PROMAX

A NEW STANDARD IN FIELD STRENGTH METERS

TV, CABLE, SATELLITE & WIFI ANALYSER

RANGER*Neo* + ATSC

EASY OPERATION

Hybrid user interface (touch + keyboard)

HEVC H.265

High Efficiency Video Codec

WIFI ANALYSER

Dual display: SPECTRUM and DATA

WIDEBAND LNB

The entire SAT band on a single SPAN

PROMAX

RANGER *Neo* + ATSC

The future today

HEVC H.265 DECODING High Efficiency Video Codec

RANGER *Neo* + ATSC is the new industry-standard in field strength meters and TV analysers. It is capable to offer HEVC signal demodulation.

LIGHT WEIGHT
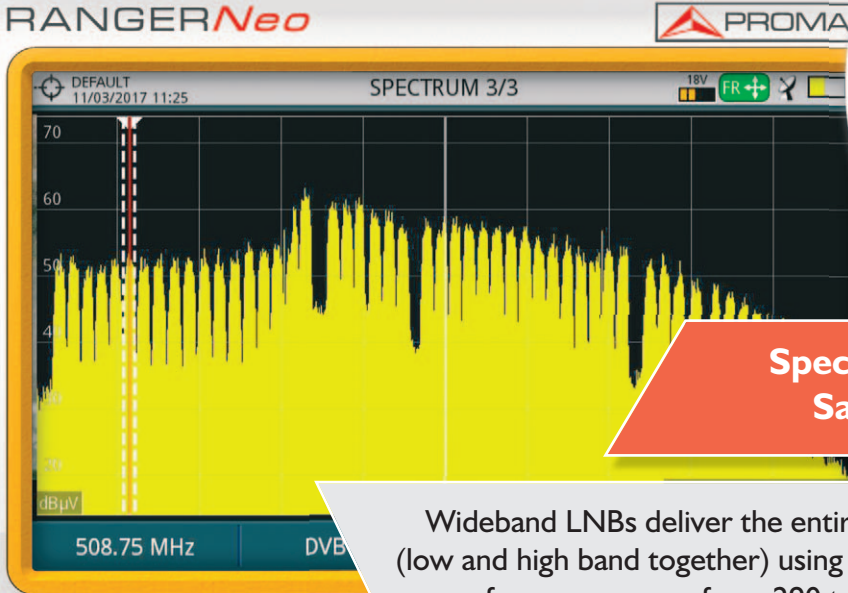**2.3 KG**

TRIPLE SPLIT DISPLAY

ULTRA FAST SPECTRUM

FREE FIRMWARE UPDATES

RANGER *Neo* + ATSC

Field strength meter for the HDTV era

wbLNB COMPATIBLE

Spectrum analyser from 5 to 2500 MHz
**Satellite band** from 250 to 2350 MHz

Wideband LNBs deliver the entire Vertical and Horizontal satellite polarities (low and high band together) using two separate RF cables and an extended IF frequency range from 290 to 2,340 MHz. **Is your analyser prepared?**

DCSS LNBs Digital Channel Stacking Switch satellite LNB

Digital Channel Stacking Switch LNB can support several users on a single cable distribution system by allocating specific user bands for each of them. It is not possible to work with this type of LNB unless your field strength meter can communicate using EN50494 and EN50607 standard protocols.

