



||| A STEP AHEAD IN DIGITAL TELEVISION

PRESENTS:

# DISCOVERY & SCOUT



**ROBUST, STYLISH & LOW COST ANTENNA ANALYZERS**  
Simply carried around your neck, it leaves both your hands free



DVB-S / ANALOG  
S.C.R. READY

LEVEL-POWER  
MER-EVM-BER  
NOISE MARGIN  
QUALITY MEAS  
MPEG DECODER  
NETWORK IDEN.  
Aud/Vid PID LIST  
SAT FINDER  
DATA LOGGER  
DUAL LNB POINT  
Transponder Navigation



DVB-T DVB-H  
& ANALOG

LEVEL-POWER  
MER-SNR-BER  
NOISE MARGIN  
QUALITY MEAS  
CONSTELLATION  
MPEG DECODER  
PROGR. SERVICE  
NETWORK IDEN.  
Aud/Vid PID LIST  
AUTOSCAN  
DATA LOGGER



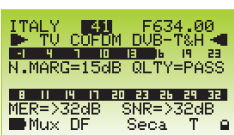
only  
2 Kg

Measurements  
and Pictures shown  
simultaneously on  
two separate displays  
for a perfect visibility  
in sunlight and in  
the dark

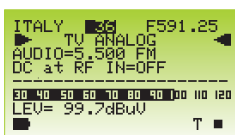
USB2

**NEW** AUTOANALYSIS  
TV ANALOG & DIGITAL FULLY AUTOMATIC SELECTION

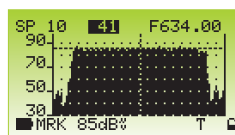
**SHOOT OUT ALL YOUR DVB-T, DVB-H and ANALOG TV CHANNELS, YOUR METER WILL AUTOMATICALLY and INSTANTLY RECOGNISE THEM, BOTH IN MEASUREMENT and SPECTRUM**



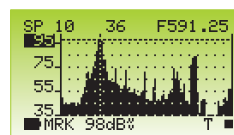
Digital MER-SNR Noise Margin & Quality Meas



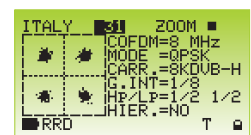
Analog Level measurement



Digital TV: MRK at center Carrier



Analog TV: MRK on video Carrier



Constellation diagram, related CH data & status



# Always a Step Ahead and at your Service with **DISCOVERY & SCOUT**



## ADVANCED

The DISCOVERY family was specifically designed to meet the requirements of installers and operators, who have to rapidly adapt to all the new, emerging, digital technologies: DVB-S, DVB-T, DVB-C, DVB-H and also the new LNB's with S.C.R. (Single Cable Router) technologies.

## POWERFUL

The DISCOVERY meter is the most powerful, compact and economical RADIO-TV-SAT analyzer existing on the market and it allows you to carry out any measurement, on both digital and analog signals, in terrestrial and satellite bands, with direct SAT TRANSDUCER navigation and dual LNB pointing.

## MORE PERSONAL SAFETY

The meter's size and weight (only 2 Kg) facilitate transport and use. If carried around your neck, the meter allows perfect viewings and readings, keeping both hands free. This not only simplifies operation in normal working conditions, but also guarantees total personal safety even in the most critical situations (on roof tops, ladders, etc.).

## FAST and AUTOMATIC

The DISCOVERY meter is the first of its kind to include a built-in, 32 bit, 100 MHz, ARM-7 microprocessor. This, together with a high capacity memory, enables you to identify, analyse and automatically and instantly store the digital and analog TV signals, according to the relative standard used in your country and the meter automatically supplies the measurements of the digital signal quality: FAIL-MARG-PASS.

## MORE MEMORY

The high capacity FLASH memory allows you to memorize up to 200 plans, which accommodate many thousands of TV channels and pre-loaded satellite transponders.

## USB PORT

A USB-2 port permits PC control, using special and sophisticated software, which simplifies the meter's operation (special, pre-memorized channel plans, "Data Logger" downloads, implementation of new software releases via internet, etc.)

## DUAL DISPLAY

Two displays, one graphic for spectrum/measurements and one 4" TFT color for pictures allow you to obtain, simultaneously and separately spectrum/measurements and full pictures. This guarantees perfect measurement vision both in full sunlight and in the dark.

## FULL OPTIONAL ACCESSORIES

The meters are supplied with a built-in shoulder strap, useful hard case for transport, batteries with a 3 to 4 hour autonomy and a charger to charge the batteries from your vehicle or from mains etc.

## COMPLETE AND SIMPLE NAVIGATION

In order to explain the simplicity of the meters' operation, we describe below how to navigate in TV and SAT bands.

### NAVIGATION IN TV BAND

(including channel PLANS from all over the world).

These meters can operate in three ways:

#### a) NAVIGATION IN THE CHOSEN COUNTRY PLAN.

By navigating manually in the country's channel PLAN (for example, channels 21-22-23, etc.), the meter instantly recognises the type of signal (analog or digital) and immediately supplies all the various measurements (level, MER, SNR, BER, NOISE MARGIN, QUALITY) and spectrum analysis.

It also supplies the network name, the bouquet name, the encryption system and, last but not least, the names of all the programs, services and audio and video PID's, contained in the bouquets, even if they are

encrypted. An interesting feature is the possibility of navigating in spectrum, using channels, and automatically obtain the level measurement and position the "marker" on the video carrier. In the same way power measurements are supplied for digital channels and the "marker" is positioned in the center of the channel.

