2015 INSTRUMENTS CATALOGUE

ROVER INSTRUMENTS

V.4.3 14-7-15

INSTRUMENTS DIVISION:

SAT TV CATV OPTIC IP-TV Measurement Instruments

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ROVER INSTRUMENTS

NEW GENERATION OF

HD TAB 9

DOCSIS CATV

75Ω "F" CONNECTOR

50Ω "N" CONNECTOR

DAB+

S2M

C2

T2

HD PROTAB 10

INSTRUMENTS

HD TAB 7 EVO

OMNIA 7000

ASI T.S. ANALYZER

T2 MI ANALYZER

IPTV ANALYZER

OPTIC ST/SC/FC

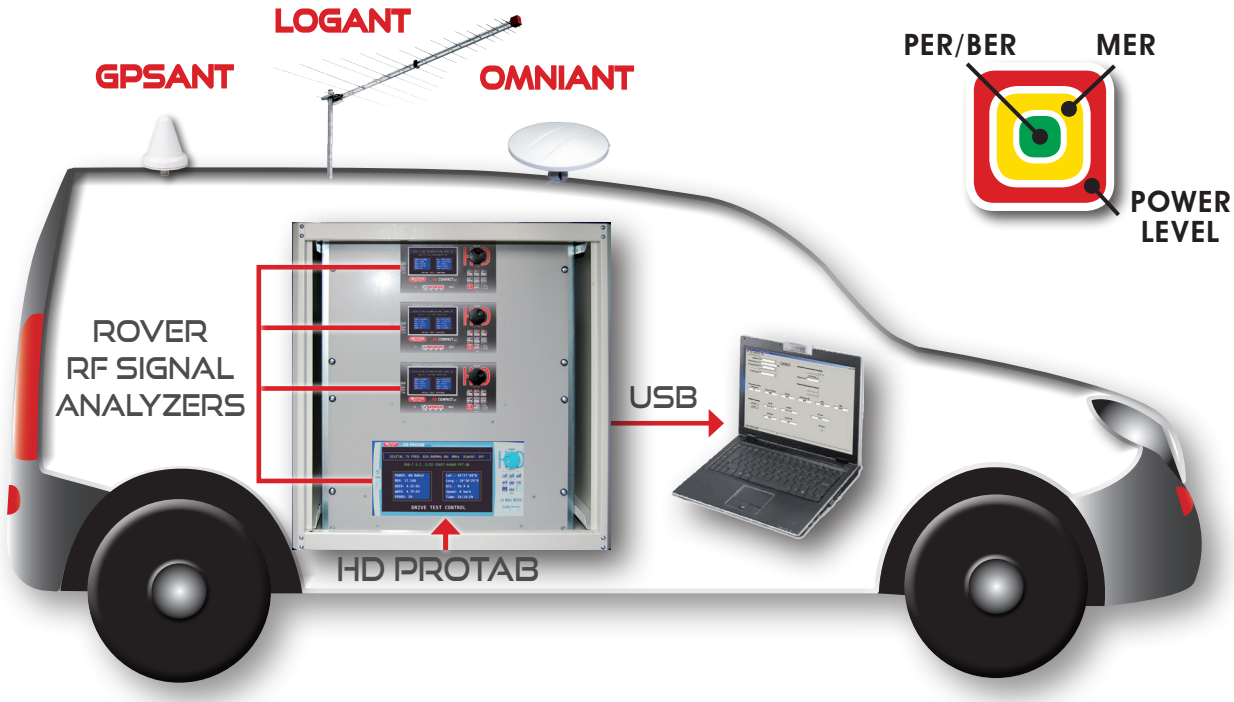
LTE

DOLBY APPROVED

REMOTE CONTROL &

TOTAL CONNECTIVITY

MOD. HD PRODRIVE TEST



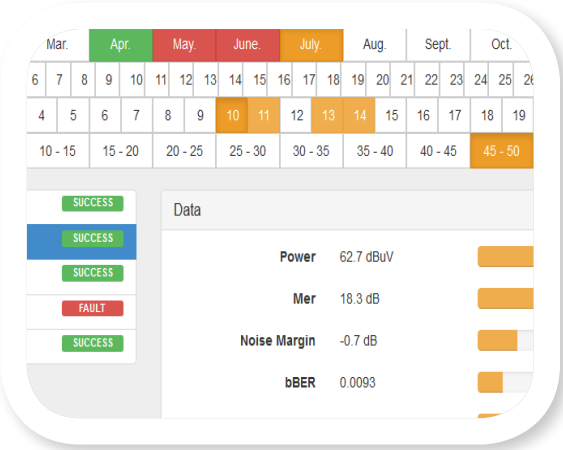
Efficient Broadcast DRIVE TEST solution for cost effective,
fast & accurate, terrestrial Broadcast networks coverage analysis.
EXCLUSIVE KIT for DVB-T2 Lite mobile & stationary MULTICHANNEL measurements.

<30	Field Strength Power dBµV	>50
<15	MER dB	>25
>10-2	PER	<10-7

& EFFICENT "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.



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.