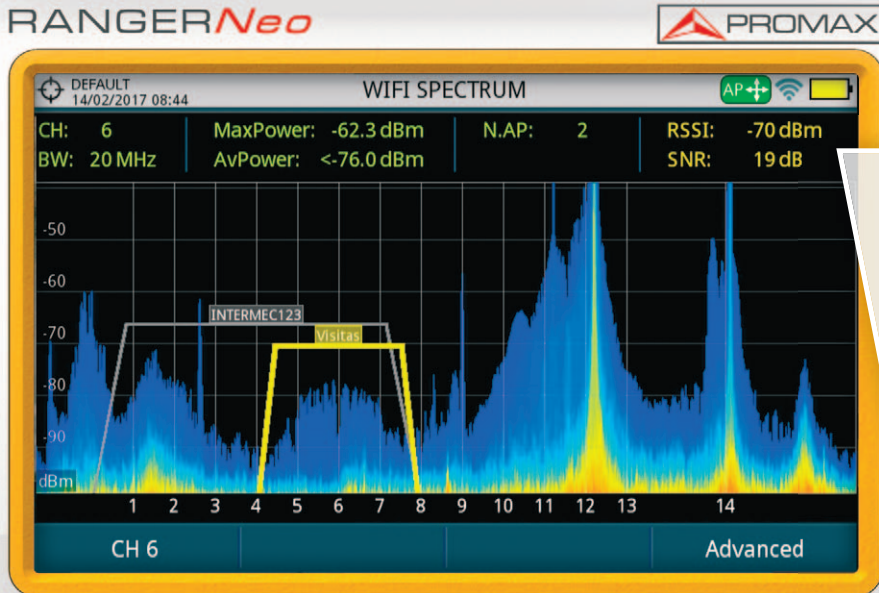This is the case of **RANGER *Neo* + ATSC** which also covers JESS and SATCR.
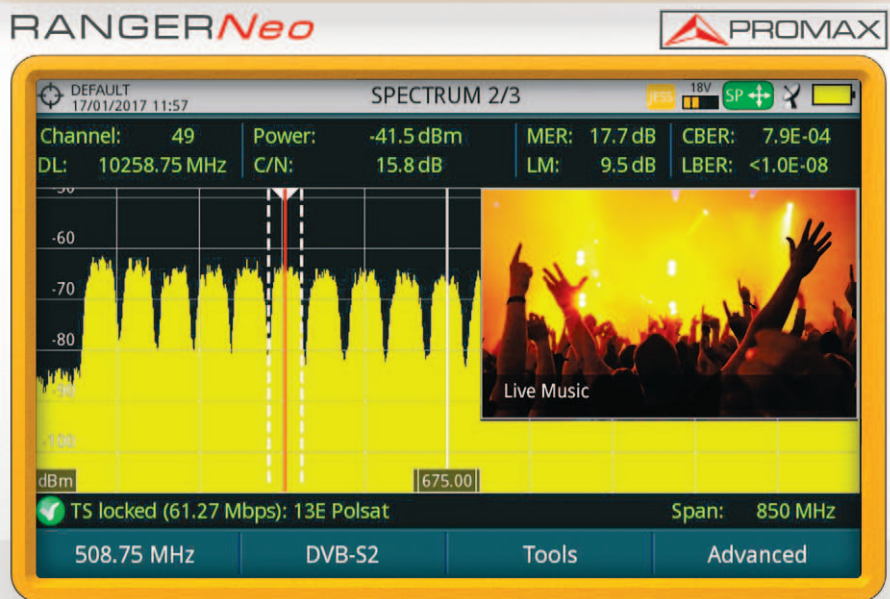
2.4 GHz WiFi ANALYSER Improve your network performance

RANGER *Neo* + ATSC



Your analyser for the new world

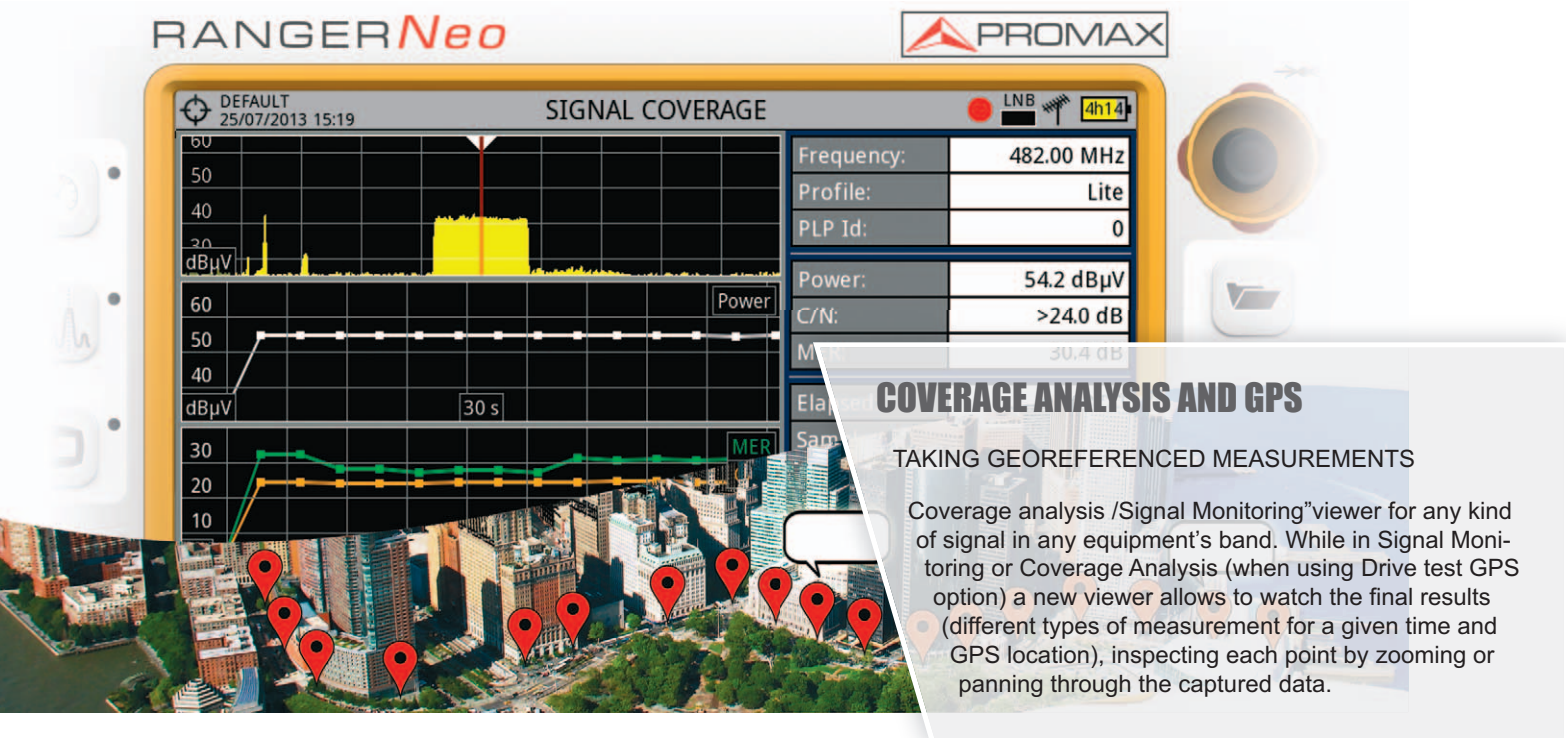# 2.4 GHz WiFi ANALYSER Improve your network performance