The DISCOVERY is the only meter that automatically sets the REF LEVEL (level scale) on the spectrum.

- b) NAVIGATION IN THE CUSTOMER PLANS, stored manually using the meter, or preloaded using a PC, via the USB port.
- c) AUTOSCAN (complete automatic auto-memorization function). Basically when connecting an antenna to the meter and after setting the minimum threshold at the required level, the meter automatically recognises, identifies and stores the various programs received in this location, generating an "AUTO" memory plan, which can be selected from N.1 to N.99, for each installation or for each town.

### NAVIGATION IN SAT BAND

(including the data of the main satellites in Europe/Asia/America and all their relative transponders).

#### a) NAVIGATION IN THE CHOSEN SATELLITE TRANSPONDERS (for example ASTRA 19°, already pre-stored on board).

satellite name and relative orbital position have been selected, you can navigate directly using the number of transponders and/or relative frequency. The transponders are listed in increasing frequency values and have all the LNB parameters pre-stored: L.O. and band, DiSeqC and the new "SCR" LNB's for 4 or 8 users (Single Cable Routers), as well as multi-switches with 4-8-12 or 18 cables.

#### b) NAVIGATION IN THE MEMORY PLAN (for example PLAN 46, stored manually by the user or using a PC). This allows you to navigate in the various programs from 1 to 199 according to the sequence and settings stored by the user.

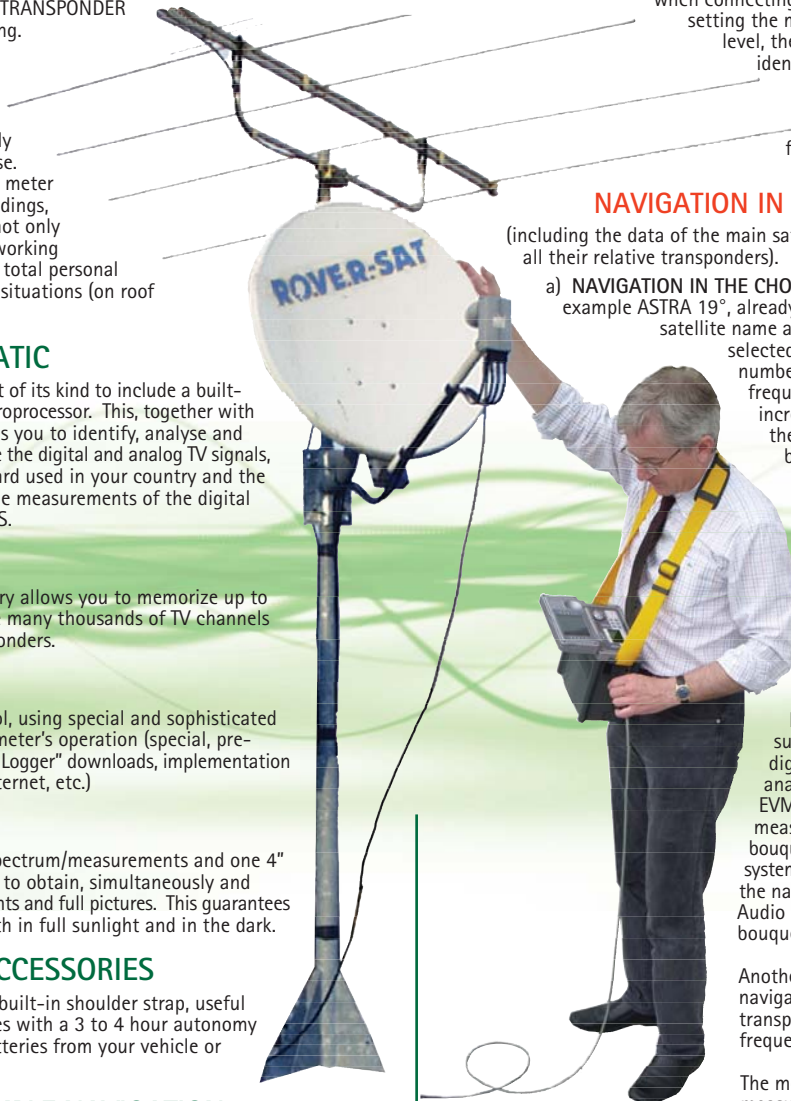
In both cases the meters automatically supply all the power measurements for digital transponders, and the level for analog ones, as well as supplying MER, EVM, BER, NOISE MARGIN, QUALITY measurements and the network name, bouquet, the orbital position and encryption system. Last but not least, the meters supply the names of all the programs (services) and Audio and Video PID's contained in the bouquet, even if they are encrypted.

Another important feature: it is possible to navigate in spectrum mode, with transponders, memory programs or frequencies.

The meter automatically supplies the level measurement for analog transponders and the power measurement for digital transponders, already correlated to the relative Symbol Rate value (without having to position the band marker), this, thanks to the quantity of pre-stored data in the meter and excellent calculation power. It is also the only meter that can automatically set the REF LEVEL (level scale) of the spectrum.

### NOISE MARGIN QUALITY MEASUREMENT (unknown): this is another exclusive ROVER measurement.

Pointing the antenna and/or satellite dish to the maximum level does not always mean the maximum signal quality. In fact, in the case of interferences with the analog TV signal, it is possible to carry out pointing for the best and clean picture and not always for the maximum level. With digital signals you should get used to measuring the NOISE MARGIN and increase it to the maximum value possible (minimum 2 dB for SAT and 6 dB for digital terrestrial) to guarantee a good and stable reception in time.





