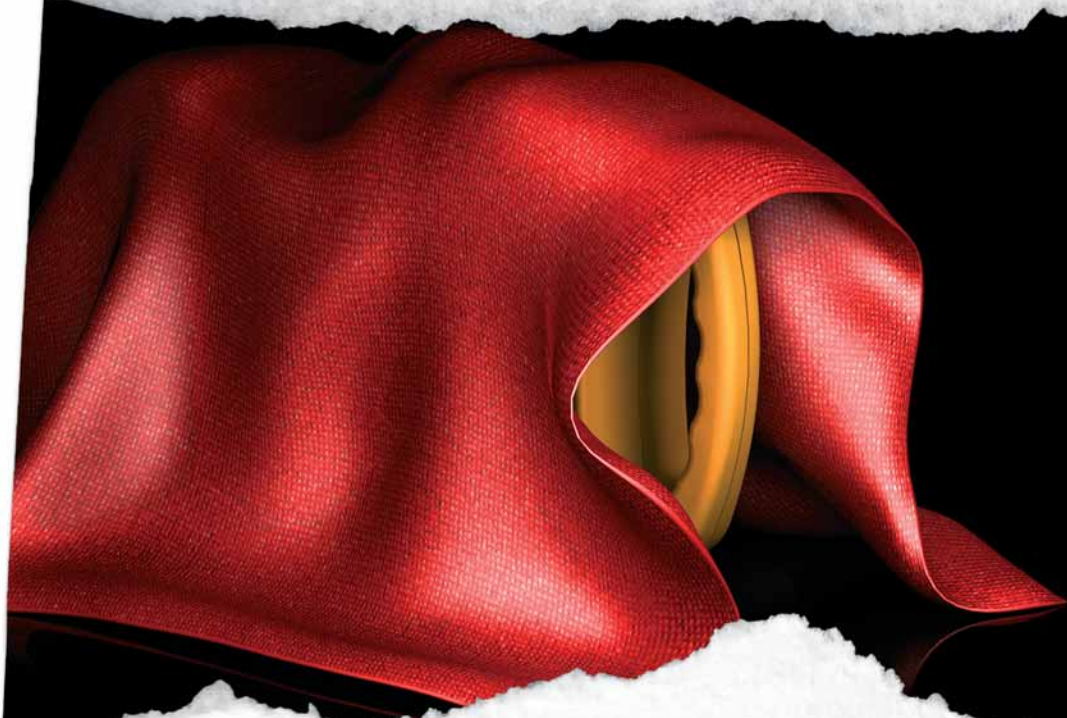


PROMAX NEWSLETTER

N° 25

Ready
to unveil it?



