![PROMAX]

RANGER *Neo* +

The future today

HEVC H.265 DECODING High Efficiency Video Codec

RANGER *Neo* + is the new industry-standard in field strength meters and TV analysers. It is capable to offer HEVC signal demodulation compatible with the new DVB-T2 broadcast signals.

LIGHT WEIGHT

1,9 KG

TRIPLE SPLIT DISPLAY

ULTRA FAST SPECTRUM
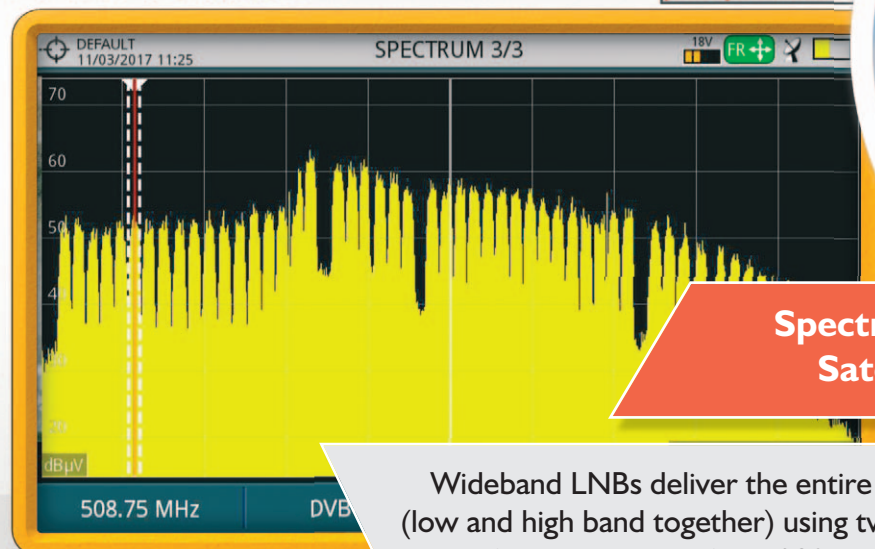
FREE FIRMWARE UPDATES

RANGER *Neo* +

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* +** which also covers JESS and SATCR.
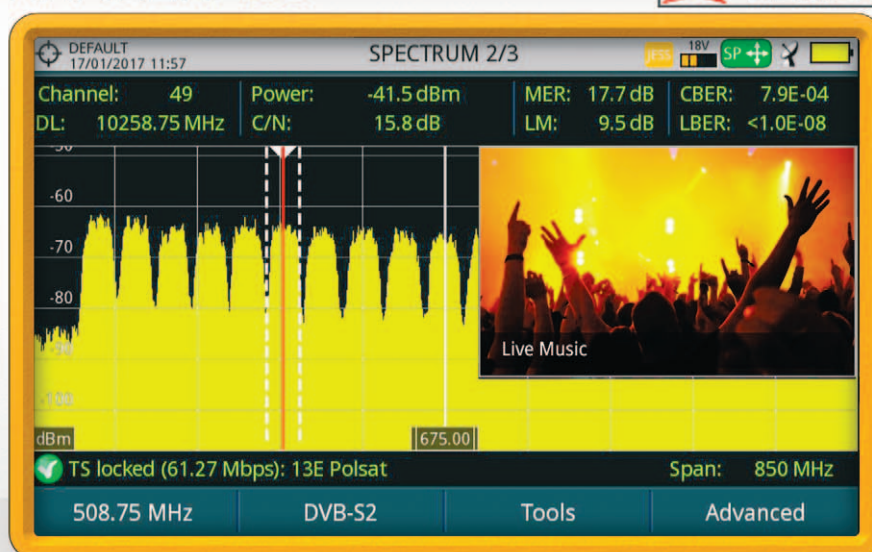
2.4 GHz WiFi ANALYSER