Simultaneous real spectrum analyser information + WiFi access point data

WiFi signals can be disturbed by interference from other WIFI stations, for example other access points, but also from non-WIFI signals such as wireless CCTV cameras or, like in the picture, a microwave oven! **RANGER *Neo* + ATSC** can display both simultaneously.

RANGER *Neo* + ATSC shows convenient information from the access points such as SSID, RSSI, SNR, security information, etc. It also indicates the number of access points per channel.
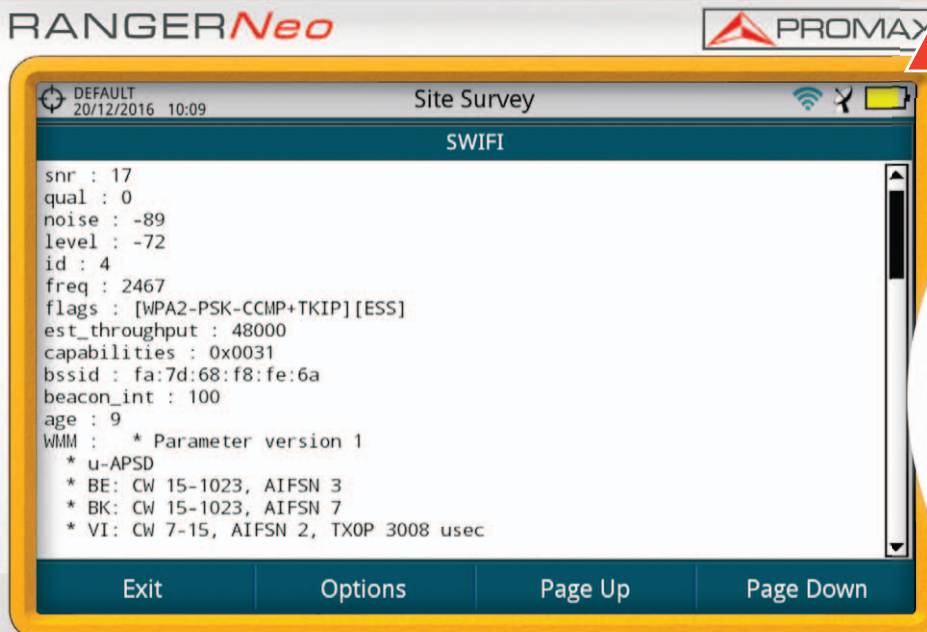
DRIVE TEST GPS - OPTION