HD RANGER

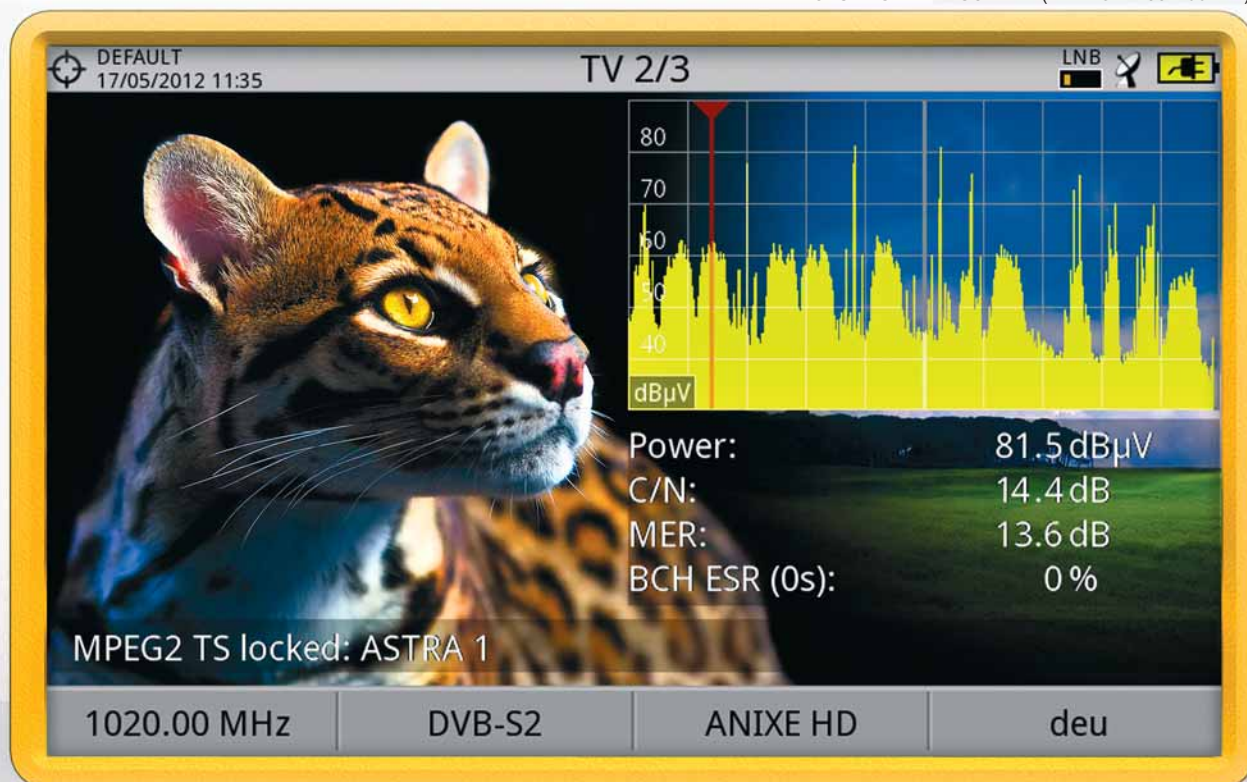
*Evolution? **No. Revolution!***

- ✓ *PROMAX-37: DOCSIS / EuroDOCSIS 3.0 Analyser*
- ✓ *DVB-C2 now available for TV EXPLORER **HD+***
- ✓ *C-band spectrum analyser option for PROLITE-77B*
- ✓ *MO-470: DVB-T2 modulator*
- ✓ *TVHUNTER+: handheld analyser for DVB-T2*



HD RANGER Revolutionising the market. Again.

ACTUAL SIZE - 7" SCREEN (APPROX. 155 x 93 mm)



DVB-T2/C2/S2

DVB-T/C/S

DOLBY DIGITAL PLUS

MPEG-4 HDTV

The largest and brightest display

HD RANGER 7" display is the brightest and largest used in any similar meter with excellent performance even under direct sun light.

This high resolution display allows functions such as the **triple split display** to be practically useful for all data and can be read clearly and easily.

New mechanical design

The **ergonomic handle**, tripod coupling and the special mix of plastics used for the chassis are just some of the mechanical innovations in the **HD RANGER**.

The **tripod coupling** for example opens the door to the use of various accessories that can be easily found in the market to use the meter in a static position or attached to an object for complete hands-free use.



HD RANGER *Unprecedented computing power*



Triple split display three functions in a single screen

Triple split display

Because of the latest processing speeds available, which allow higher processing capability, the **HD RANGER** can display information on several screens at any single time. These screens can be either overlapped or shown in a split screen format.

Spectrum analyser

We present a new ultra fast spectrum analyser function with higher dynamic range, better accuracy and improved resolution.

	HD RANGER +	HD RANGER
DVB-T2/C2 [®] DVB-S2 [®]	✓ ✓	✓
DOLBY DIGITAL PLUS	✓	
Optical measurements	○	○
3 GHz band extender	○	○

✓ Included ○ Optional

HD RANGER Ultra fast spectrum analyser

90 ms sweep time in ALL SPANs

The **HD RANGER** spectrum analyser sweep time is 90 ms per scan regardless of the frequency band or span select. That's all we can tell on printed paper but we encourage you to check the **video in our website** to see how fast that is or even better to go and find a real **HD RANGER** as soon as you can.

In addition it comes with special functions such as markers or max hold.

StealthID

There is a general consensus that the TV EXPLORER **AutoID** has been an outstanding function and extremely useful in a number of applications.