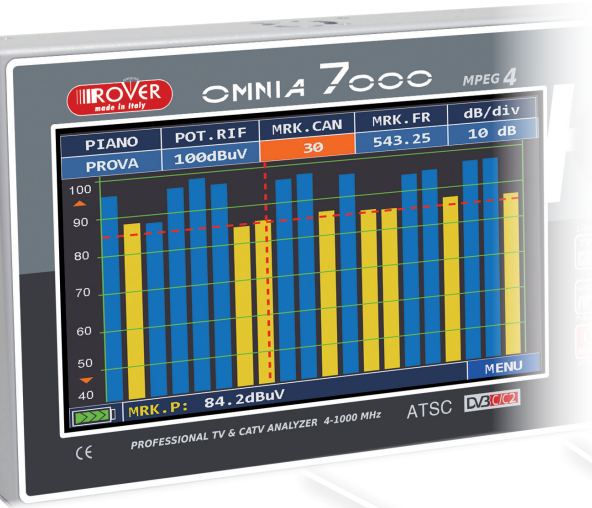
ETR 101 290 T.S. ANALYZER

The meter has a built-in TS analyzer that provides complete ETR101290 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

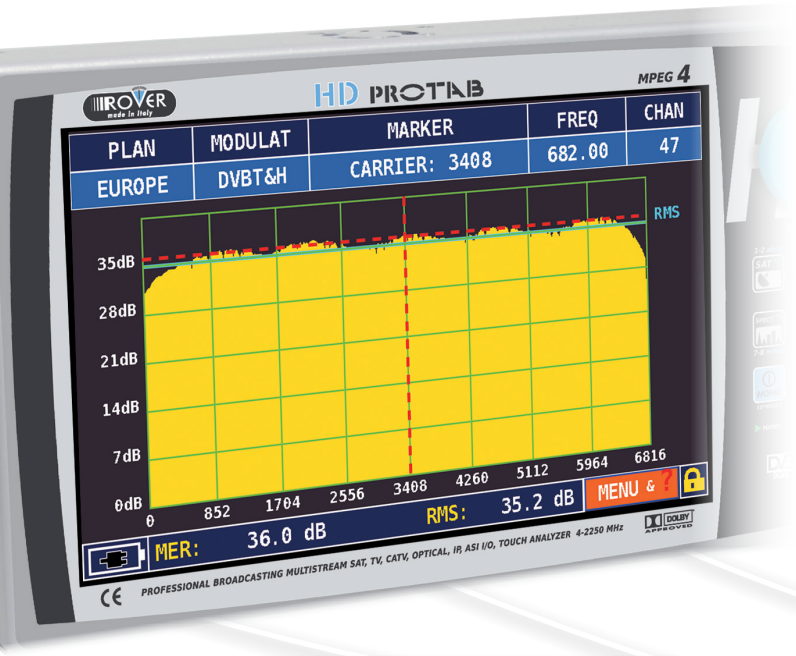
The meter has an internal GPS receiver. It allows you to carry out the analysis of a GPS reception antenna quality. It also provides time reference for the Network Delay function and location data when performing on-field measurement loggers when driving in a car or standing on .
This is practical for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

BARSCAN LEVEL GRAPH

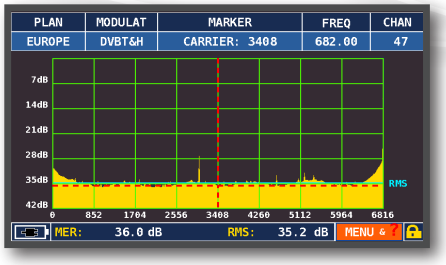


Simultaneously check the level/power of all analog & digital channels.
In TV standard canalization the meter displays the level/ power of all channels as a bar graph.
In AUTOMEMORY or MANUMEMORY PLAN the meter displays only the memorized channels and distinguishes Analog and Digital signals using two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

MER VS CARRIER

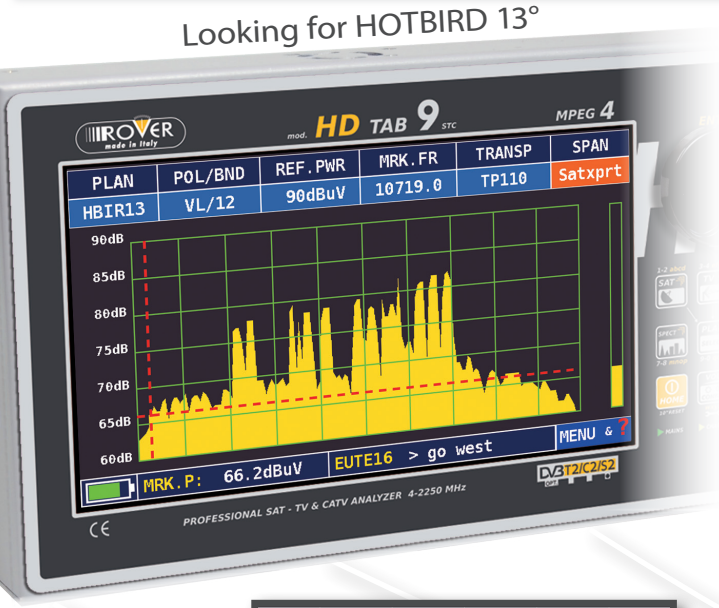


The MER measurement, performed for every single carrier in a DVB-T & T2 COFDM mux, is an indispensable tool to spot the impairments on the received digital signal.



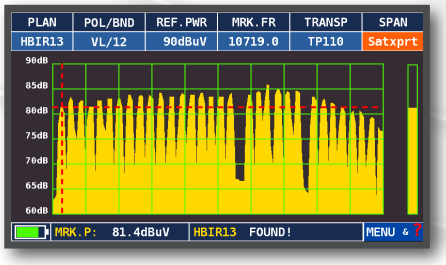
MER vs CARRIER Reverse visualization.