SAT

# Measurement Examples

TV



## MAIN MEASUREMENT SCREEN

MEASUREMENTS: MER - EVM - NOISE MARGIN - QUALITY

**NOISE MARGIN:** Noise Margin measurement both numerical and with the linear bar and relative peak memory. This value must always be more than 2 dB

**AUTOMATIC ANALYSIS OF THE RECEIVED SIGNAL QUALITY:** FAIL= lock FAILED MARG= lock PRECARIOUS / PASS= lock PERFECT This sophisticated automatic quality analysis system, eliminates all doubts about the quality of the signal received and has an excellent margin to guarantee good reception over time

**SATELLITE PLAN/NAME** and Orbital Position

**CENTER FREQUENCY** of the Transponder

**TRANSMISSION STANDARD:** DVB=EUROPE ASIA DSS=NORTH AMERICA

**MODULATION TYPE:** QPSK SAT/ ANALOG SAT

**TRANSPONDER No.** (in order of frequency)

**MEMORY PEAK**

**COUNTRY/SAT** CUSTOM PLAN AUTOSCAN

**CHAN/TRANSP.** PROG. NAME CHAN/PROG.

**FREQUENCY** MHz

HBIR13 NR 63 F11977.0  
SAT QPSK DVB  
N.MARG= 6dB QLT=PASS

MEMORY PEAK

4 6 8 10 12 14 16 18 20  
MER=12.6dB EVM=25%

skys 17NDS 4 S LCK

**BATTERY STATUS:** ~ mains connection 45/240' 15/30' 1/15'

**NETWORK NAME**

**ORBITAL POSITION**

**ENCRYPTION TYPE**

**RECEPTION TYPE:** S = SAT = ANALOG SAT

**M.E.R. MODULATION ERROR RATIO:** Global measurement of the signal quality (includes: noise, distortions, interferences and SKEW adjustment (polarization plan) in numerical form and with a linear bar and relative peak memory. The measurement precision is 0.2 dB and is used for fine antenna pointing, eventually together with the BUZZER

**CLOSED LOCK =** locked digital signal  
**OPEN LOCK =** unlocked digital signal

**E.V.M. ERROR VECTOR MAGNITUDE:** Constellation quality in % shown as a vector error

**sat S.C.R. USER N.**

## MAIN MEASUREMENT SCREEN

MEASUREMENTS: MER - SNR - NOISE MARGIN - QUALITY

**NOISE MARGIN:** Noise Margin measurement both numerical and with the linear bar and relative peak memory. This value must always be more than 6 dB.

**AUTOMATIC ANALYSIS OF THE RECEIVED SIGNAL QUALITY:** FAIL= lock FAILED MARG= lock PRECARIOUS / PASS= lock PERFECT This sophisticated automatic quality analysis system, eliminates all doubts about the quality of the signal received and has an excellent margin to guarantee good reception over time

**PLAN** Name of the Custom PLAN or country channel plan

**FREQUENCY** Video carrier in Analog TV Center Channel in DVB-T

**MODULAT. TYPE:** ANALOG TV RADIO/DVB-T H (DVB-C-J83 mod. C2 only)

**CHANNEL** channel name/number

**TRANSMISSION STANDARD:** DVB-T: Digital Terrestrial Television DVB-H: Mobile Telephone Television

**COUNTRY/SAT** CUSTOM PLAN AUTOSCAN

**CHAN/TRANSP.** PROG. NAME CHAN/PROG.

**FREQUENCY** MHz

ITALY 41 F634.00  
TV COFDM DVB-T H  
N.MARG=15dB QLT=PASS

8 11 14 17 20 23 26 29 32  
MER=>32dB SNR=>32dB

MEDIASET NAGRA T LCK

**BATTERY STATUS:** ~ mains connection 120/240' 15/30' 1/15'

**NETWORK NAME**

**ENCRYPTION TYPE**

**RECEPTION TYPE:** T = TERRESTRIAL = TV/RADIO ANALOG

**M.E.R. MODULATION ERROR RATIO:** Global measurement of the signal quality (includes: noise, distortions, interferences and poor antenna alignment, in digital modulation) with a linear bar and relative peak memory.

**CLOSED LOCK =** locked DVB-T signal  
**OPEN LOCK =** unlocked digital signal

**S.N.R. SIGNAL NOISE RATIO:** Signal noise ratio measurement

## AUTOMATIC SPECTRUM VISION

SPECTRUM ANALYSIS with MAX HOLD (MAXIMUM PEAK MEMORY)

**AUTOMATIC REFERENCE LEVEL:** Level scale reference value in dBµV; can also be adjusted manually

**MAX HOLD CURVE:** Maximum peak memory reached by the signal

**SPECTRUM SPAN:** Span width in MHz from 50/100/200/500 to FULL.

**TRANSPONDER No.** (in order of frequency)

**CENTER FREQUENCY** of the Transponder

**COUNTRY/SAT** CUSTOM PLAN AUTOSCAN

**CHAN/TRANSP.** PROG. NAME CHAN/PROG.

**FREQUENCY** MHz

SP200 NR 63 F11977.0

70 60 50 40

MRK 60dB% MaxH 4 S LCK

**BATTERY STATUS:** ~ mains connection 30/240' 15/30' 1/15'

**LEVEL/POWER:** Signal level/power value in dBµV corresponding to the Frequency Marker

**MAX HOLD FUNCTION:** Activated maximum peak memory

**RECEPTION TYPE:** S = SAT = ANALOG SAT

**sat S.C.R. USER N.**

**LEVEL/POWER MARKER:** 0,1 dB resolution corresponding to the frequency Marker position

**FREQUENCY MARKER:** 0.1 MHz resolution

**SPECTRUM ANALYSIS CURVE:** 5 dB division, in almost real time

## AUTOMATIC SPECTRUM VISION

SPECTRUM ANALYSIS of an ANALOG TV CHANNEL with an ADJACENT DVB-T CHAN.