Improve your network performance

RANGER *Neo* +

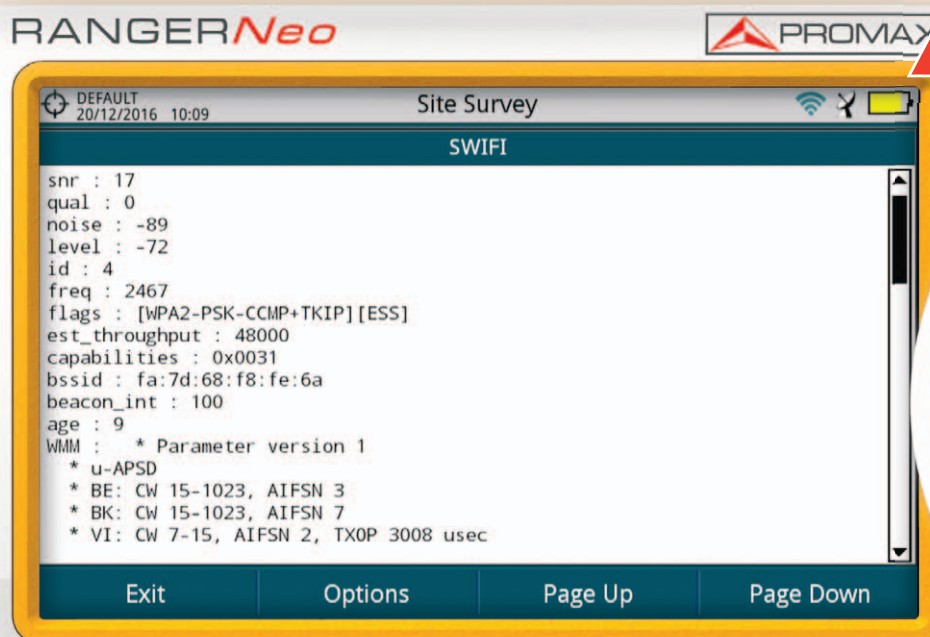## Your analyser for the new world

2.4 GHz WiFi ANALYSER — Improve your network performance
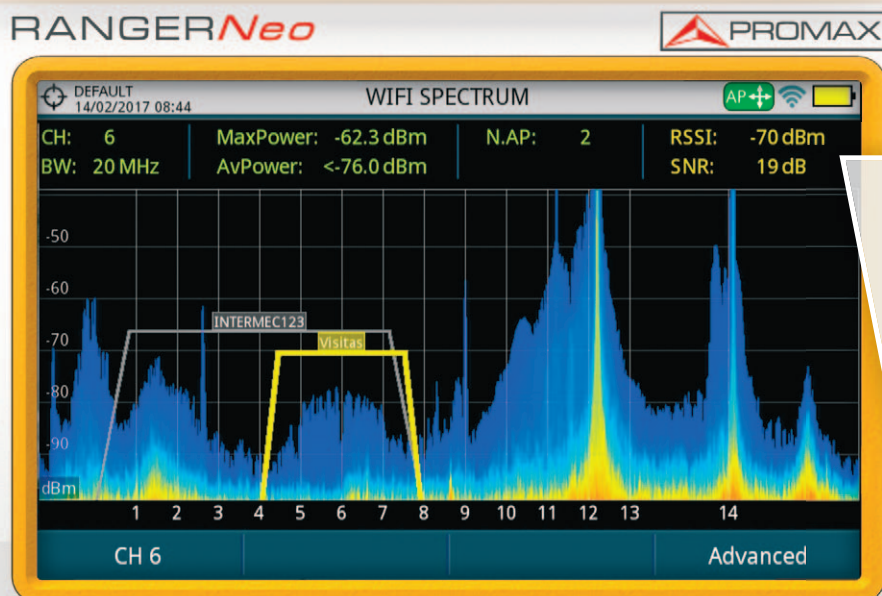
Simultaneous real spectrum analyser information + WiFi access point data

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* +** can display both simultaneously.