SAT EXPERT FUNCTION



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

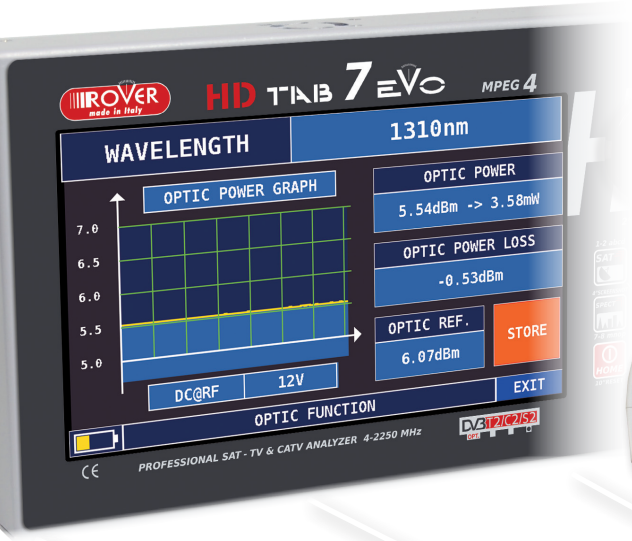
Through text messages, which appear from time to time on the screen, the measuring instrument will indicate in which direction to move the satellite dish, to the east or to the west, until you reach the wanted satellite.



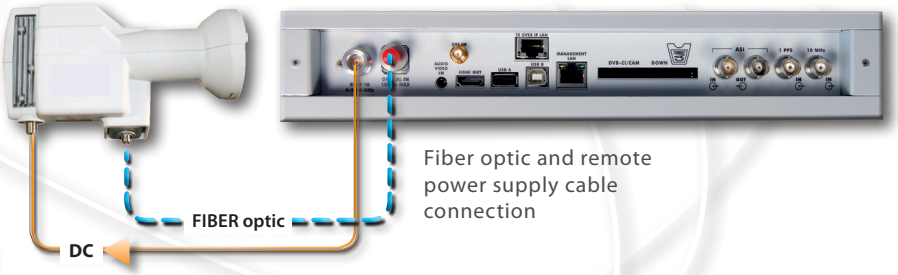
Example pointing Hot Bird 13 ° East
The tool informs you that the dish is oriented on the correct satellite via the message HBIR13 FOUND!

Found HOTBIRD 13°

OPTIC

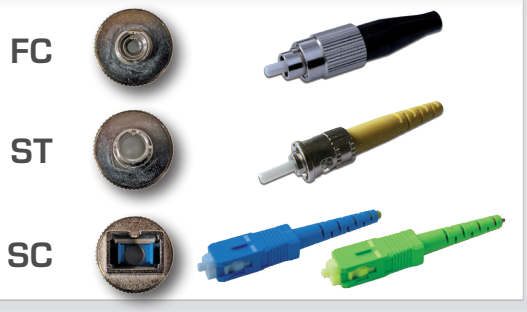


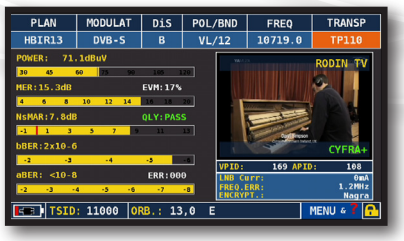
The meter has an internal optical to RF converter. Can measures the OPTICAL POWER and OPTICAL ATTENUATION, carries out RF measurements (from the optical input), decodes the services and visualizes the spectrum.



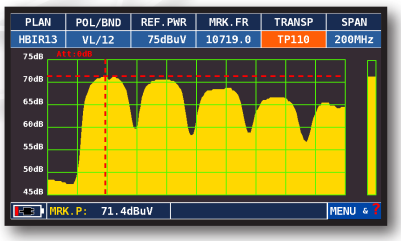
Fiber optic and remote power supply cable connection

INTERCHANGEABLE OPTICAL CONNECTOR



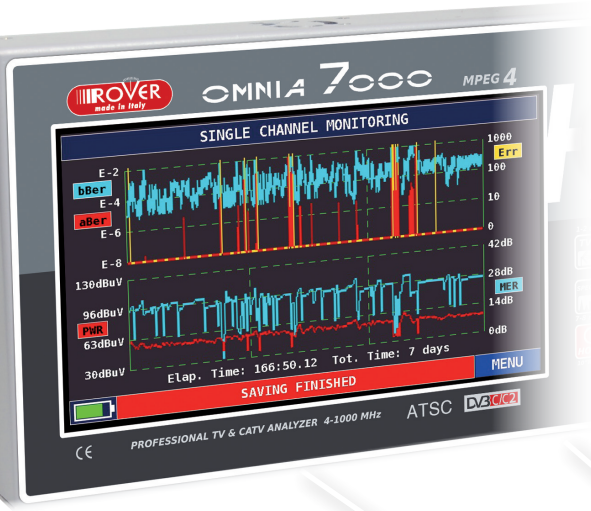


Measurements and pictures



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.

MOD. HD PROTAB 10

PROFESSIONAL BROADCAST HD ANALYZER FROM 4 TO 2.250 MHz

AUTOMATIC, FAST & EASY TO USE

RF IN

- 50Ω "N" Connector
- 75Ω "F" Connector
- FREQ. RANGE 4–2.250 (2.700 OPT.) MHz
- DVB–S2 MULTISTREAM
- DVB–T2–T2 LITE & C2
- ISDB–T (6/8 MHz)–ATSC–GB20600
- ANALOG TV
- FM RADIO
- DAB & DAB +
- REAL TIME SPECTRUM (4-2.700 MHz)
- MINI SPECT. WITH PICTURES
- GSM BAND
- LTE FILTER
- ITU QUALITY COVERAGE
- PRODRIVE TEST SW
- LTE ANALYZER
- WAVE FORM MONITOR
- T2 MI ANALYZER

ASI T.S.

