



A NEW STANDARD IN FIELD STRENGTH METERS

TV, CABLE, SATELLITE & WIFI ANALYSER

RANGER *Neo* 2 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*

The future today

HEVC H.265 DECODING High Efficiency Video Codec

RANGER Neo 2 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**



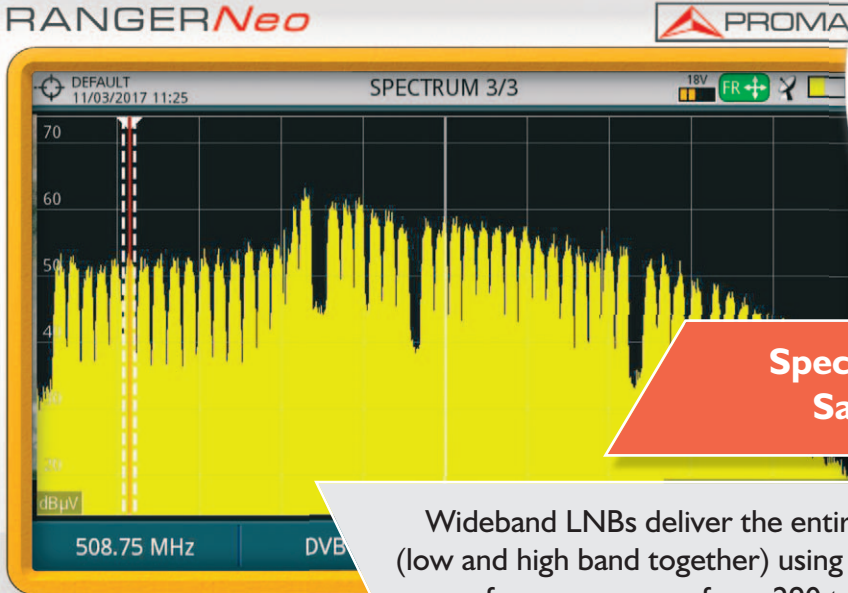
**ULTRA FAST
SPECTRUM**



**FREE FIRMWARE
UPDATES**

Field strength meter for the HDTV era

wbLNB COMPATIBLE



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

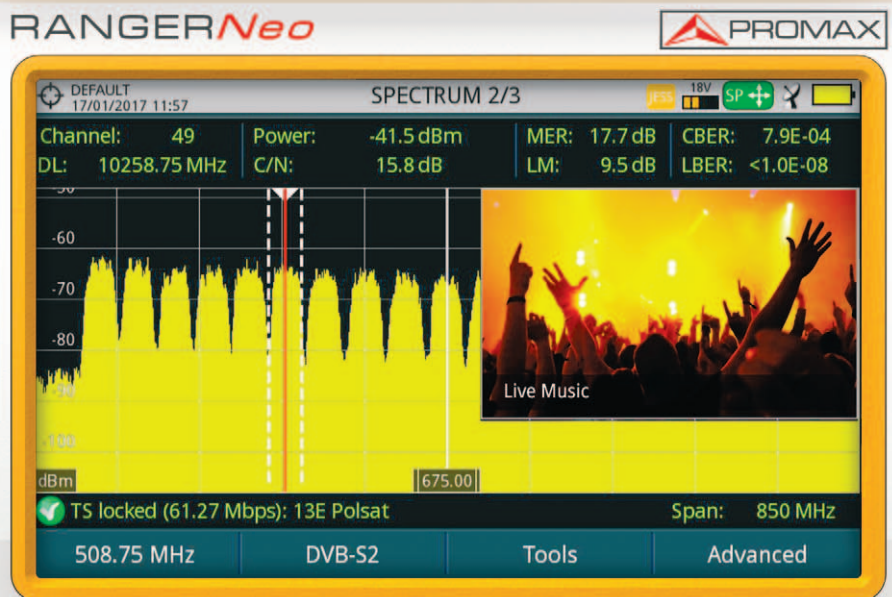
Wideband LNBs deliver the entire Vertical and Horizontal satellite polarities (low and high band together) using two separate RF cables and an extended IF frequency range from 290 to 2,340 MHz. **Is your analyser prepared?**

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 2 ATSC** which also covers JESS and SATCR.