COVERAGE ANALYSIS AND GPS
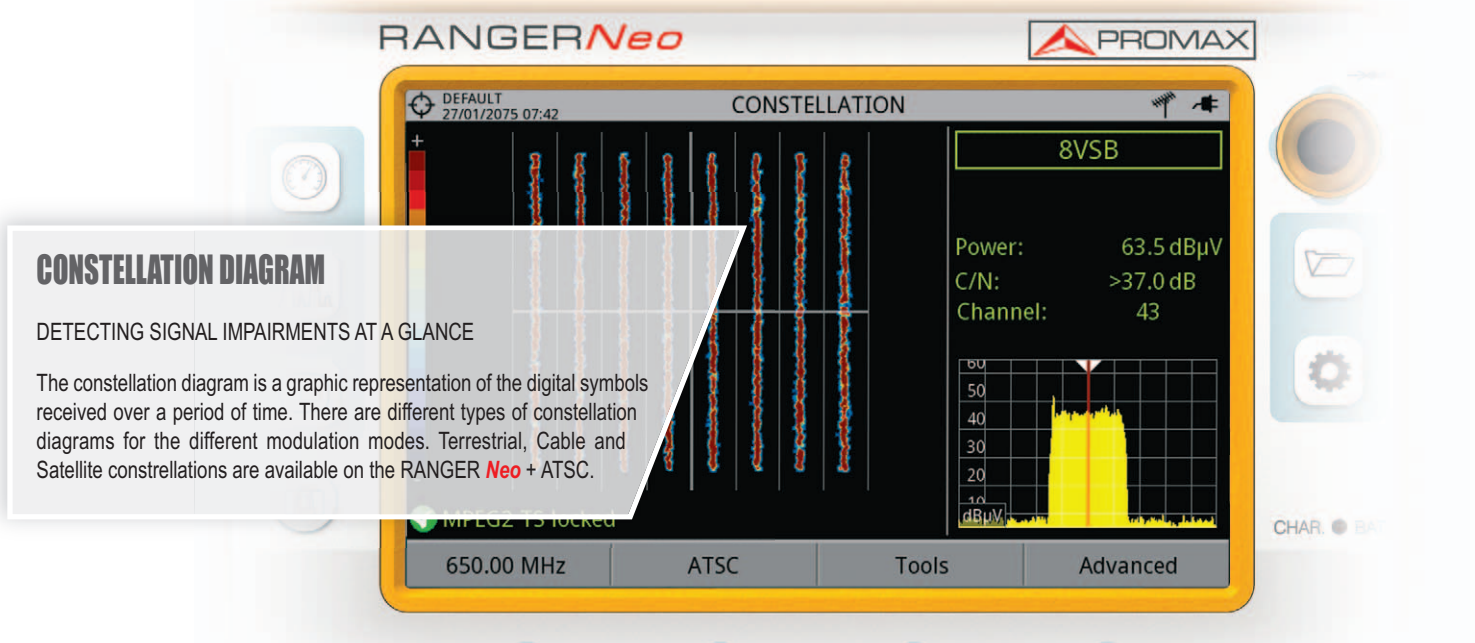
TAKING GEOREFERENCED MEASUREMENTS

Coverage analysis /Signal Monitoring"viewer for any kind of signal in any equipment's band. While in Signal Monitoring or Coverage Analysis (when using Drive test GPS option) a new viewer allows to watch the final results (different types of measurement for a given time and GPS location), inspecting each point by zooming or panning through the captured data.

8 VSB CONSTELLATION

CONSTELLATION DIAGRAM

DETECTING SIGNAL IMPAIRMENTS AT A GLANCE

The constellation diagram is a graphic representation of the digital symbols received over a period of time. There are different types of constellation diagrams for the different modulation modes. Terrestrial, Cable and Satellite constellations are available on the RANGER *Neo* + ATSC.
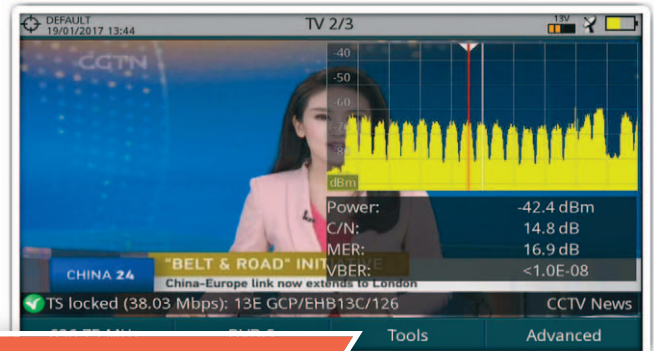
Fast and accurate spectrum analyser
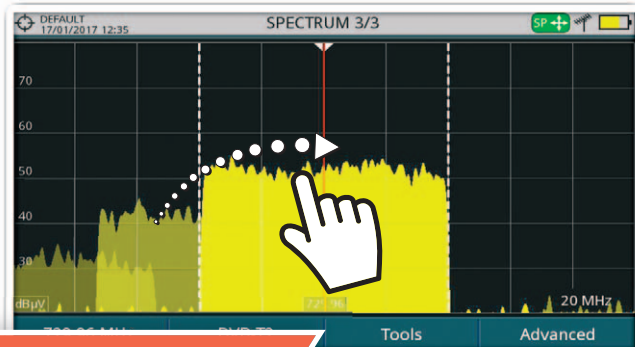
PROFESSIONAL SPECTRUM ANALYSER
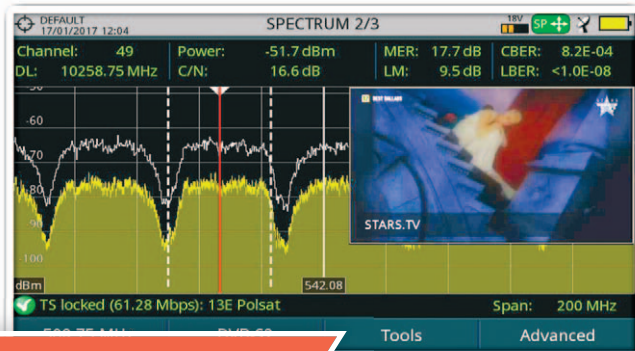
Reference traces
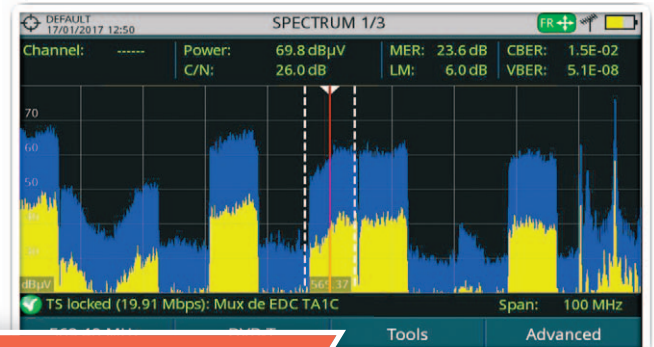Freeze the spectrum graph and compare it with the running trace.