- INPUT/OUTPUT
- DVB–T SFN NETWORK DELAY MEAS
- ETR 101–290 T.S. ANALYZER
- RECORD/READER

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 & CATV SPECT & MEAS

GPS

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

MONITO-RING

- 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

MAIN FUNCTIONS

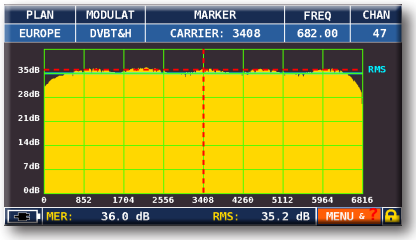
SUPPLIED

- TV and CATV TUNER, extended band, 4-1000 MHz
- SAT TUNER, extended band, 930-2.250 MHz
- GSM extended band, 860-1.000 MHz for telephone repeater installation, see application note
- Exclusive patented ROVER AUTODISCOVERY system: auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode
- 2 IF/RF inputs "N" 50 ohm/"F" 75 ohm (or N & opt. Optic, or F & opt. Optic)
- Real time spectrum with max hold
- ISDB-T multilayer (opt.)
- DVB-T2 with multi-plp
- DVB-S2 multistream with ISI selection
- World wide analog TV & radio standards
- DVB-S2 & C2 with automatic symbol rate selection
- Full MPEG 2&4/SD & HD decoder
- T.S. Recorder/reader via LAN or USB
- Mer vs Carrier normal/inverted
- All measurements: MER, PER, LDPC, BCH, aBER, bBER, EVM, noise margin, average power
- Echoes/microechoes/preechoes in real time
- Common interfaces for CAM
- CATV meas: ingress, leakage, barscan & tilt
- LCN program code
- USB memory stick storage
- AAC/HEAAC & AC3/DD+dolby sound
- Free sw upgrades from the rover website
- Sun and rain proof
- Aluminium body, bag & case
- 6H /10A li-ion polimer batteries

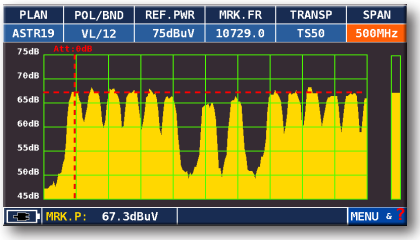
OPTIONAL

- ASI input/output
- ISDBT
- DVB-T2 lite
- DAB+ measures
- ETR 101-290 T.S. Analyzer, built-in FPGA
- DVB-C2
- LTE autotest with rejection filter
- Optic input for pwr & spect with interchangeable connectors, ST/SC/FC
- IP to ASI/de-encapsulator
- IPTV quality analyzer
- Network delay measurements for the DVB-T SFN network
- GPS receiver for position & GPS antenna quality test
- Signal coverage quality with GPS & "prodrive test SW"
- ITU "Q1 to Q5" radio electric quality
- Satexpert function dish pointing
- Remote web monitoring
- Usable like PROBE for quality of service monitoring with NMS
- Coax cable Reflectometric measurements

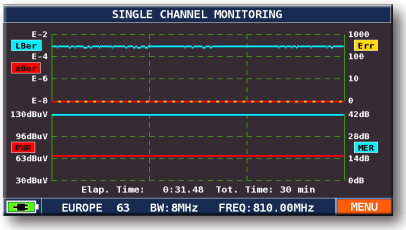
MEASUREMENT EXAMPLES



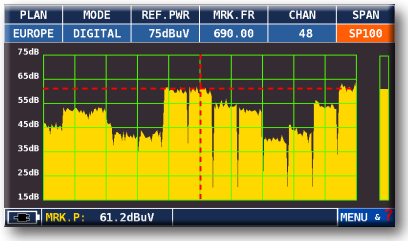
MER vs CARRIER: normal visualization



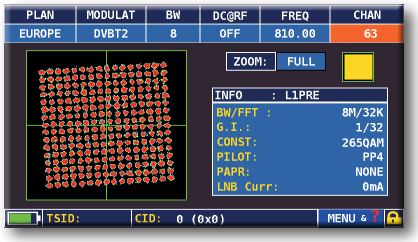
Spectrum SAT 400 MHz span



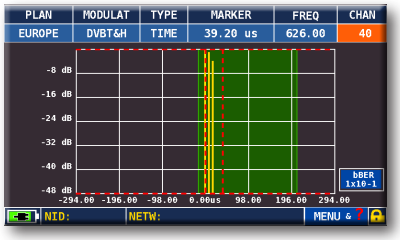
Single channel monitoring: 30 minutes



Spectrum TV 100 MHz span



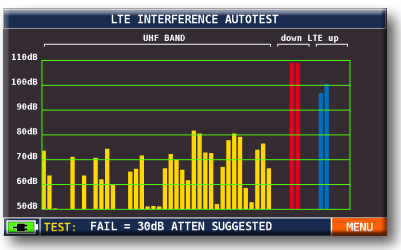
DVB-T2 rotated Constellation 256 QAM mod., on the right relative modulation parameters & M-PLP



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

ETR 290 Transport Stream Analyzer

GPS antenna Quality, constellation & Position.



LTE Interference Autotest (opt.)