**AUTOMATIC REFERENCE LEVEL:** Level scale reference value in dBµV, can also be adjusted manually a step di 5dB

**FREQUENCY MARKER:** 0,025 MHz resolution

**SPECTRUM SPAN:** Span width in MHz from 2/7/10/20/50/100/200/500 to FULL.

**CHANNEL** channel name/number

**FREQUENCY** Video carrier for Analog TV Center channel for DVB-T H

**COUNTRY/SAT** CUSTOM PLAN AUTOSCAN

**CHAN/TRANSP.** PROG. NAME CHAN/PROG.

**FREQUENCY** MHz

SP 20 32 F559.25

70 50 30

MRK 86,9dB% T LCK

**BATTERY STATUS:** ~ mains connection 20/180' 10/20' 1/10'

**LEVEL/POWER:** Signal level/power value in dBµV corresponding to the Frequency Marker position

**RECEPTION TYPE:** T = TERRESTRIAL = ANALOG TV

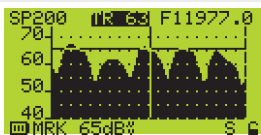
**LEVEL/POWER MARKER**



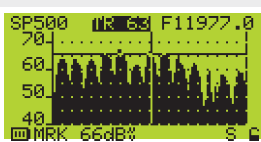
**LEVEL/POWER & HOME MEASUREMENT**  
Level/power measurement in real time, represented numerically and by a linear bar with relative peak memory, resolution 0.1 dB. The **HOME** function allows you to go directly to this screen where all the reception settings are represented: satellite, transponder, frequency, modulation, standard, polarization, band, LNB 12/18V voltage, 22 KHz pulse, DiSEqC a, b, c, d, LNB LO., symbol rate, power, S.C.R. User, battery, etc.



**BER MEASUREMENT**  
"bBER" to measure the BER value, before VITERBI error correction (Pre BER). "aBER" to measure the BER value, after VITERBI error correction (Post BER). Both measurements are represented numerically and by a linear bar and relative memory peak.



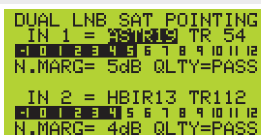
**SPECTRUM ANALYSIS SPAN - 200 MHz**  
Spectrum (without "Max Hold" function), level/power 0.1 dB resolution, 5 dB/div. scale, refreshment speed almost in real time.



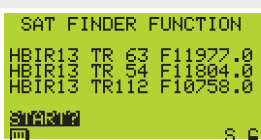
**SPECTRUM ANALYSIS SPAN - 500 MHz**  
Spectrum (without "Max Hold" function), level/power 0.1 dB resolution, 5 dB/div. scale, refreshment speed almost in real time.



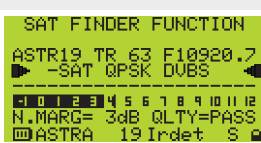
**MPEG SERVICE and A/V PID LIST**  
Shows the names of the programs received and relative Audio and Video PIDs contained in the bouquet. Using the Scroll function it is possible to visualise up to 64 programs. The RADIO programs show only the Audio PID.



**SAT POINTING with DUAL LNB**  
This special function allows you to point a satellite dish with two, or more LNB simultaneously (without having to change LNB or frequency). It also allows you to adjust the relative SKEW (polarization plan) with a total precision of 0.2 dB.



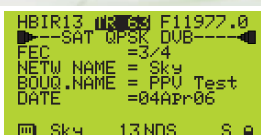
**SATELLITE FINDER (1st screen)**  
This automatic function allows you to manually program up to 3 particular transponders on a specific satellite and, then, to find and identify the satellite required by simply moving the satellite dish in the direction of the satellite. Once the programmed satellite has been found it automatically goes to the 2nd screen for fine pointing (see below).



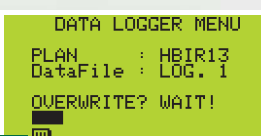
**SATELLITE FINDER (2nd screen)**  
Once the programmed satellite has been found (see above) the instrument automatically goes to this screen for fine pointing and relative adjustment of the polarization plan (SKEW). In the lower part of the display you can also see the Network name and the orbital position of the satellite. The BUZZER, which inserts automatically, allows you to align the dish without looking at the display.



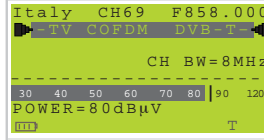
**PLAN/SAT SELECTION MENU**  
The instrument allows you to select all the satellites and transponders worldwide (up to 99 satellites, 60000 transponders) and relative parameters, as shown in **HOME**. (N.B. The meter is supplied pre-stored with all the most important satellites and their relative transponders)



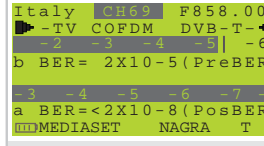
**NETWORK IDENTIFICATION FUNCTION**  
This display allows you to see the network name, bouquet and data received, but also the FEC value (error correction Rate) used.