Triple split display
Say goodbye to switching between TV, measurements and spectrum modes.

Touch screen
Place the marker on any channel and move the trace using your finger.

MIN and MAX hold
Display them separately or simultaneously along with the current spectrum trace.
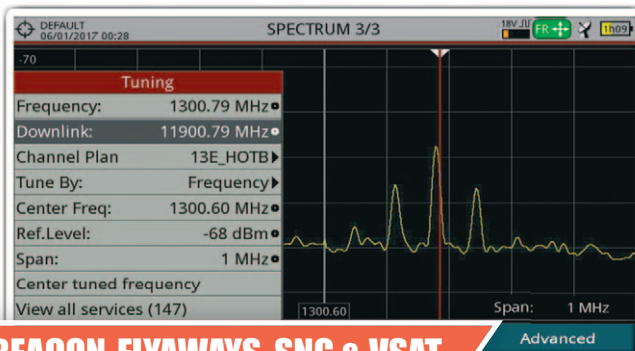
BEACON-FLYAWAYS, SNG & VSAT
Satelite BEACON signals can be clearly seen thanks to the 1 MHz SPAN and 10 kHz resolution filters.

PLS-PHYSICAL LAYER SCRAMBLING
PLS is a number generated by the broadcaster that must be properly decoded by the customer so that demodulation is possible

OPTICAL MEASUREMENTS-OPTION

Selective Optical-to-RF converter
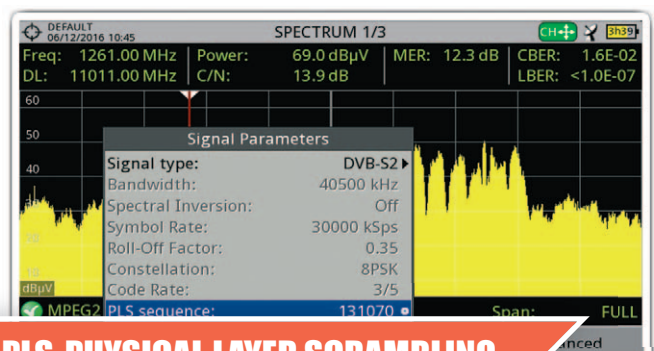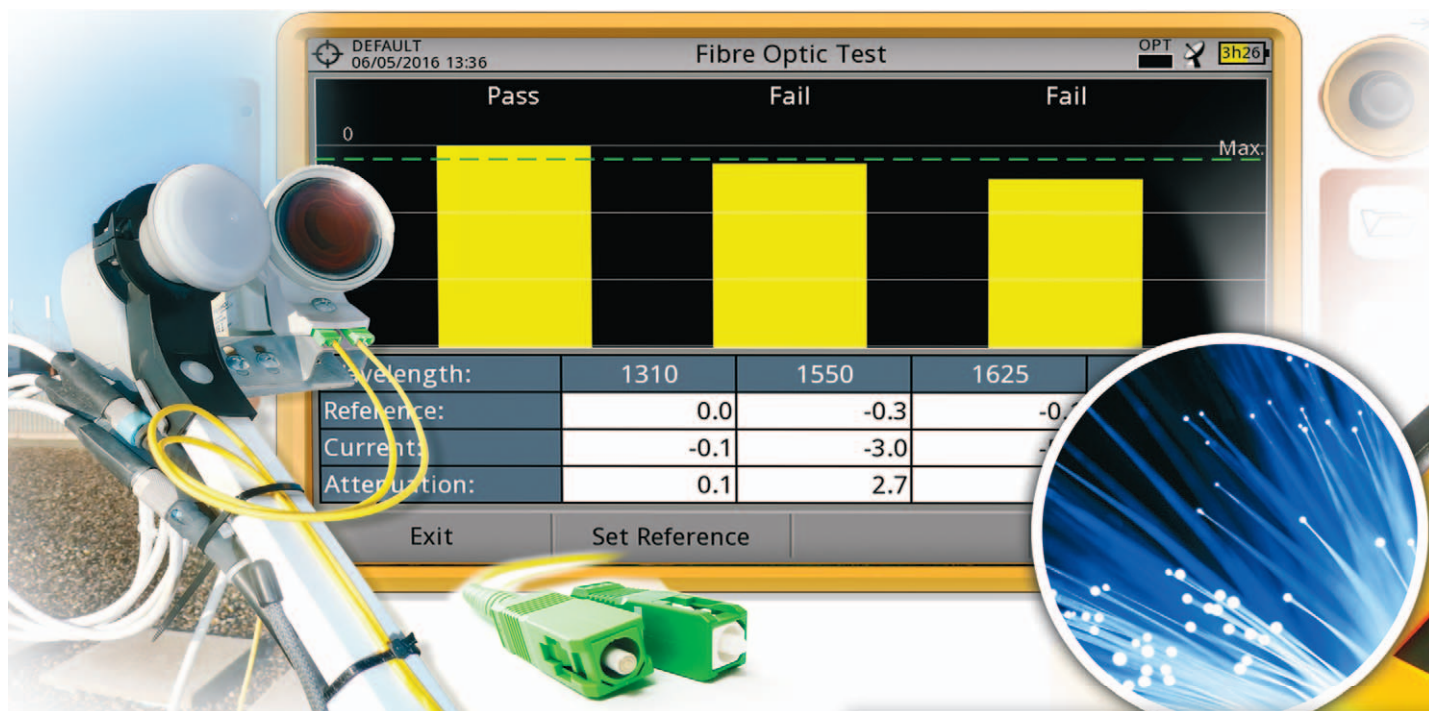
RFoG (Radiofrequency-over-Glass), as well as optical TV&SAT distribution, is used more and more by operators because it allows them to benefit from the advantages of fibre optics to compete with FTTH service providers. The RF signal at the converter output can be analyzed, measured and decoded by the meter as one would usually do with any signal over copper wires.