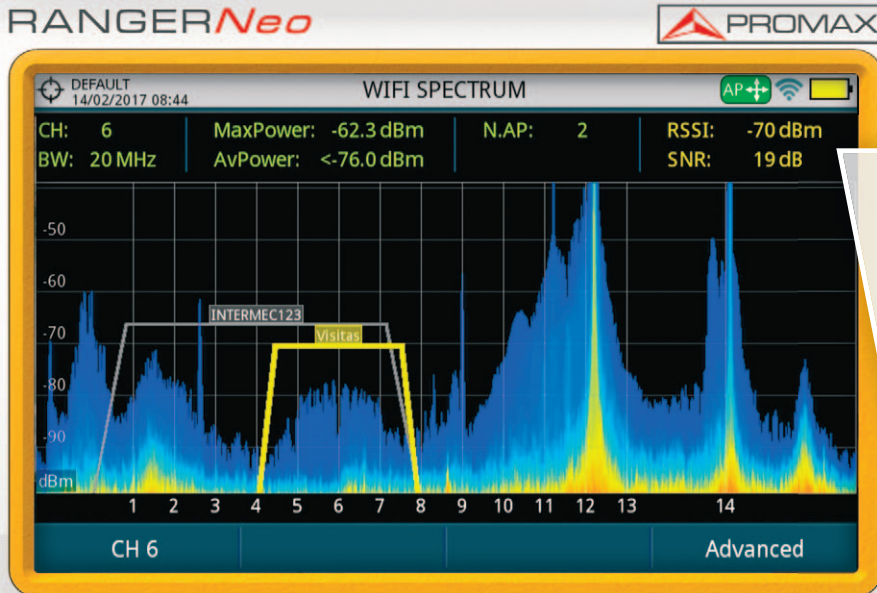
Be ready for the future

2.4 GHz WiFi ANALYSER Improve your network performance



Your analyser for the new world

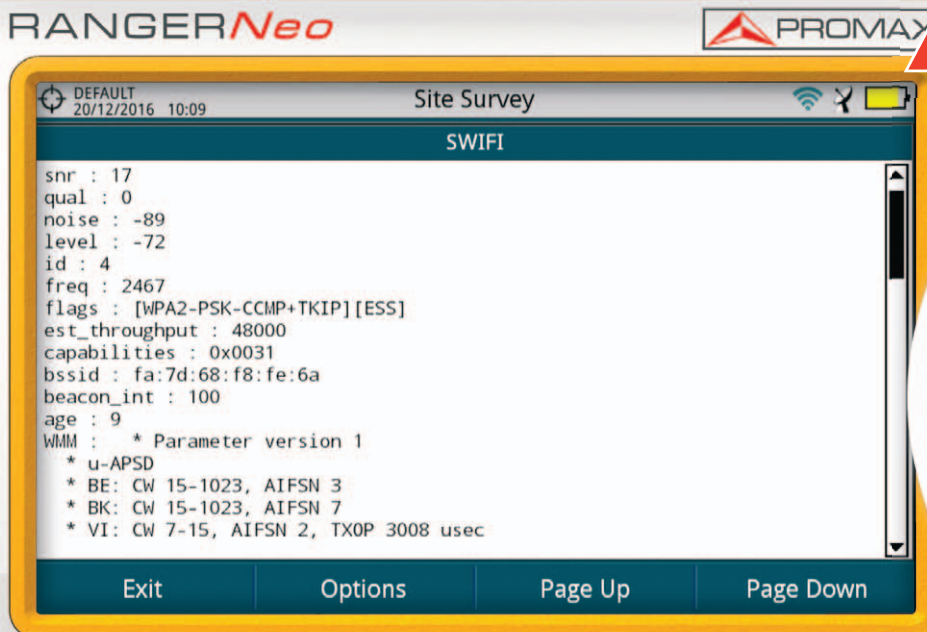
2.4 GHz WiFi ANALYSER Improve your network performance