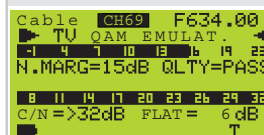
**DATA LOGGER (measurement recording)**  
This function allows you to record all the measurements of the various transponders and then to download them and print them via the USB socket with the PC.



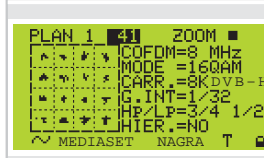
**LEVEL/POWER & HOME MEASUREMENT**  
Level/power measurement in real time, represented numerically and by a linear bar with relative peak memory. The **HOME** function allows you to go directly to this screen where all the reception settings are represented: country canalization, channel, frequency, modulation, channel band width, power, battery, etc.



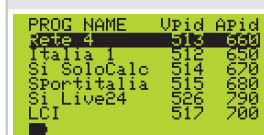
**BER MEASUREMENT**  
"bBER" to measure the BER value, before VITERBI error correction (Pre BER). "aBER" to measure the BER value, after VITERBI error correction (Post BER). Both measurements are represented numerically and by a linear bar and relative memory peak.



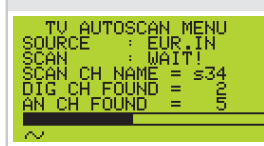
**QAM EMULATED MEASUREMENT**  
This measurement, developed by ROVER, allows you to measure the digital signal quality using a series of analog measurements. The quality measurement is based on the C/N and FLATNESS and is similar to demodulated. **The C2 model has a complete QAM demodulator, with constellation.**



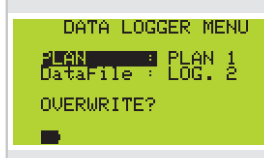
**CONSTELLATION DIAGRAM and RELATED CHANNEL DATA and STATUS**  
Visualisation of the constellation and modulation parameters. It is possible to zoom and navigate in the channels. The following parameters are shown: plan, channel, zoom type, constellation, mode, no. of carriers, DVB-T or H, guard interval, hierarchy and priority, bouquet name, encryption system, etc.



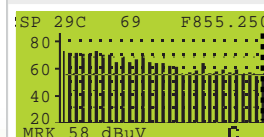
**MPEG SERVICE and A/V PID LIST**  
Shows the names of the programs received and relative Audio and Video PIDs contained in the bouquet. Using the Scroll function it is possible to visualise up to 64 programs. The RADIO programs show only the Audio PID.



**AUTO SEARCH and MEMORIZATION**  
This function automatically recognises both analog and digital TV channels and stores them in a plan. The scanning progress is shown during the search: the scanned channel, the channels found with digital modulation, the channels found with analog modulation. The AUTO plan automatically created can be easily used to carry out all the measurements.



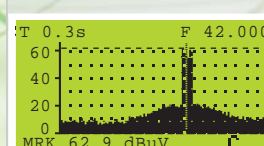
**DATA LOGGER (measurement recording)**  
This function allows you to record all the measurements of the various channels and then to download them and print them via the USB socket with the PC.



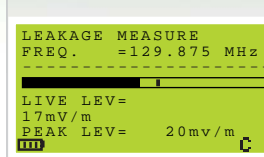
**CHANNEL BARS SCAN UP TO 100 CHANS**  
BAR visualisation of the canalisation in a CATV network. It allows you to see the video carrier, audio carrier, power up to 100 channels to check, on one screen. The reference level is automatic and can also be adjusted manually. Selectable dB/div. Level marker, which navigates in the channels.



**TILT MEASUREMENT**  
This function allows you to adjust the TILT in line extender amplifiers. BAR visualisation and measurement of the TILT with high speed refreshment. It allows you to see the carrier and the power of up to 9 specific preselected channels. The 2 level markers position automatically on the first and last channel and the difference in level is shown.



**INGRESS SPECTRUM - MEASUR**  
Spectrum visualisation in the return band ("DOCSIS up stream") to measure disturbances (INGRESS). Selectable Start, Stop frequencies, level frequency marker can be positioned on all band. Max hold function can be activated. It allows you to check for disturbances including impulsive and repetitive impairments.



**LEAKAGE MEASUREMENT**  
Electromagnetic field (leakage) irradiated from poor shielding in the CATV distribution network. Peak measurement in real time, with acoustic alarm threshold, possibility of selecting many types of antennas and different measurement distances.

Large yellow-green  
64x128 mm  
high definition  
graphics display



ABS plastic, shock-proof,  
rugged case for safe and easy  
transportation

Shock-, rain- and dust-proof  
front panel and keyboard

Space for cables,  
chargers and accessories

Heavy duty shoulder strap



## S2 SCOUT S.C.R. READY

- Demodulated QPSK, SCPC and MCPC operation
- Interchangeable IN connector: "F" ("IEC" or "BNC" or "N" opt.)
- **NET. ID. function** (net name, orbital position, encryption system, date)
- **MPEG Service/Program and Audio/Video PID list**
- Up to 99 navigation memory plans:
  - SAT PLAN: pre-loaded, unchangeable satellite transponder PLAN (only modifiable using optional SMART PC SW)
  - CUSTOM PLAN: Stored manually or through PC generated by the customer, including program name
- QPSK Real Average Power measurement: from 30 to 123 dBuV
- Measurements: aBER, bBER, MER, EVM, NOISE margin, average power
- **Automatic quality analysis: PASS-FAIL-MARGINAL and Noise Margin measurements**
- **SAT FINDER:** Simple to use and automatic highly efficient satellite identification function
- Easy "SAT point" spectrum function with buzzer and peak hold memory for fast and correct dish alignment
- Satellite fine alignment with Noise Margin measurement and relevant bar graph with peak memory for perfect dish pointing and SKEW adjust.
- **Dual LNB dish alignment function**
- Accurate spectrum analysis with max hold (peak) features, with variable SPAN: 50 MHz to full band with automatic and adjustable reference level
- USB PC interface for firmware up-grades through internet