The **HD RANGER** takes it to the next level by **not requiring the user to press the green button!** The **HD RANGER** instantly identifies the required parameters while you are tuning the signal.



Span: 100 MHz

Ultra FAST spectrum
90 ms sweep time

Fibre optics option

Measurements of fibre optics systems are also possible with **HD RANGER** as an option. This option adds several optical functionalities: selective optical power meter and Optical-To-RF converter.

Optical LNBS

Work with optical LNBS just like conventional ones.

Selective OPM

Optical networks certification together with a light source.

Optical-To-RF conversion

For optical CATV or DTT links up to 1 GHz.

HD RANGER Amazing features

LTE Long Term Evolution

When a TV distribution system is interfered by a mobile phone cell the use of an LTE filter is recommended. The **HD RANGER** has a variety of tools that allow you to compare the signal reception quality measurements on digital TV channels with and without the LTE filter. This is very helpful to anticipate the performance improvement you should expect on your TV distribution system well before you physically make changes to the cabling to insert the LTE filter.

There are a large number of frequency bands allocated to LTE some of which are near or inside television bands. For instance band 5 (uplink 824-849 MHz; downlink 869-894 MHz) or band 3 (uplink 1710-1785 MHz; downlink 1805-1880 MHz). The **HD RANGER** has special functions to help installers determine the level of activity in those frequency bands and therefore be able to anticipate potential interference problems.

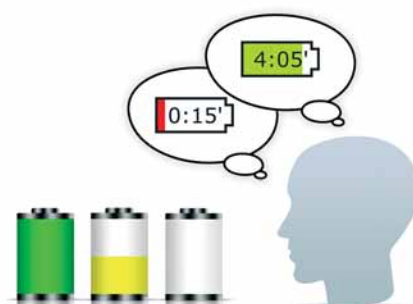


Intelligent data management

Create a container file for each installation and associate with it all the measurements, screen captures, channel tables, etc.

This information can be shared among various **HD RANGER**, which can be interesting for companies operating large work crews.

All this data can be downloaded on a PC at a later stage to be included in printed reports or for signal analysis purposes.



Smart battery control

The **HD RANGER** uses a high quality, long operating time Li+ battery and a special control system that shows the remaining battery time. This is also useful to know at any instant what the exact battery charge situation is before we go out for our next work.

Evolution? No. Revolu



The background of the advertisement features a close-up of a yellow handheld electronic device on the left and a wooden-handled axe with a black head embedded in a tree stump on the right. The scene is set in a field of tall green grass. The word 'tion!' is written in large, white, italicized letters with a black outline, partially overlapping the axe and the device.

tion!

Unprecedented computing power

Three function split display

Dramatically fast spectrum analyser

90 milliseconds sweep time in ALL spans

Largest and brightest display on the market

7" 16/9 high resolution display

Intelligent data management

Screens, measurements and data single file integration

PROMAX-37 DOCSIS / EuroDOCSIS 3.0 analyser

PROMAX-37 is an analyser for the installation, setting up and maintenance of video and high speed data interactive services over TV networks based on the EuroDOCSIS and DOCSIS 3.0 standard. It allows the qualification of VoIP and IPTV services.

The **PROMAX-37** incorporates the most advanced functions in accordance to updates made on the latest version of the DOCSIS 3.0 protocol, which includes channel bonding technology, allowing the instrument to be adapted to the latest technologies implemented by data over cable network operators.

DOCSIS 3.0

channel bonding +
sweeper function



Channel bonding

Channel bonding technology divides the data stream packets, sends them simultaneously through multiple channels and reorders them at destination. The result is a bandwidth equal to the sum of all used channels (both Downstream as Upstream) by using the existing infrastructure of the data network.

The channel bonding function of the **PROMAX-37** can measure and check cable networks that use this technology in both directions.