5 GHz RF Auxiliary input

The RANGER*Neo* + ATSC optical fibre option comes along with 6 GHz RF auxiliary input which can be used among other applications for direct connection to optical LNB's with 6 GHz output. This RF input covers three bands:

Band I   From 2000 MHz to 3000 MHz

Band II   From 3400 MHz to 4400 MHz

Band III   From 4400 MHz to 6000 MHz
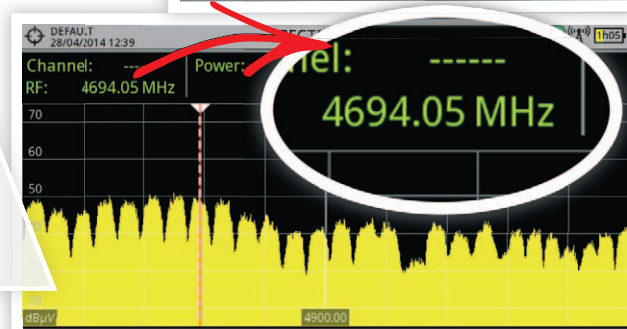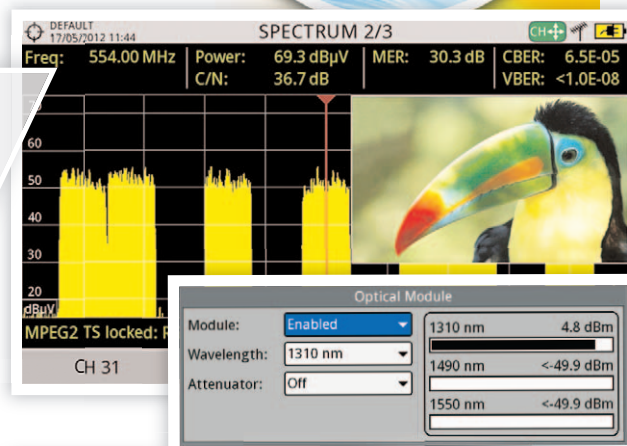
Upgrading at anytime

ETHERNET CONNECTIVITY remote control and web server

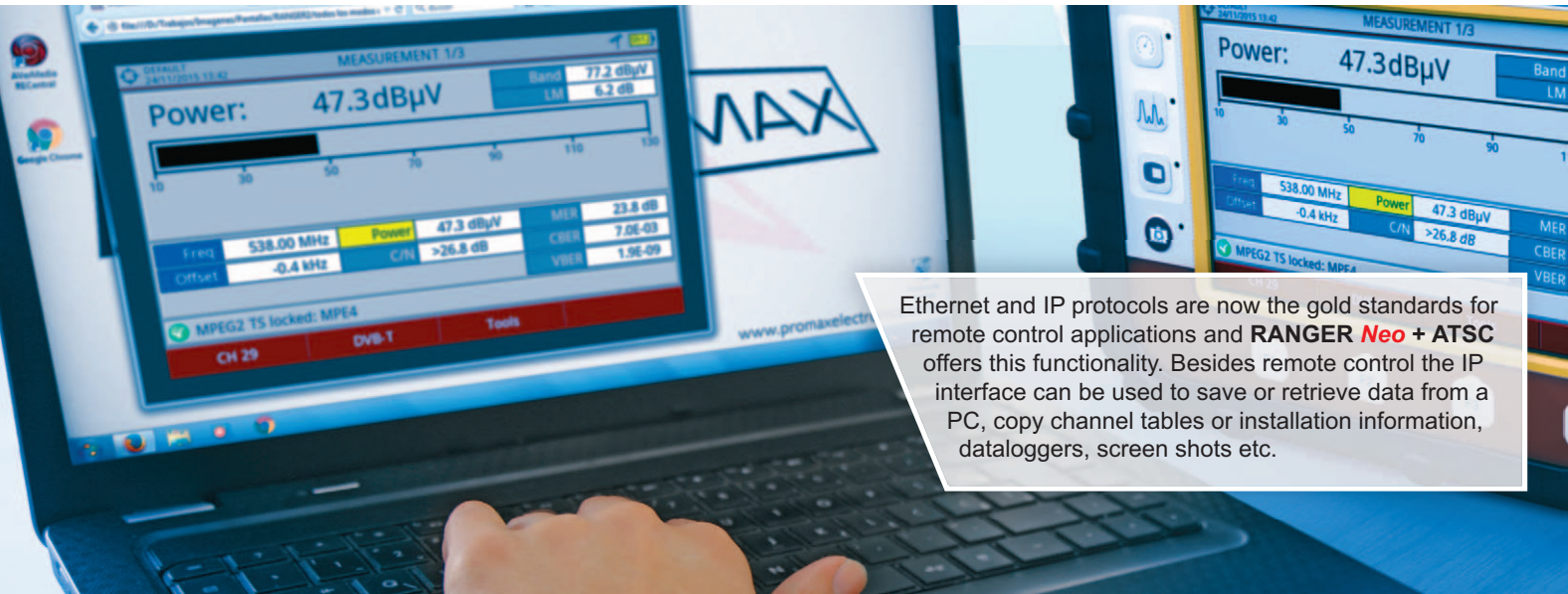Ethernet and IP protocols are now the gold standards for remote control applications and **RANGER *Neo* + ATSC** offers this functionality. Besides remote control the IP interface can be used to save or retrieve data from a PC, copy channel tables or installation information, dataloggers, screen shots etc.