**SAT ANALOG and DIGITAL QPSK ANALYZER** for EASY and PERFECT DISH ALIGNMENT and D.T.H. COMMUNITY SAT DISTRIBUTION SYSTEMS (930-2250 MHz) (30-123 dB $\mu$ V) **Level Accuracy 1 dB**

only  
1 Kg

USB2

DVB-S  
QPSK

Multi-  
language

NEW

FULL TRANSPONDER NAVIGATION

Shock-,  
rain- and  
dust-proof

- ✓ DIGITAL SAT QPSK
- ✓ ANALOG SAT
- ✓ DIGITAL and ANALOG SPECT
- ✓ AUTO SAT FINDER
- ✓ S.C.R. LNB
- ✓ DiSEqC MOTOR
- ✓ DiSEqC CONTROL A-B-C-D
- ✓ NETWORK IDENTIFICATION
- ✓ DATA LOGGER FUNCTION
- ✓ DUAL LNB POINTING
- ✓ A/V PID and MPEG PROGRAM LIST
- ✓ CUSTOM MEMORY PLAN
- ✓ ALL SATELLITES and TRANSPONDERS PREMEMORIZED ON BOARD
- ✓ LARGE BACK LIGHT DISPLAY
- ✓ HARD CARRY CASE SUPPLIED
- ✓ HIGH CAPACITY BATTERIES



## T2 SCOUT DVB-H READY

- Demodulated COFDM, SFN and MFN operation
- Easy to use, in channel navigation, automatically selects the analog or digital TV modulation
- Interchangeable input connector: "F" ("IEC" or "BNC" or "N" optional)
- **Network identification function** (network name, bouquet and encryption system)
- Up to 99 navigation memory plans:
  - COUNTRY TV PLAN: pre-loaded, unchangeable TV canalization PLANS (only modifiable using optional SMART PC SW)
  - CUSTOM PLAN: Stored manually or PC generated by the customer, including program name
  - AUTOSCAN: automatically recorded by the meter
- Modulation, Plan, Program Number, program name, Channel, Frequency selectable and storable from the keyboard or through PC
- **AUTOSCAN auto-search and auto-memory function**
- C/N, SNR, MER, BER, measurements
- **Automatic Quality Analysis: FAIL- MARG-PASS and Noise Margin measurements**
- Accurate spectrum analysis with max hold (peak) features, with variable SPAN: from 2 MHz to full band with automatic and adjustable reference level
- USB PC interface for firmware up-grades through internet

**TV ANALOG and DIGITAL COFDM ANALYZER** for INDIVIDUAL and COMMUNITY TV DISTRIBUTION SYSTEMS with FULLY AUTOMATIC A/D SELECTION in TV CHANNEL NAVIGATION (47-870 MHz) (30-120 dB $\mu$ V) **Level Accuracy 1 dB**

only  
1 Kg

USB2

DVB-T-H  
COFDM

Multi-  
language

NEW

AUTOANALYSIS  
TV ANALOG & DIGITAL FULLY AUTOMATIC SELECTION

Shock-,  
rain- and  
dust-proof

- ✓ DIGITAL TV COFDM
- ✓ ANALOG TV
- ✓ DIGITAL and ANALOG SPECT
- ✓ NETWORK IDENTIFICATION
- ✓ AUTO SCAN MEMORY
- ✓ DATA LOGGER
- ✓ CUSTOM MEMORY PLAN
- ✓ A/V PID and MPEG PROG. LIST
- ✓ LARGE BACK LIGHT DISPLAY
- ✓ HARD CARRY CASE SUPPLIED
- ✓ HIGH CAPACITY BATTERIES



## C2 SCOUT

- Demodulated QAM, annex A-B-C, 64-128-256, DOCSIS down stream
- Interchangeable input connector: "F" ("IEC" or "BNC" or "N" optional)
- Up to 99 Master and Custom programmable plans: stored manually in the meter or generated using the SMART PC software
- HELP function for frequency, constellation and symbol rate search
- AUTOSCAN to automatically create a custom plan and select the analog or digital TV modulation
- Power, C/N, SNR, MER, BER digital QAM measurements
- Level, A/V, CCN analog measurements
- BARS SCAN and TILT measurement with selectable bar, from 9 to 120 channels
- INGRESS spectrum 5-65 MHz
- LEAKAGE measurement fully programmable antenna, distance and threshold
- DATA LOGGER and AUTOTEST measurement recording function
- AC VOLTMETER triangular wave measurement
- Automatic Quality Analysis: FAIL- MARG-PASS and Noise Margin measurements**
- Accurate spectrum analysis with max hold (peak) feature, with variable SPAN: from 2 MHz to full band with automatic and adjustable reference level
- Network identification function (network name, bouquet and encryption system and audio/video PID)
- BUZZER according to selected measurement
- USB PC interface for firmware up-grades through internet

only 1 Kg

USB2

DVB-C  
J83 QAM  
DOCSIS D.S.