Sweeper function

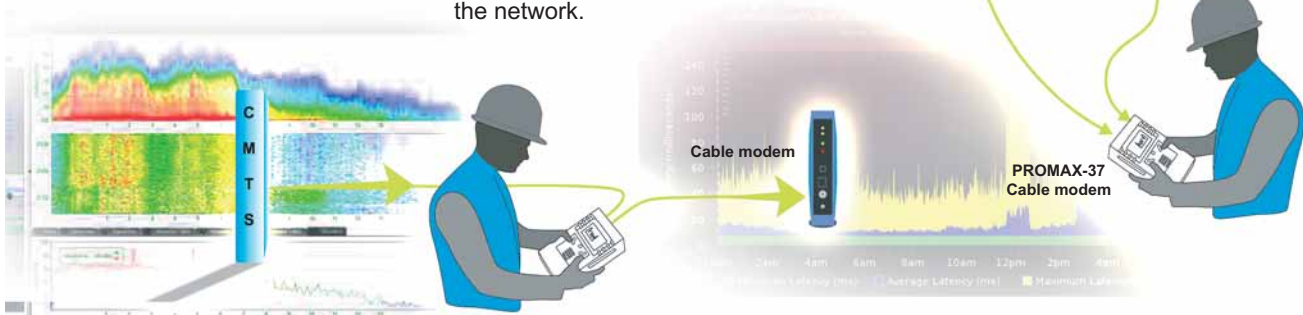
The **PROMAX-37** also incorporates the Sweeper function, which can test and adjust tilt and gain of the upstream distribution amplifiers and detect any failure in the system caused by the imbalance of any of these parameters.

Through loop with an external cable modem

It allows the user to monitor the signal transmitted by an external CM that has been previously registered in the network.

Internet access

The Ethernet connection to a PC allows browsing by means of the internal cable modem of the instrument, once it is registered on the network.



PROMAX-37 DOCSIS / EuroDOCSIS 3.0 analyser



Downstream:

- Σ Power measurement.
- Channel power measurement.
- Quality test: MER, BER, Pre BER, Post BER, Constellation diagram.
- Full band power.
- Frequency, channel and active channel plan.
- Modulation type and symbol rate.
- Spectrum / Scan measures.

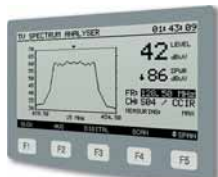
Upstream:

- Σ Power measurement.
- Power measurement
- Attenuation at CMTS
- Frequency and bandwidth
- Modulation and symbol rate
- Communications test
- Spectrum / Scan measures

Digital & analogue channel TV measurements

Communications Test (in Registered mode):

- IPTV analyser (television over IP)
- VoIP analyser (voice over IP)
- IP report
- Ping test
- Ratio of lost packets



DVB-C2 available for TV EXPLORER HD+

DVB-C2 is the second generation digital transmission system for cable networks. It employs the most powerful coding techniques and modulation schemes so that Cable TV operators can make the most efficient use of their networks. The first field tests show that DVB-C2 will allow for about 50% more digital transmission bandwidth regarding DVB-C.

In the immediate future, supporting DVB-C2 will be a must for a field meter. The TV EXPLORER HD+ already offers DVB-C2 as a separate option.



DVB C2[®] DVB S2[®] DVB T2[®]

PROLITE-77B FTTH analyser & Selective OPM

The **PROLITE-77B** is an instrument optimised for analysis, installation and maintenance of fibre optics networks based on GPON architecture.

The instrument provides filtered measurements, individualised and simultaneous for the three wavelengths that are used in GPON (1490 and 1550 nm for Downstream and 1310 nm and 1550-1626 nm for Upstream).

Optionally, a **Spectrum Analyser module for Band C** is available (**OP-077-S** option). It is designed specially for ITU G692 channels separated by 100 GHz (0.8 nm) in C band (1529-1564 nm).

PC software
included

C band spectrum
analyser (optional)



Professional measurements

- FTTH portable analyser for FTTx/PON systems, optimised for GPON architecture.
- Simultaneous wavelength selective measurements for 1490 / 1550 nm (downstream) and 1310 nm (upstream) and also 1550-1626 nm which are used for Docsis over fibre or RFoG upstream.
- Up to 10 groups of configurable threshold values: Maximum and minimum values per wavelength.
- High selectivity wavelength filters.
- Relative measurement: Estimation of losses with respect to a configurable reference value.
- Expandable to C-band spectrum analyser.
- Attenuation test. Selective filters at three wavelengths.