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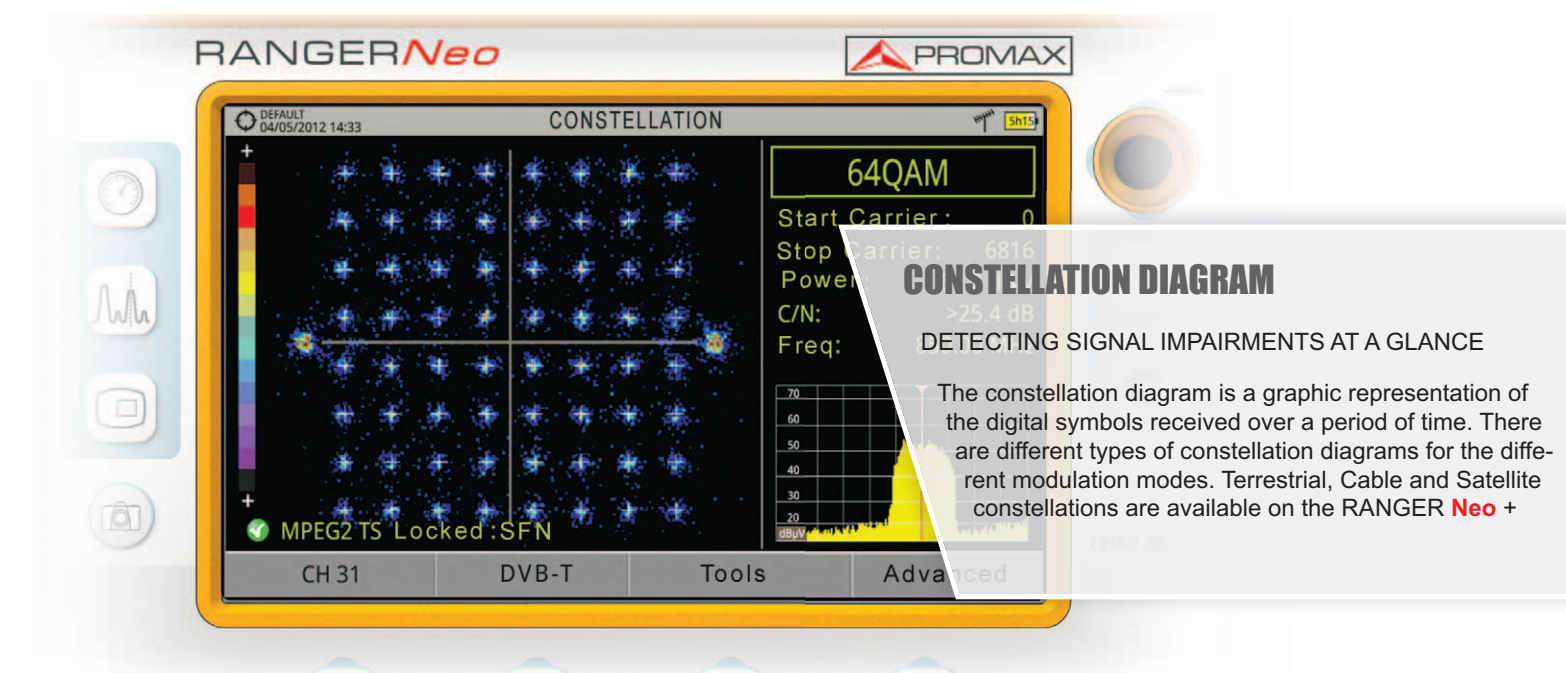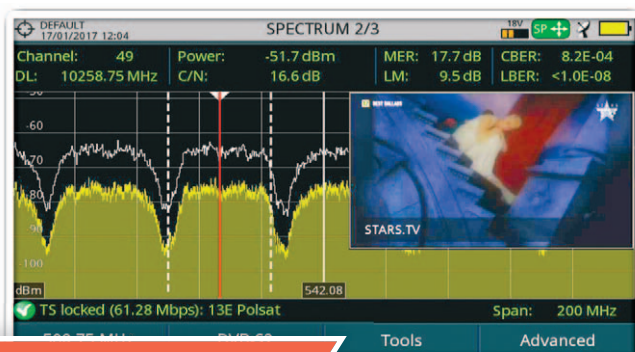
Coverage analysis /Signal Monitoring"viewer for any kind of signal in any equipment's band. While in Signal Monitoring or Coverage Analysis (when using Drive test GPS option) a new viewer allows to watch the final results (different types of measurement for a given time and GPS location), inspecting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

CONSTELLATION DIAGRAM

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** +
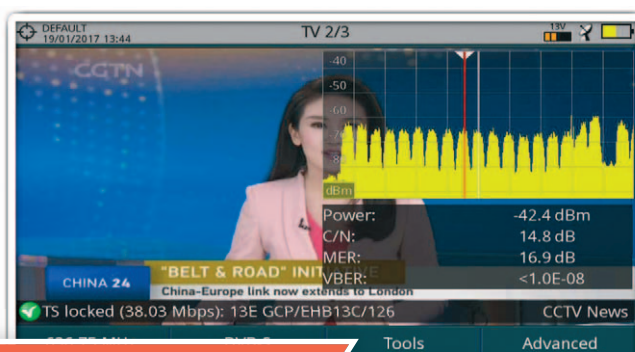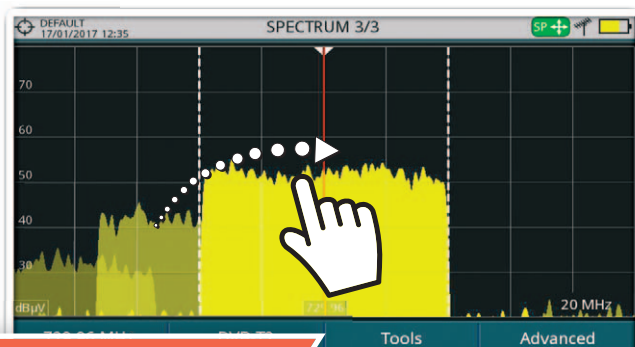
PROFESSIONAL SPECTRUM ANALYSER

Reference traces

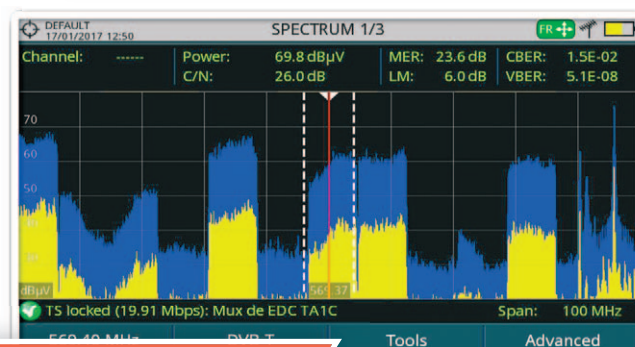Freeze the spectrum graph and compare it with the running trace.