THE PROFESSIONAL & ACCURATE TOUCH SCREEN ANALYZER

AUTOMATIC, FAST & EASY-TO-USE

RF IN

- 50Ω "N" Connector
- 75Ω "F" Connector
- FREQ. RANGE 4–2.250 (2.700 OPT.) MHz
- DVB–S2 MULTISTREAM
- DVB–T2–T2 LITE & C2
- ISDB–T (6/8 MHz)–ATSC–GB20600
- ANALOG TV
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- DAB & DAB +
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LAN

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- REMOTE CONTROL
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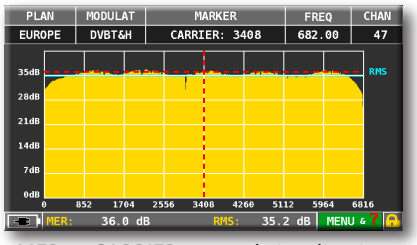

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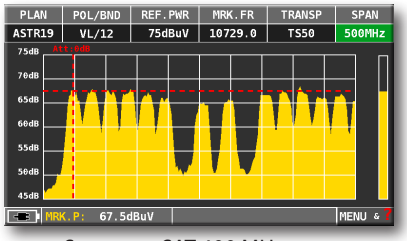
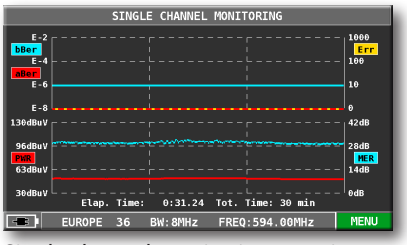


Spectrum SAT 400 MHz span



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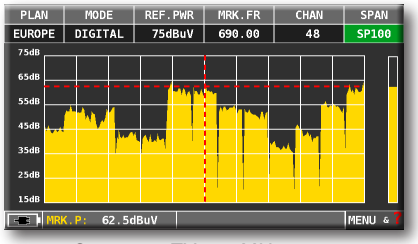

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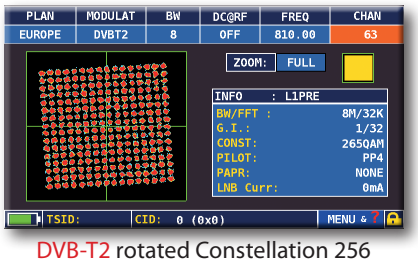
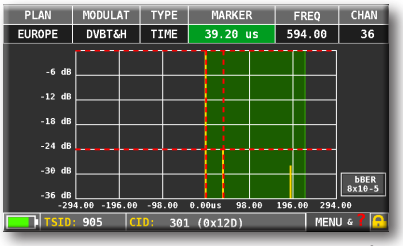


DVB-T2 rotated Constellation 256 QAM mod., on the right relative modulation parameters & M-PLP



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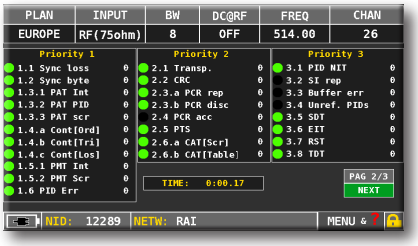
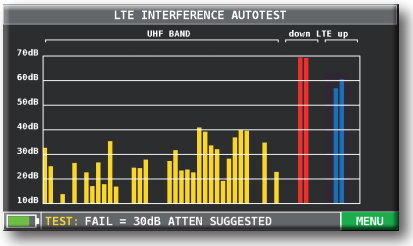


ETR 101290
Transport Stream Analyzer

GPS antenna Quality, constellation & Position.



LTE Interference Autotest

THE MOST ADVANCED & ACCURATE TABLET ANALYZER

RF IN

75Ω "F" Connector

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FC-ST-SC
INTERCHANGEABLE CONNECTOR

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

LAN

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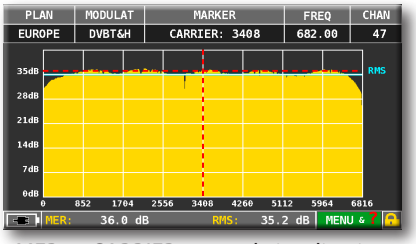
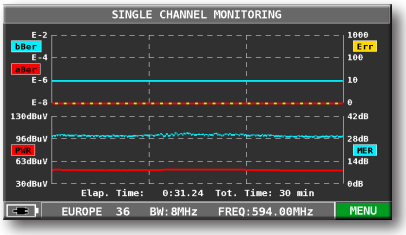
- Exclusive patented ROVER AUTODISCOVERY system: auto-matically detects and selects analog and digital COFDM/QAM TV signals in both measurement and spectrum mode
- Spectrum in real time, fast and super fast with memory peak
- Detects, measures and SHOWS pictures of MPEG 2 and 4 H264 HD High Definition programs
- All the measurements, program lists, A/V PIDs, NET ID, LCN, settings and pictures on one screen
- Automatic quality analysis: FAIL-MARG-PASS
- Automemory, Manual memory & Datalogger functions
- HELP function automatically identifies all the signals with digital modulation SAT, TV and CATV
- USB storage memory stick
- OPTICAL POWER METER opt. with interchangeable FC-ST-SC connector for fiber optic testing (FTTH & FTTX) and troubleshooting
- MER versus CARRIER, MER measurement for DVB-T & T2 carriers opt.
- Barscan TV & CATV function from 10 to 100 channels on one screen
- TV & IF SAT test ICT FENITEL Spain
- 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-ION-POLIMER 4A battery with 4 hour 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 basic SW upgradeable on-line
- Remote monitoring
- Reflectometric measurements (opt.)