Multi-language

Shock-, rain- and dust-proof

NEW

AUTOANALYSIS

TV ANALOG & DIGITAL FULLY AUTOMATIC SELECTION (IN AUTOSCAN FUNCTION)

- ✓ DIGITAL TV QAM, DOCSIS D.S.
- ✓ ANALOG TV
- ✓ DIGITAL and ANALOG SPECT
- ✓ NETWORK IDENTIFICATION
- ✓ AUTO SCAN MEMORY
- ✓ BARSCAN and TILT
- ✓ INGRESS and LEAKAGE
- ✓ DATA LOGGER
- ✓ CUSTOM MEMORY PLAN
- ✓ A/V PID and MPEG PROGRAM LIST
- ✓ LARGE BACK LIGHT DISPLAY
- ✓ HARD CARRY CASE SUPPLIED
- ✓ HIGH CAPACITY BATTERIES



## ST2 SCOUT

DVB-H and S.C.R. READY

- Demodulated QPSK, SCPC and MCPC operation
- Demodulated COFDM, SFN and MFN operation
- MPEG Service/Program and A/V PID list
- Easy to use, in channel navigation, automatically selects the analog or digital TV modulation
- Up to 99 navigation memory plans:
  - COUNTRY TV PLAN: pre-loaded, unchangeable TV Canalization PLANS (only modifiable using optional SMART PC SW)
  - SAT PLAN: pre-loaded, unchangeable satellite transponder PLAN (only modifiable using optional SMART PC SW)
  - CUSTOM PLAN: Stored manually or through PC generated by the customer (including program name)
- Real Digital Average Power measurement: from 5-30 to 123 dBuV
- Measurements: aBER, bBER, MER, SNR, EVM, NOISE margin, average power
- SAT FINDER: Simple to use and automatic highly efficient satellite identification function
- Easy "SAT point" spectrum function with peak hold memory for fast and correct dish alignment
- Satellite fine alignment with Noise Margin measurement and relevant bar graph with peak memory for perfect pointing and SKEW adjust.
- Dual LNB dish alignment function
- TV AUTOSCAN: Auto-search and auto-memory function
- Accurate spectrum analysis with max hold (peak) features, with variable SPAN: from 2 MHz to full band with automatic and adjustable, reference level
- Modulation, Plan, Program No., Prog. name, Channel, Frequency, selectable and storable from the keyboard or through PC
- Network identification function (network name, orbital position, bouquet, encryption system and date)
- Automatic Quality Analysis: FAIL- MARG-PASS and Noise Margin measurements
- Interchangeable input connector: "F" ("IEC" or "BNC" or "N" opt.)
- USB PC interface for firmware up-grades through internet

only 1 Kg

USB2

DVB-T-H  
COFDM

DVB-S  
QPSK

Emul.  
QAM

Multi-language

Shock-, rain- and dust-proof

NEW

AUTOANALYSIS

TV ANALOG & DIGITAL FULLY AUTOMATIC SELECTION

### SAT

- ✓ DIGITAL SAT QPSK
- ✓ ANALOG SAT
- ✓ S.C.R. LNB
- ✓ DiSEqC MOTOR
- ✓ DiSEqC CONTROL A-B-C-D
- ✓ AUTO SAT FINDER
- ✓ DUAL LNB POINTING
- ✓ ALL SATELLITES & TRANSPONDERS PREMEMORIZED ON BOARD

### TV

- ✓ DIGITAL TV COFDM
- ✓ ANALOG TV

### BOTH

- ✓ CUSTOM MEMORY PLAN
- ✓ DIGITAL and ANALOG SPECT
- ✓ NETWORK IDENTIFICATION
- ✓ DATA LOGGER FUNCTION
- ✓ AUTO SCAN MEMORY
- ✓ MPEG PROGRAM LIST
- ✓ AUDIO/VIDEO PID LIST
- ✓ LARGE BACK LIGHT DISPLAY
- ✓ HARD CARRY CASE SUPPLIED
- ✓ HIGH CAPACITY BATTERIES



# ST4 DISCOVERY

DVB-H and S.C.R. READY

- Demodulated QPSK, SCPC and MCPC operation
- Demodulated COFDM, SFN and MFN operation
- MPEG picture decoder
- Easy to use in channel navigation, automatically selects the analog or digital TV modulation
- Up to 99 navigation memory plans:
  - COUNTRY TV PLAN: pre-loaded, unchangeable TV canalization PLANS (only modifiable using optional SMART PC SW)
  - SAT PLAN: pre-loaded, unchangeable satellite transponder PLAN (only modifiable using optional SMART PC SW)
  - CUSTOM PLAN: Stored manually or through PC generated by the customer, including program name
- Real Digital Average Power measurement: from 5-30 to 126 dBuV
- Measurements: aBER, bBER, MER, SNR, EVM, NOISE margin, average power
- SAT FINDER: Simple to use and automatic highly efficient satellite identification function
- Easy "SAT point" spectrum function with peak hold memory for fast and correct dish alignment
- Satellite fine alignment with Noise Margin measurement and relevant bar graph with peak memory for perfect pointing and SKEW adjust.
- Dual LNB dish alignment function
- TV AUTOSCAN: Auto-search and auto-memory function
- Accurate spectrum analysis with max hold (peak) features, with variable SPAN: from 2 MHz to full band with automatic and adjustable reference level
- Modulation, Plan, Program No., Program name, Channel, Frequency selectable and storable from the keyboard or through PC
- Fully programmable CUSTOM PLAN, manual or through PC (optional SMART PC SW)
- Network identification function (network name, orbital position, bouquet, encryption system and date)
- Automatic Quality Analysis: FAIL- MARG-PASS and Noise Margin measurements
- Dual LNB dish alignment function
- Interchangeable input connector: "F" ("IEC" or "BNC" or "N" opt.)
- USB PC interface for firmware up-grades through internet