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.
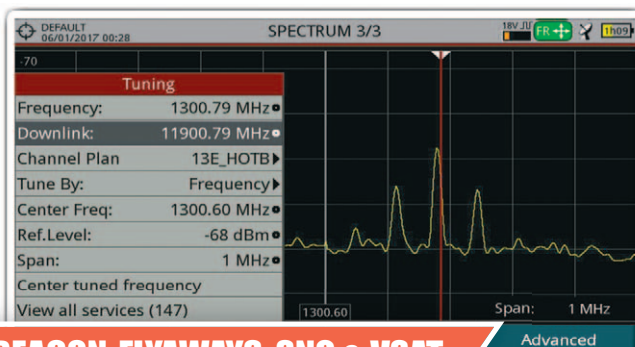
BEACON-FLYAWAYS, SNG & VSAT

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.

Enjoy a wide variety of functions

OPTICAL MEASUREMENTS-OPTION

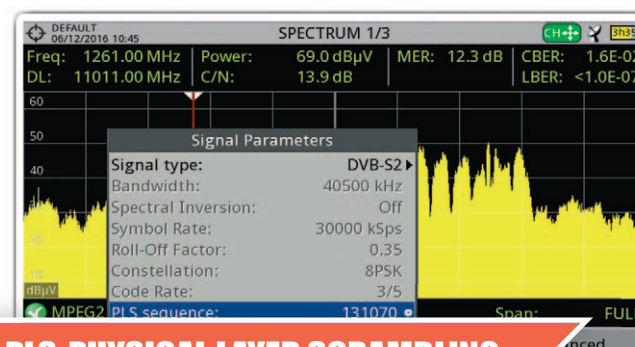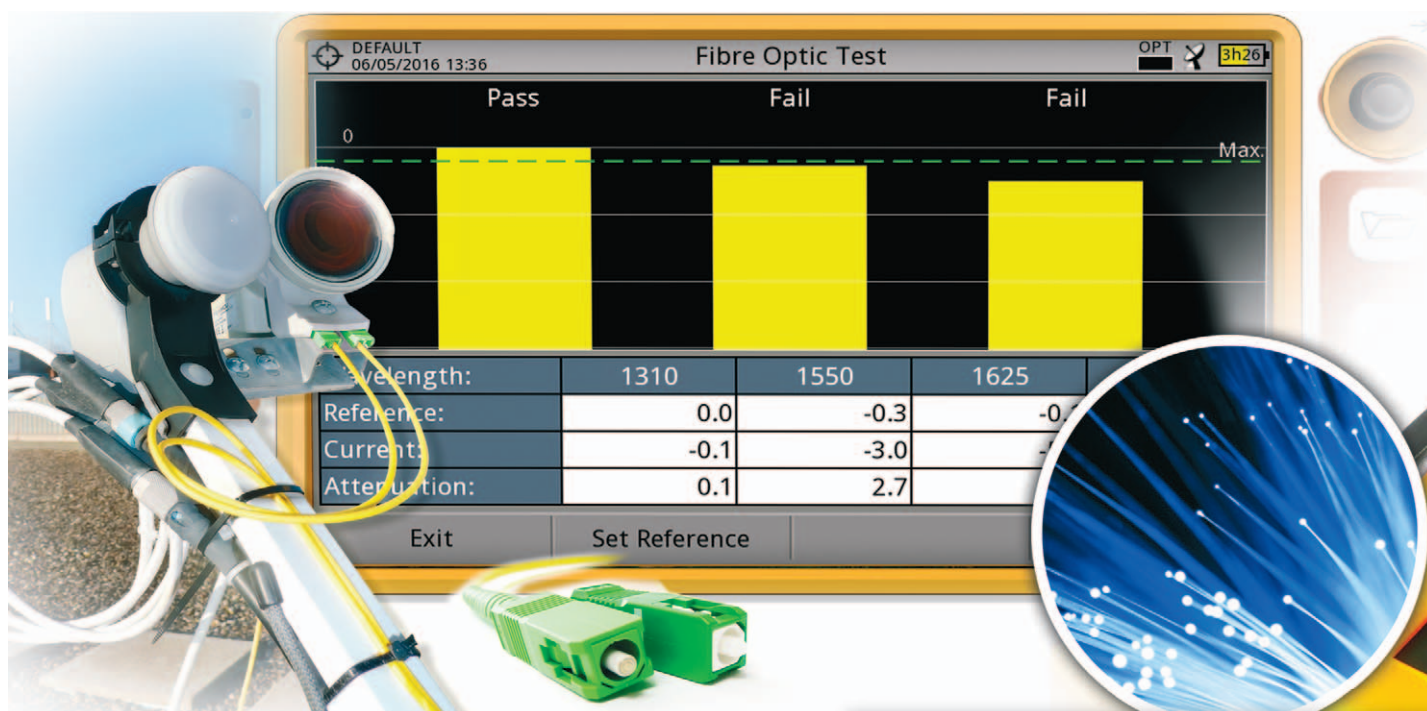

Selective Optical-to-RF converter

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.