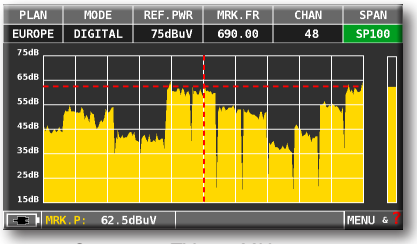
MEASUREMENT EXAMPLES



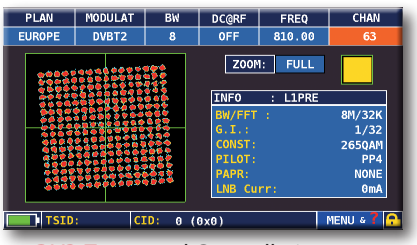
MER vs CARRIER: normal visualization



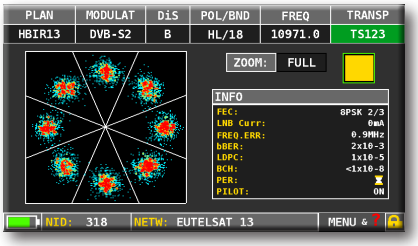
Single channel monitoring: 30 minutes



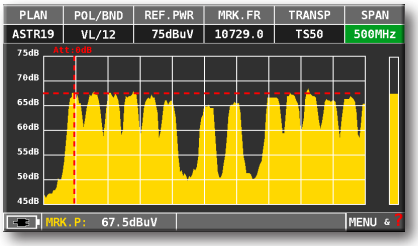
Spectrum TV 100 MHz span



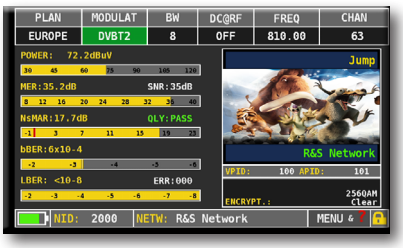
DVB-T2 rotated Constellation 256 QAM mod., on the right relative modulation parameters & M-PLP



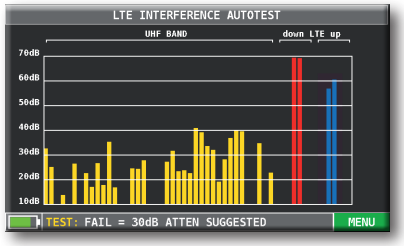
DVB-S2 multistream Constellation 8PSK mod., on the right relative modulation parameters & ISSY



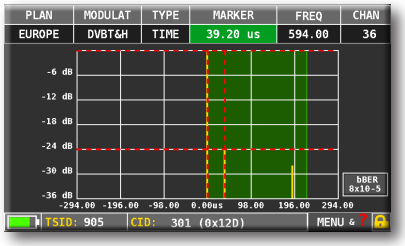
Satellite spectrum with 500 MHz SPAN



All the measurements, A/V PID, the picture and settings on one screen



LTE Interference Autotest



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

THE MOST ADVANCED & ACCURATE TABLET ANALYZER

RF IN

75Ω "F" Connector

- FREQ. RANGE 5–1.250 MHz
- DVB-C – J83B – ATSC – NTSC (US Version)
- OPTICAL INPUT opt.
- DVB-T2–T2 LITE & C2
- ANALOG TV
- FM RADIO
- DAB & DAB +
- REAL TIME SPECTRUM (5-1.250 MHz)
- GSM BAND
- LTE ANALYZER
- WAVE FORM MONITOR
- INGRESS
- HUM MEASUREMENTS
- ANALOG SIGNAL/NOISE IN QUITELINE
- LEAKAGE MEASUREMENTS

LAN

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

DOCSIS

- DOCSIS 3.0 (4 x 4 or 8 x 4) CHANNEL BONDING
- 5 to 1.250 MHz FREQ. RANGE for DOCSIS 3,1 ANALYSIS
- DOCSIS UPSTREAM TONE GENERATOR 5-65 MHz

OPTIC

FC-ST-SC INTERCHANGEABLE CONNECTOR

- POWER METER
- POWER LOSS
- POWER GRAPH
- CATV SPECT & MEAS
- OPTIC to RF CONVERTER

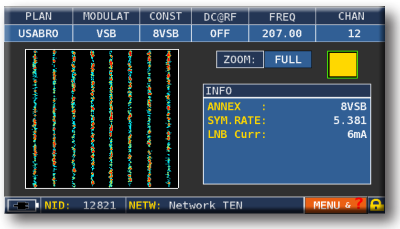
MONITO-RING

- 7 DAYS CHANNEL MONITORING LOGGER
- REMOTE PC/TABLET CONTROL
- USB ON THE GO for LONG TERM LOGGING
- QOS 24 h with NMS

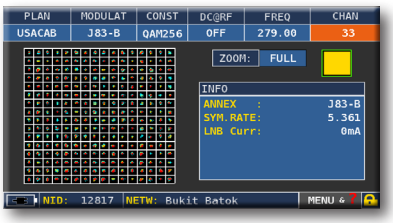
MAIN FUNCTIONS

- 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, 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
- Ping report, Network IP configuration
- Lost Packet measurements, latency time and PER
- DOCSIS upstream tone generator 5–65 MHz
- OPTICAL POWER METER opt. with interchangeable FC-ST-SC connector for fiber optic testing (FTTH & FTTX) and troubleshooting
- 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-ION-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 basic SW upgradeable on-line

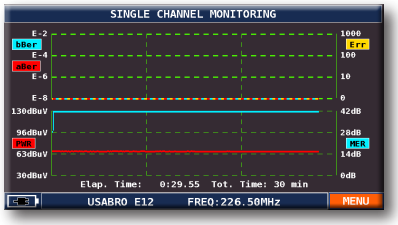
MEASUREMENT EXAMPLES



VSB constellation, on the right relative modulation parameters



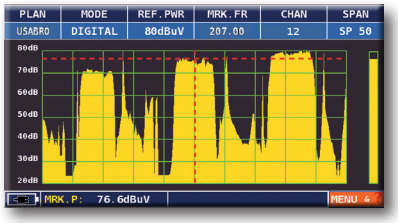
J83-B constellation, on the right relative modulation parameters



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 dBµV, -45 to 65 dBmV
- BER Measurement: (pre) bBER up to 1 x 10-9
  (post) aBER up to 1 x 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: 5-65MHz

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 NiMh 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