MORE INTERNAL MEMORY up 7 GB for user data

There is more data a **RANGER *Neo* + ATSC** can store in the internal memory every time, dataloggers, screen shots, signal monitoring files, etc.

Even though the information can be downloaded to a PC or even copied to a memory stick in the field, the 7 GB of internal memory in the **RANGER *Neo* + ATSC** are far from negligible.

7 GB

▲ PROMAX

MANY USEFUL FUNCTIONS
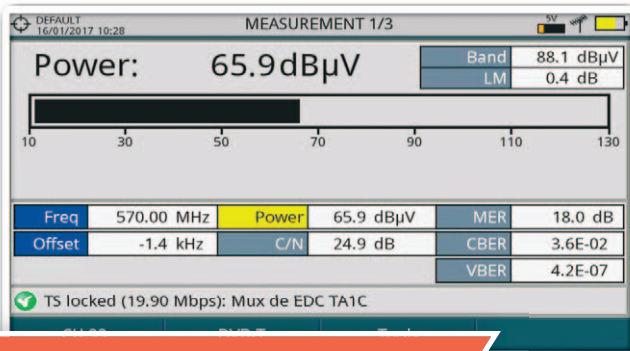
Simultaneous measurements
More computing power for real-time measurements displayed on a single screen.
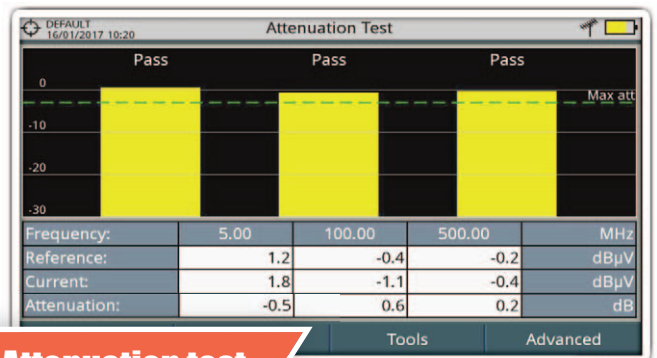
Attenuation test
Test the frequency response of your installation using RP-050, RP-080, RP-110B signal generators.

Datalogger and Test&Go
Collect data for your reports faster and easier using the auto-setup Test&Go.
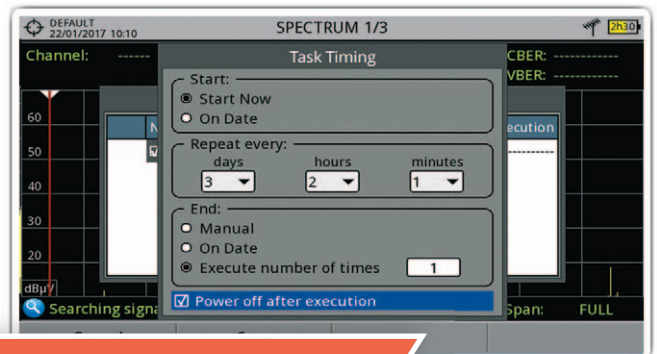
TASK PLANNER
The equipment can be switched off after setting all parameters and will itself wake-up, at the required time, to perform the planned tasks.
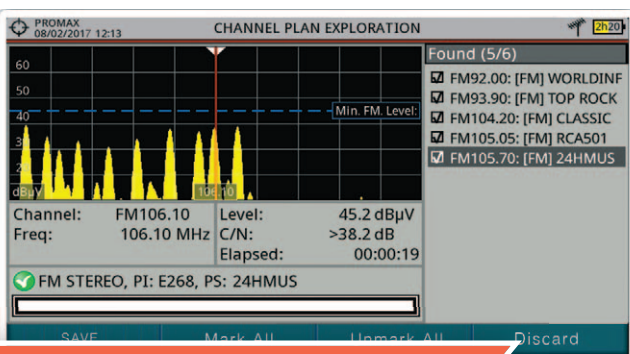
FM RADIO RECEIVER & ANALYZER
FM radio signals can be scanned, measured and demodulated
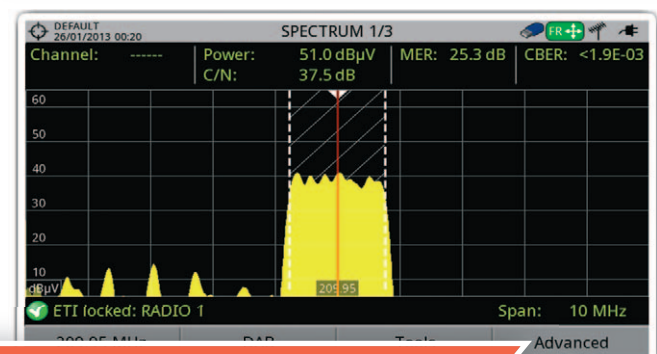
OPTION FOR DAB AND DAB+
Standard radio services can be detected, measured, analysed and demodulated.