6 GHz RF Auxiliary input

The RANGER*Neo* + optical fibre option comes along with 6 GHz RF auxiliary input which can be used among other applications for direct connection to **wholeband LNB's** with **5.4 GHz** RF output. This auxiliary 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
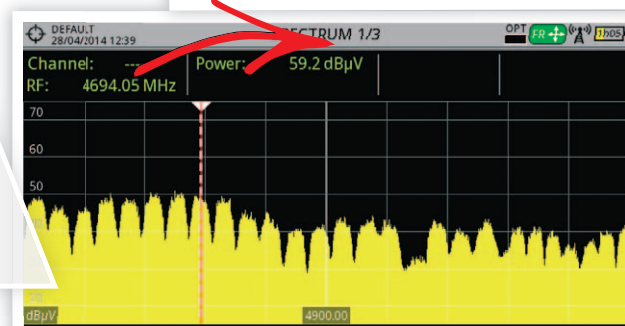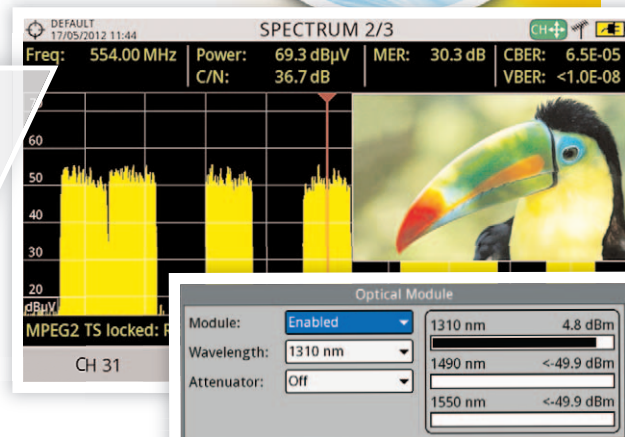
Enjoy a wide variety of functions

ETHERNET CONNECTIVITY remote control and web server

Ethernet and IP protocols are now the gold standards for remote control applications and **RANGER *Neo* +** 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, copy transport stream files, screen shots, etc.
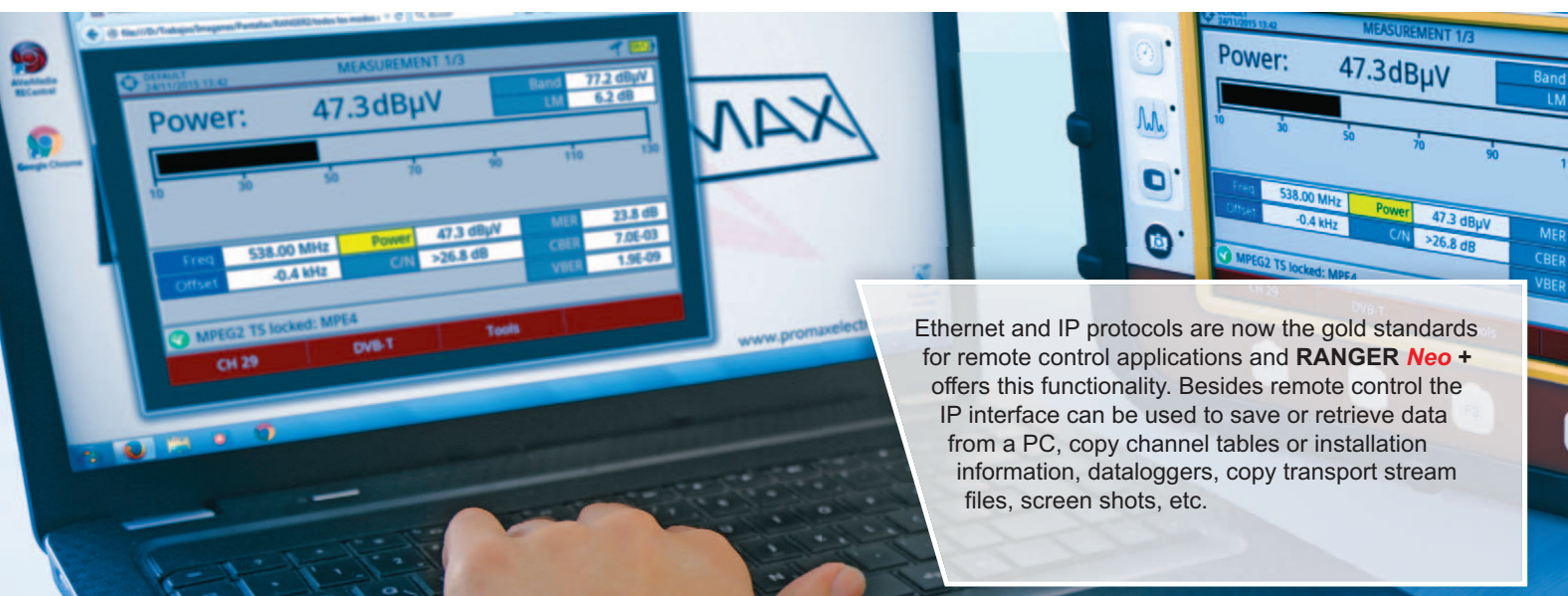
MORE INTERNAL MEMORY up 7 GB for user data

There is more data a **RANGER *Neo* +** can store in the internal memory every time, dataloggers, screen shots, signal monitoring files, etc... However, it is the transport stream recording what uses up memory faster.