Valuable features

- ✓ Very intuitive graphical interface: Fast display of measurements on screen
- ✓ Easy to use: Plug and Play
- ✓ Attenuation Test: A quick way to certify optical wiring
- ✓ Visual Fault Locator: Quick problem finding
- ✓ Ideal for field work
- ✓ Data transfer to a computer via USB

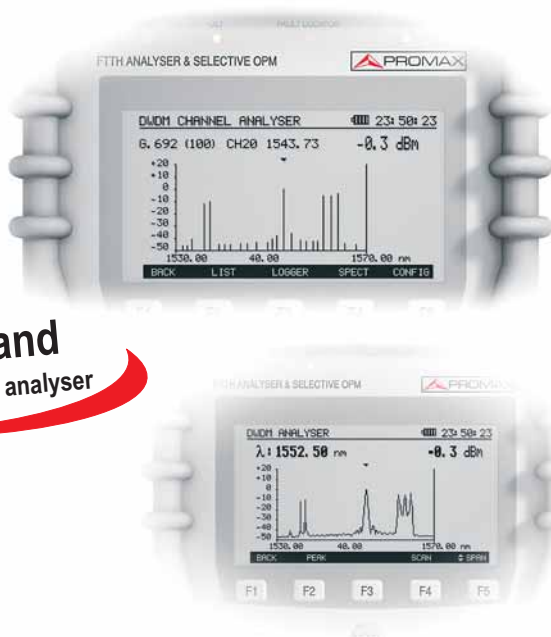


C-band spectrum analyser option for PROLITE-77B

Available now is an optional module that enables **PROLITE-77B** to work with ITU G692 channels separated by 100 GHz (0.8 nm) in C band (1529-1564 nm).

This option (**OP-077-S**) can be installed either as a factory-fit option or retro-fit to an existing unit.

C band
spectrum analyser



Quick and easy FTTH networks certification



Step 1

Connect a LASER source (such as our **PROLITE-105**) to the main fibre optic connector of the building and let it generate all three wavelengths simultaneously.

Step 2

Measure the optical power in each wavelength to ensure the losses are within the acceptable range.

MO-470 DVB-T2 Modulator

The **MO-470** is a **DVB-T2** modulator available in a standard 1U high 19" rack case that can be used for MFN (**MO-470**) as well as SFN applications (**MO-480**).



The modulator has several Transport Stream and T2-MI inputs in ASI and IP formats so that it can be easily interfaced with other existing transmission equipments such as gateways. The modulator can be configured to generate any of the transmission modes listed in the corresponding **DVB-T2** standard including single and multiple PLP, MISO or SISO. It can also be used for DVB-T applications.

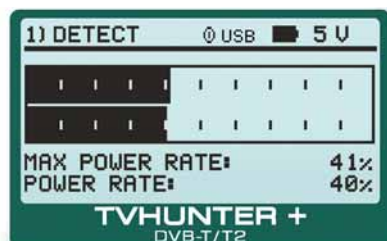
The interest in **DVB-T2** is now increasing with the growing demand for bandwidth mostly to deliver high definition television programmes. Several countries already have T2 commercial services, some others are running test trials and many more are on the planning stage.

TV HUNTER+ Digital Terrestrial Television Hunter for DVB-T2

The **TVHUNTER** has become a widely popular tool for DVB-T antenna alignment. The key factors have been its small pocket size and ease of use still offering proper measurements. As a natural evolution **TVHUNTER+** is now available allowing full compatibility with **DVB-T2** standard for the High Definition digital terrestrial TV broadcasting.



1 Detection
The meter shows information about the received signal power (wide band analogue and digital) in the form of two graphic bars with two different time constants and an audible indicator to help align the aerial to the optimum detection.



2 Identification
In this mode the meter shows information about the received digital channels (DVB-T and DVB-T2) including the service list as well.



3 Adjustment
In this mode the **TVHUNTER +** shows digital measurements (DVB-T/T2) such as, POWER, MER, CBER, VBER or LBER.

