features and functions may change without notice.

EFFICIENT "QoS" REMOTE MONITORING

MOD. HD PROBE & NMS

Highly reliable, easy **Network Management System** to check 24 h **Quality of Service** for Radio, TV & SAT signals through multiple HD ROVER meters/probe placed in your distribution network.



HOW TO FIND US:

in Sirmione, Lake Garda, Italy.

Situated in one of the most beautiful tourist locations in Italy, on Lake Garda, ROVER can be easily reached from Milan, Bergamo, Verona and Venice airports.

Lake Garda is in the north of Italy, near the borders of Austria, Switzerland and Germany and is in the foothills of the Alps.


Lake Garda has a micro-climate, tropical in summer and temperate in winter, and where palms, olives, lemons, oranges, bouganville and even banana trees can grow.

Exploited by the Romans as long ago as 350 a.C., it is now one of the most important lakeside, spa and tourist resorts in Europe. Please find below photographs of some of the most important tourist attractions in the area.


Catullus roman ruins, 350 b.C.

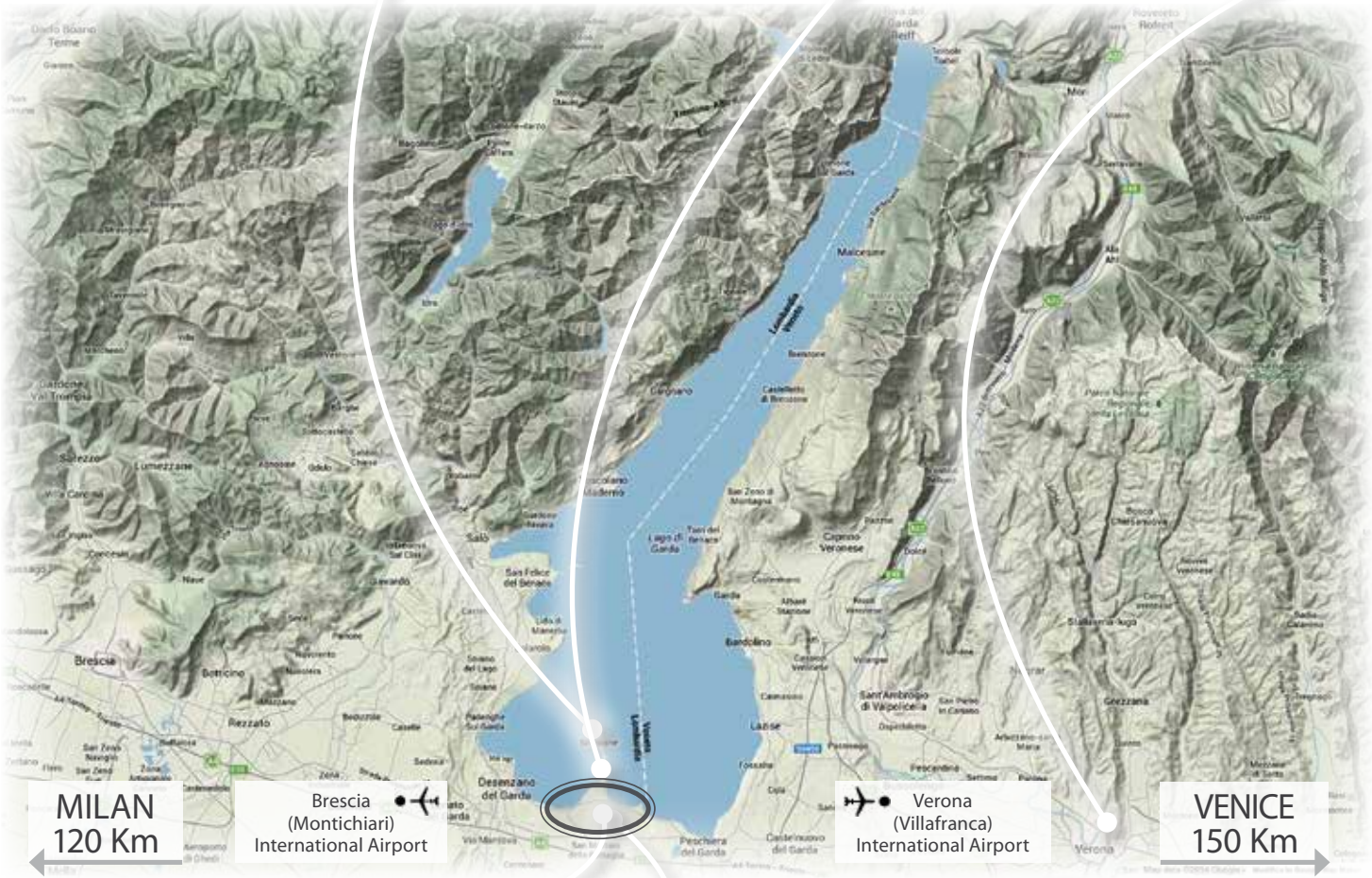


Sirmione Castle, 1.500 a.C.



Verona, roman Arena 120 b.C.





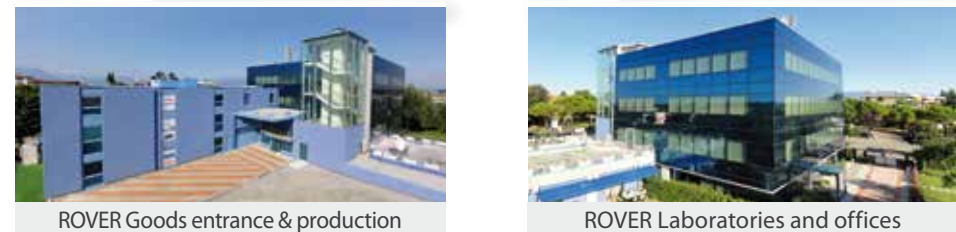
MILAN
120 Km

Brescia
(Montichiari)
International Airport

Verona
(Villafranca)
International Airport

VENICE
150 Km

GPS COORDINATES:
45° 27' 47"N, 10° 36' 24" E



CERTIFICATES N°

1263 ISO 9001

1264 ISO 14001

1265 ISO 45001

DIMITTO