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* +** are far from negligible.

PROMAX
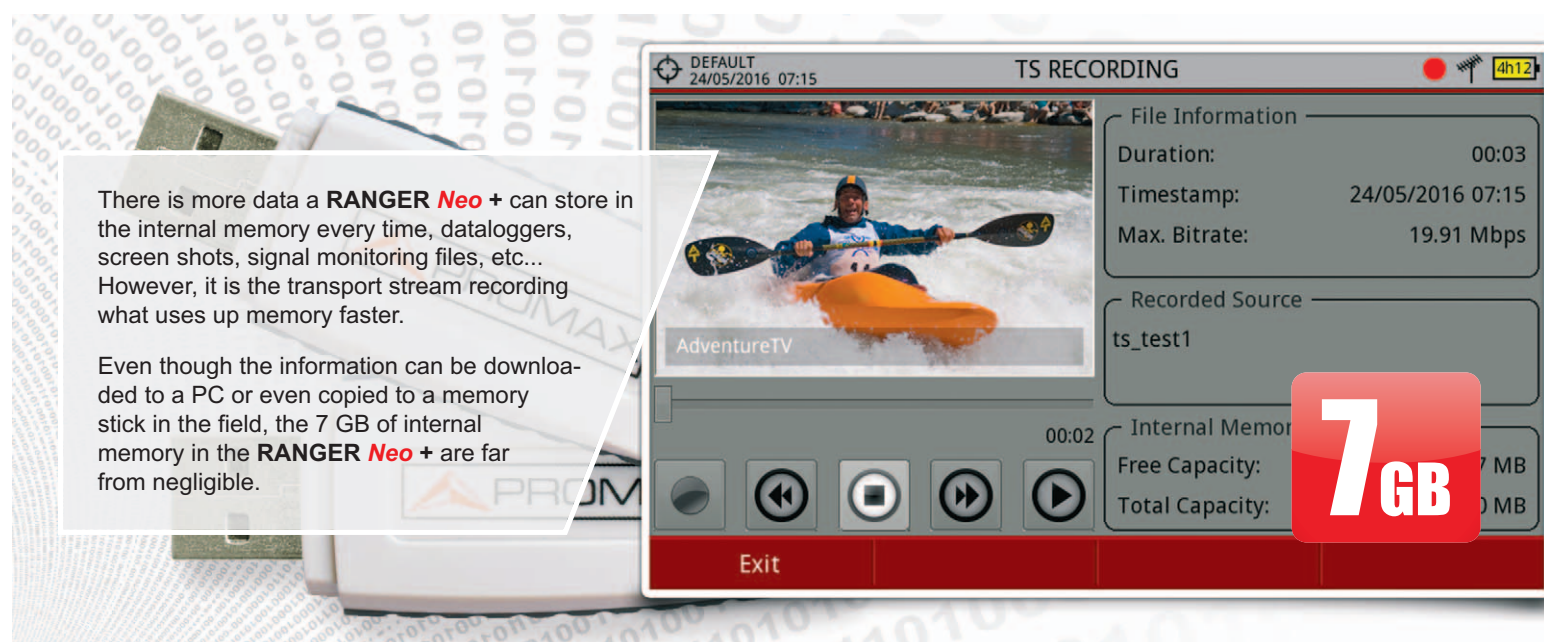
Enjoy a wide variety of functions

MANY USEFUL FUNCTIONS
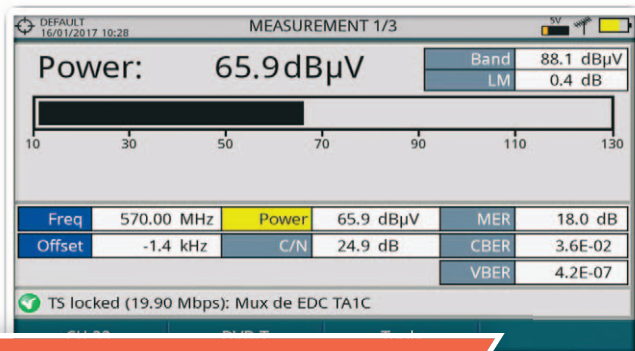
Simultaneous measurements

More computing power for real-time measurements displayed on a single screen.