## COMBINED SAT and TV ANALOG and DIGITAL QPSK and COFDM ANALYZER for D.T.H. COMMUNITY SMATV DISTRIBUTION SYSTEMS. (47-2250 MHz) (20-126 dBuV) Level Accuracy 1 dB











### NEW AUTOANALYSIS

TV ANALOG DIGITAL FULLY AUTOMATIC SELECTION



- SAT**
- ✓ DIGITAL SAT QPSK
  - ✓ ANALOG SAT
  - ✓ S.C.R. LNB
  - ✓ DiSEqC MOTOR
  - ✓ DiSEqC CONTROL A-B-C-D
  - ✓ AUTO SAT FINDER
  - ✓ DUAL LNB POINTING
  - ✓ ALL SATELLITES TRANSPONDERS PREMEMORIZED ON BOARD
- TV**
- ✓ DIGITAL TV COFDM
  - ✓ ANALOG TV
- BOTH**
- ✓ CUSTOM MEMORY PLAN
  - ✓ DIGITAL ANALOG SPECTRUM
  - ✓ NETWORK IDENTIFICATION
  - ✓ DATA LOGGER FUNCTION
  - ✓ AUTO SCAN MEMORY
  - ✓ MPEG PROGRAM LIST
  - ✓ AUDIO/VIDEO PID LIST
  - ✓ LARGE BACK LIGHT DISPLAY
  - ✓ HARD CARRY CASE SUPPLIED
  - ✓ HIGH CAPACITY BATTERIES

# Main Technical Specifications

MODEL	MAIN SPECIFICATIONS															
	SIZE (mm)	80 x 225 x 215	80 x 225 x 215	80 x 225 x 215	80 x 225 x 215	115 x 225 x 215	110 x 280 x 370	110 x 280 x 370	135 x 330 x 380							
WEIGHT (kg)	1.1	1.1	1.2	2	2	5	5	6								
ABS Shock-Proof Hard Case	●	●	●	●	●	FABRIC BAG and LIGHT-SHIELD	FABRIC BAG and LIGHT-SHIELD	FABRIC BAG and LIGHT-SHIELD								
Battery Duration (hours)	4 h	4 h	4 h	4 h	4 h	2 h	2 h	5 h								
Graphics Display	64 x 128	64 x 128	64 x 128	64 x 128	64 x 128											
TV Picture Display						4" TFT color	4.5" CRT B/W	4.5" CRT B/W	5.5" TFT color							
MEMORY	Logger	99	99	99	99	99	99	99	99	99						
	PROGS (for PLAN)	99	99	99	99	99	99	99	99	99						
	PLANS	99	99	99	99	99	99	99	99	99						
Tuning Navigation	Tran / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)	Chan / Freq / Prog (Meas / Spectrum)						
TV Sound		●	●	●	●	●	●	●	●	●						
Accuracy (dB)	1.5 typ.	1.0 typ.	1.0 typ.	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV	1.5 typ. SAT 1.0 typ TV						
MEAS Dynamic Range (dBuV)	30-123	5-120	5-120	30-123 SAT 5-123 TV	30-126 SAT 5-126 TV	30-126 SAT 5-126 TV	30-126 SAT 5-126 TV	30-126 SAT 5-126 TV	30-126 SAT 5-126 TV	30-126 SAT 5-126 TV						
SPECIAL FUNCTIONS	USB Software Upgrade via web	●	●	●	●	●	RS 232	RS 232	RS 232							
	NETWORK DATA Et Service Progs	●	●	●	●	●	NET only	●	●	●						
	TV PROGRAM AUTO SCAN		●	●	●	●	●	●	●	●						
	S.C.R. DRIVER	●														
	MOTOR DISH DRIVER	●														
	DUAL LNB POINT	●														
	SAT FINDER	●						●	●	●						
	DiSEqC	●						●	●	●						
	BARSCAN & TILT			●				●	●	●						
	INGRESS and LEAKAGE			●					●	●						
					●					●						
PICTURES	DIGITAL MPEG2 DECODER	Network Iden, PID SERVICES	Network Iden, PID SERVICES	Network Iden, PID SERVICES	Network Iden, PID SERVICES	● TV e SAT		● TV e SAT	● TV e SAT	● TV e SAT						
	ANALOG					● TV only	● ALL	● TV only	● ALL	● ALL						
MEASUREMENTS	SPECTRUM ANALYSIS	●	●	●	●	●	●	●	●	●						
	DIGITAL QUALITY ANALYSIS	●	●	●	●	●	●	●	●	●						
	CONSTELLATION		●	●	●	●		●	●	●						
	DEMODULATED BER, MER, NOISE MARGIN	8VSB							● opt.	● opt.	● opt.					
		QAM			●	● emul.	● emul.		● opt.	● opt.	● opt.					
		COFDM		●		●	●		●	●	●					
	OPSK	●			●	●		●	●	●						
SAT 930 - 2150 MHz	●			●	●		●	●	●							
TV 47 - 870 MHz		●	●	●	●		●	●	●							
CATV 5 - 870 MHz			●						●							
MODEL	S2 SCOUT		T2 SCOUT		C2 SCOUT		ST2 SCOUT		ST4 DISCOVERY		DL1 DIGILINE		DM12 DIGIMAX		DM14C DIGIMAX	

THE FUNCTIONS, SPECIFICATIONS and ACCESSORIES MAY BE CHANGED WITHOUT NOTICE