WARRANTY

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

CROSS REFERENCE

	HD PROTAB	HD TAB 9	HD TAB 7 EVO	OMNIA 7000
				
RECEPTION STANDARD				
Freq. Range MHz	4 – 2250	4 – 2250	4 – 2250	5 – 1250
DVB-T2 / S2 / C	•	•	•	DVB-T2 & C only
DVB-T2 LITE	opt.	opt.	opt.	•
DVB-C2	opt.	opt.	opt.	opt.
DAB / DAB+	opt.	opt.	opt.	–
DOLBY audio AC3–DD+	•	•	opt.	opt.
ISDB-T	opt.	opt.	opt.	–
ATSC	opt.	opt.	opt.	•
GB20600 DTMB	opt.	opt.	opt.	–
MPEG & AAC audio	•	•	•	•
PCMCIA common interface	•	•	–	–
MEASUREMENTS				
ANALOG TV PICTURE & VIDEO INPUT	•	•	•	•
MPEG 4 HD Picture or AVS	•	•	•	•
Analog Level and Digital Power	•	•	•	•
Analog C/N (Carrier to Noise)	•	•	•	•
Analog V/A (Video/Audio Ratio)	•	•	•	•
Full Spectrum: SAT-TV-CABLE	•	•	•	TV & CABLE
100 CHs TV Barscan	•	•	•	•
MER - BER - PER - SCR	•	•	•	•
Constellation	•	•	•	•
Noise Margin	•	•	•	•
AUTO Quality test	•	•	•	•
ADVANCED FUNCTIONS				
GPS Receiver	opt.	opt.	–	–
Prodrive Test SW	opt.	opt.	–	–
ETR 101-290 T.S. Analyzer	opt.	opt.	–	–
T2 MI analyzer	opt.	opt.	–	–
Network Delay Measurement	opt.	opt.	–	–
LAN IPTV/ASI	opt.	opt.	–	–
Optic Input	opt.	opt.	opt.	opt.
TV Minispectrum	opt.	opt.	–	–
LTE Filter	opt.	opt.	opt.	–
2.700 MHz SAT Extension	opt.	–	–	–
Video Waveform Monitor	opt.	–	–	•
Advanced "FFT" Spectrum Analysis	opt.	–	–	–
SAT Expert Function	•	•	opt.	–
Coaxial Cable Reflectometer	opt.	opt.	opt.	–
OTHERS				
Display Color TFT Touchscreen	10.2"	9"	7"	7"
Data Logger	•	•	•	•
Auto Discovery	•	•	•	•
Auto Memory	•	•	•	•
Manu Memory	•	•	•	•
Battery type	LI-PO >6 hr	LI-PO >4 hr	LI-PO >4 hr	LI-PO >4 hr
Bag & Shoulder Strap	•	•	•	•
Hard Suitcase	•	-	-	-

N.B. = Options are only available for quantities to be agreed and must be specified when ordering. All technical features are subject to change without notice

MOD. CNG 70 USB — USB HIGH POWER WHITE NOISE SOURCE 4 – 2.500 MHZ

SPECIFICATIONS:

- Freq. Range : 4 – 2.500 MHz
- Noise type : White Gaussian
- ENR: 70 dB 75 Ω 25°C
- Output power: – 56 dBm (*Mesured at 100 KHz spectrum RBW)*
- Flatness: 1,5 dB typ. 2 max
- Impedance: 75 Ω, SMB, (50 Ω opt.)
- PSU: USB, 5 Vdc, 70 mA
- Size: USB stick

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

ACTIVE DEVICES
- GAIN
- FLATNESS
- BW
- WSWR *

PASSIVE DEVICES
- LOSS
- FLATNESS
- BW
- VSWR *

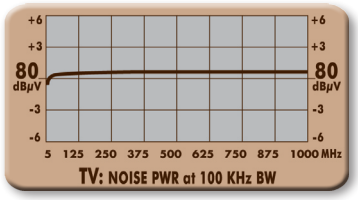
COAX CABLE/REFLECTOMETER
- LOSS
- LENGTH
- SHORT-CIRCUIT DISTANCE **
- OPEN CIRCUIT DISTANCE **
- IMPEDANCE MISMATCH

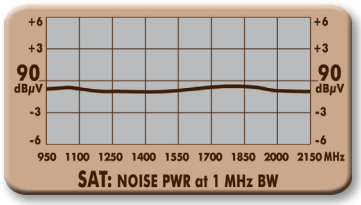
* *With RF Bridge.* ** *With simple slide ruler, depending on Cable type*

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 dBµV ± 2 @ 8MHz BW
- TV Power out : 83 dBµV ± 2 @ 100KHz BW
- SAT Power out : 88 dBµV ± 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:

- 1th wave length : 1310 n.m.
- 2th wave length : 1490 n.m. (1625 for USA)
- 3th 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.

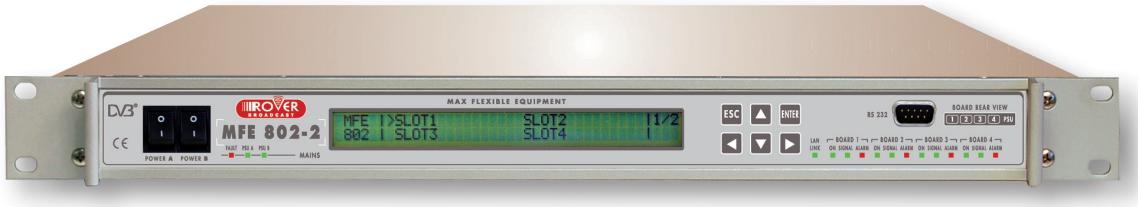
Furthermore, thanks to the red laser, the "MOS 4" will also allow the identification of any breaks in the optical fiber.