Datalogger and Test&Go

Collect data for your reports faster and easier using the auto-setup Test&Go.
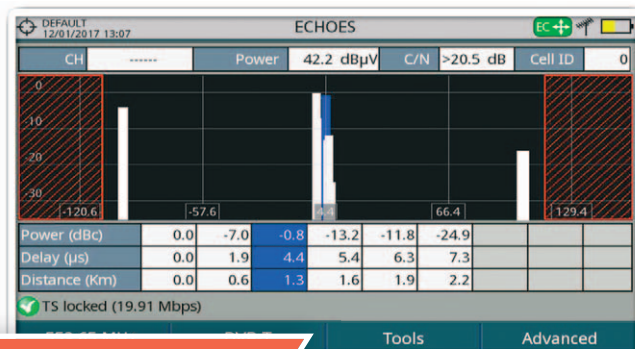
Dynamic echoes

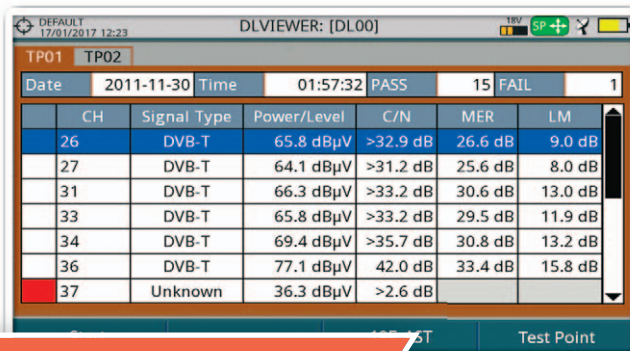A must-have utility for testing DVB-T, DVB-T2 and DVB-C2 networks.
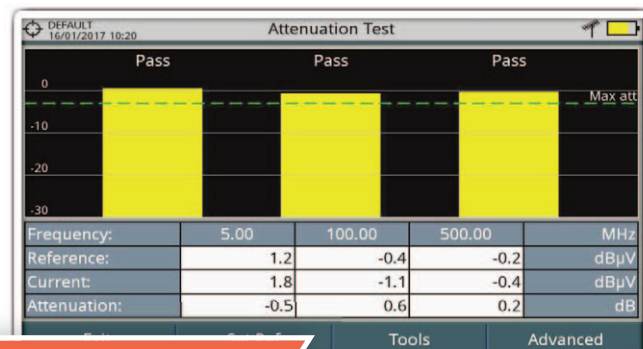
Attenuation test

Test the frequency response of your installation using RP-050, RP-080, RP-110B signal generators.