A new breed of analysers for a new world

LTE INGRESS TEST

LTE interference on SMATV systems

RANGER *Neo* + ATSC has a variety of tools 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 the LTE filter.

H.265	H.265 HEVC analyser and decoder	**WiFi™**	Home network, commercial, point to point	**6GHz**	6 GHz RF input (optional)
	Webserver control via Ethernet port	**7GB**	Fast-storage 7 GB capacity for user data	**USB**	2x USB ports
DAB+	DAB and DAB+digital radio (optional)		Digital Channel Stacking Switch LNB (dCSS)		
	Optical power meter and RF converter (optional)		GPS for signal coverage analysis (optional)		

SPECIFICATIONS	RANGER *Neo* + ATSC		
DIGITAL STANDARDS	ATSC DVB-C, QAM Annex B DVB-S, DVB-S2, DVB-S2 Multistream, DSS, ACM / VCM		
AUDIO CODECS	MPEG-1, MPEG-2, HE-AAC, Dolby Digital, Dolby Digital Plus		
VIDEO CODECS	MPEG-2, MPEG-4 / H.264, HEVC / H.265		
INPUTS AND OUTPUTS	Universal RF connector 75 Ω HDMI output IP input for remote control Analogue Video / Audio input 2 USB connectors for data tranferring and GPS module (Type A)		
FUNCTIONS	Spectrogram Constellation diagram for all standards StealthID (instant identification of tuning parameters) PLS (Physical Layer Scrambling) Ultra fast spectrum analyser (70 ms sweeping time) with max. and min. hold Screenshots and Datalogger for measurement reports Field strength measurement	Wideband LNB WiFi 2.4 GHz LTE 1.8 GHz OTT LTE FM RDS radio measurements and decoding DVB-S2 multistream	Resolution Bandwidth: 100, 200 kHz, 1 MHz Web server Task planner Signal monitoring Service Recording GPS Coverage Analysis (option) Beacon-Flyaways SNG & VSAT
MEASUREMENT MODE Frequency Margin ATSC QAM ITU-J83 Annex B DVB-C QAM,ITU - J83 Annex A PAL, SECAM and NTSC analogue TV FM radio DVB-S QPSK DVB-S2 QPSK, 8PSK, 16APSK, 32APSK DSS QPSK	From 5 - 1000 MHz (Terrestrial) From 250 - 2350 MHz (Satellite) Power (45 to 100 dBµV), SER, VBER, MER, C/N and noise margin. Power (35 to 115 dBµV), BER, MER, C/N and noise Margin, BCH ESR, LDP iterations, wrong packets Power (45 to 115 dBµV), BER, MER, C/N and Link margin M, N, B, G, I, D, K and L Level measurement Power (35 to 115 dBµV), CBER, MER, C/N and Link Margin Power (35 to 115 dBµV), CBER, LBER, MER, C/N, BCH ESR, wrong packets and Link Margin Power (35 to 115 dBµV), CBER, VBER, MER, C/N and Noise margin		
SPECTRUM ANALYZER Frequency Margin Measurement range Span	From 5 - 1000 MHz (Terrestrial) From 250 - 2500 MHz (Satellite) From 10 - 130 dBµV Full / 500 / 200 / 100 / 50 / 20 / 10 MHz		
OPTIONS OP-001-PS OP-001-WL OP-001-DAB+ OP-001-GPS OP-001-19	OPM & OPT to RF conv & WiFi 5 GHz & LTE 2.6 GHz WiFi 5 GHz & LTE 2.6 GHz DAB, DAB+ GPS Coverage Analysis For rack assembly		
INTERNAL STORAGE	7 GB for measurement protocols, screenshots and transport stream recordings		
PC CONNECTION (via ethernet interface)	NetUpdate 4 (free software); Free and automatic firmware updates; Remote control (webserver); User customised channel plans; Measurement reports and screenshots		
GENERAL	Hybrid operation: Touch screen (7") or conventional keyboard Battery >4 h. in continuous mode DiSEqC 1.2 SATCR / SCD (EN50494) DCSS / SCD2 (EN50607)		

DESIGN AND SPECIFICATIONS SUBJECT TO CHANGES WITHOUT PRIOR NOTICE   03-17