OTHER SOLUTIONS

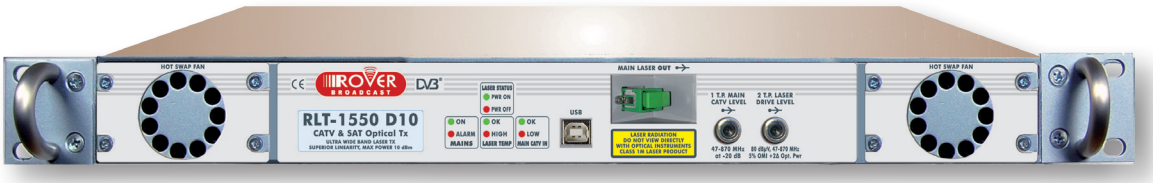
RECEIVING - PROCESSING - MONITORING

Close to its customers, and with over 40 years' experience in professional equipment design, ROVER Broadcast is a trusted provider of solutions for any broadcaster, offering a complete range of products for DVB digital TV network reception, processing and monitoring of digital and analog signals, network coverage analysis systems and high power optical transmitters.

SAT DVB-S2 RECEIVING/PROCESSING
TV DVB-T2 MONITORING NETWORK PLATFORMS



CATV & SAT LASER OPTICAL TX & RX



www.roverbroadcast.com

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.

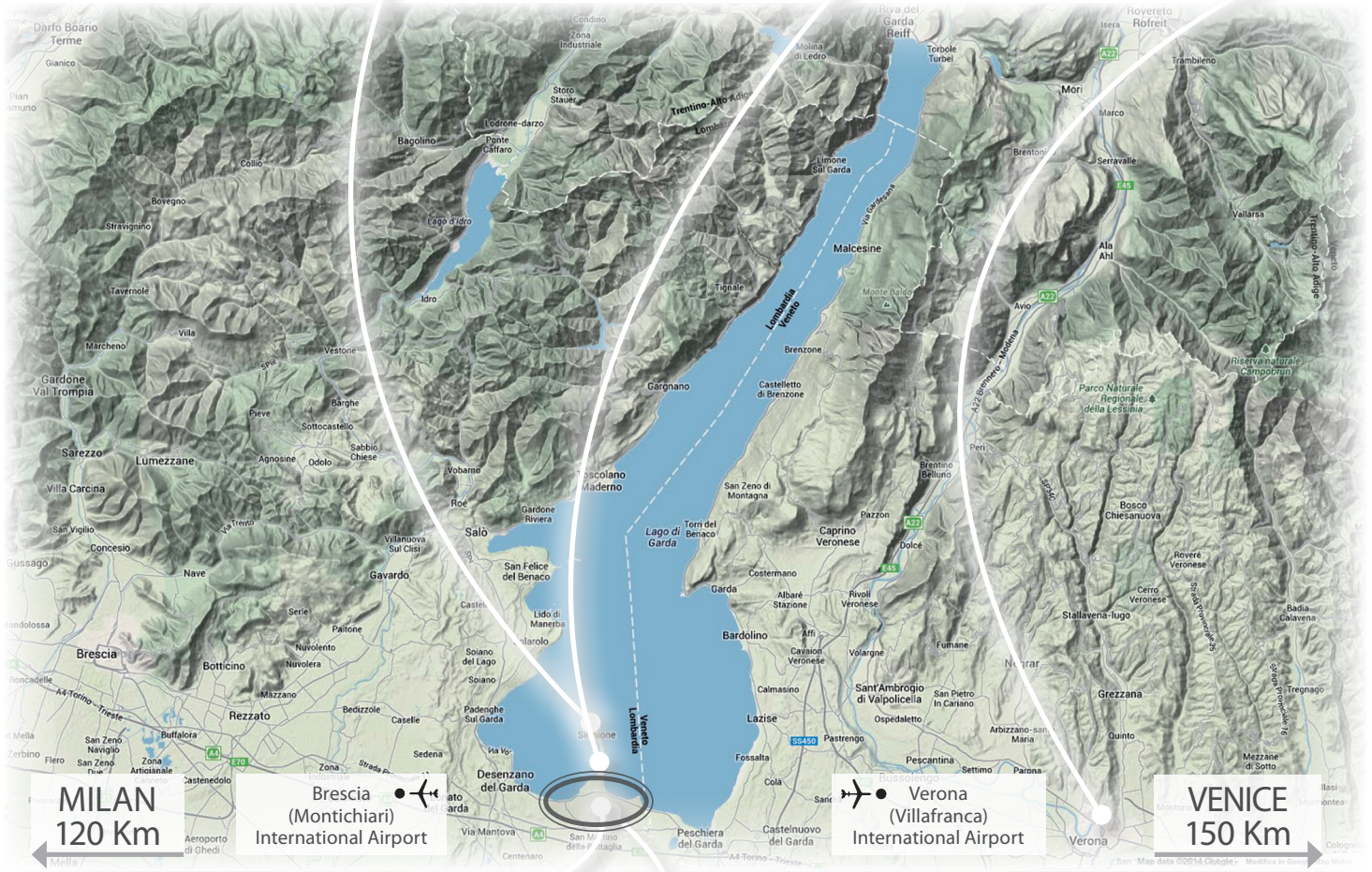
Lake Garda has a micro-climate, tropical in summer and temperate in winter, and where palms, olives, lemons, oranges, bouganville and even banana trees can grow.

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.



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

ROVER Goods entrance & production

ROVER Laboratories and offices

CERTIFICATES N°
1263 ISO 9001
1264 ISO 14001
1265 BS OHSAS 18001

DIMITTO