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* + 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.
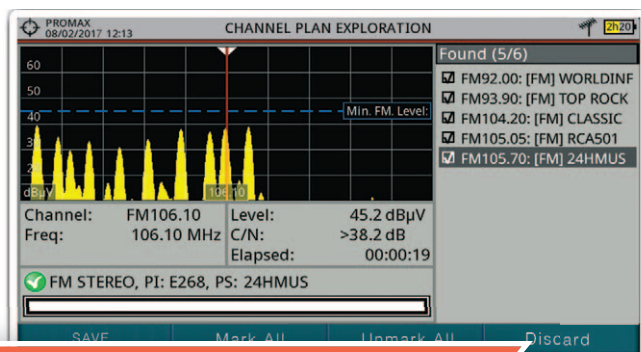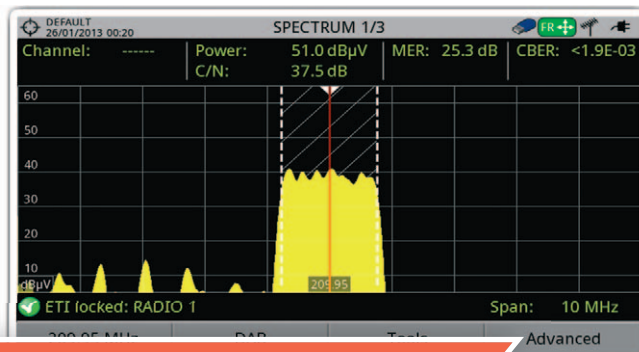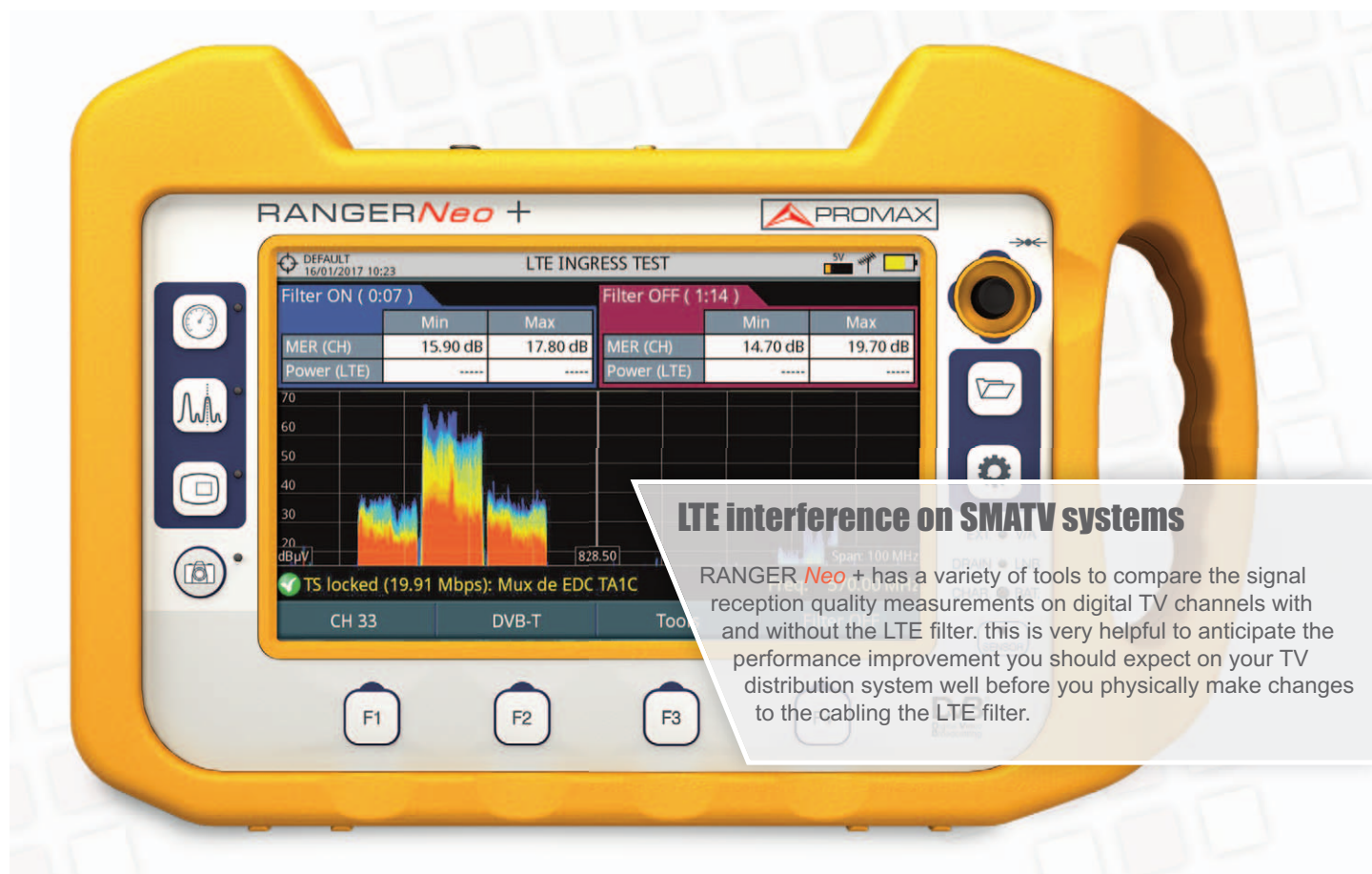
H.265	H.265 HEVC analyser and decoder	**WiFi**	Home network, commercial, point to point	**6GHz**	5 GHz RF input (optional)
	Webserver control via Ethernet port	**7GB**	Fast-storage 7 GB capacity for user data	**USB**	2x USB ports
DAB+	DAB and DAB+ digital radio (optional)		Digital Channel Stacking Switch LNB (dCSS)		
	Optical power meter and RF converter (optional)		GPS for signal coverage analysis (optional)		

A NEW STANDARD IN FIELD STRENGTH METERS
TV, CABLE, SATELLITE & WIFI ANALYSER

SPECIFICATIONS	RANGER *Neo* +		
DIGITAL STANDARDS	DVB-T, DVB-T2, DVB-T2 lite DVB-C, DVB-C2 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	Merogram and Spectrogram Constellation diagram for all DVB 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 Measurements Dynamic echoes analysis	Wideband LNB WiFi 2.4 GHz LTE 1.8 GHz LTE OTT FM RDS radio measurements and decoding DVB-S2 multistream GPS Coverage Analysis (option)	Resolution Bandwidth: 100, 200 kHz, 1 MHz Task planner Web server MER by Carrier Signal monitoring Service Recording Beacon-Flyaways SNG & VSAT

MEASUREMENT MODE
  Frequency Margin
 	
  DVB-T COFDM
  DVB-T2 Base and Lite COFDM
  DVB-C QAM
  DVB-C2 COFDM
  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 (35 to 115 dBµV), CBER, VBER, MER, C/N, Link margin.
	Power (35 to 115 dBµV), CBER, C/N, LBER, MER, Link Margin, BCH ESR, LDP iterations, wrong packets
	Power (45 to 115 dBµV), BER, MER, C/N and Link margin
	Power (45 to 115 dBµV), CBER, MER, C/N, LBER, BCH ESR, LDP iterations and wrong packets
	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 screenshot;		
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