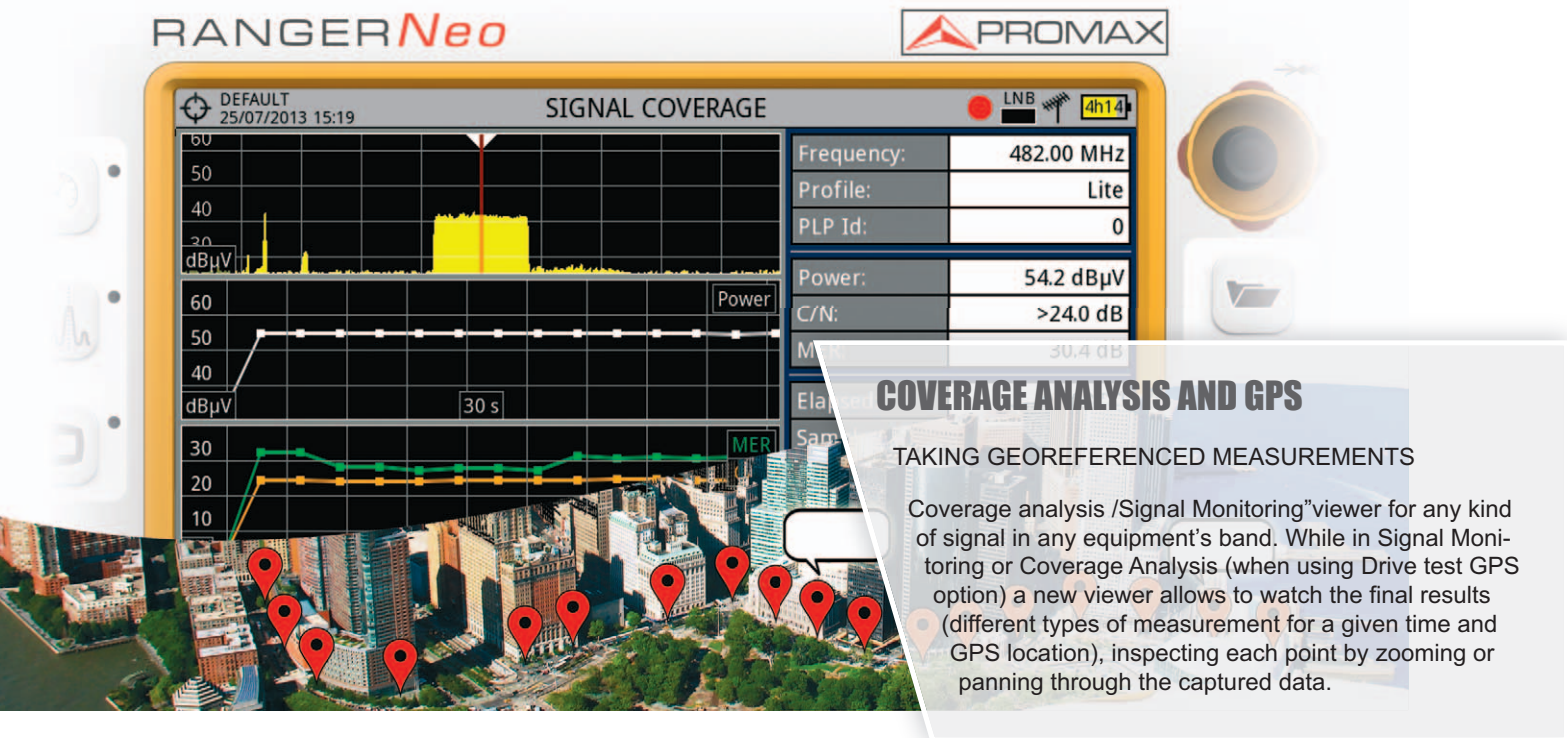
Simultaneous real spectrum analyser information + WiFi access point data

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 2 ATSC** can display both simultaneously.

RANGER Neo 2 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



RANGER Neo PROMAX

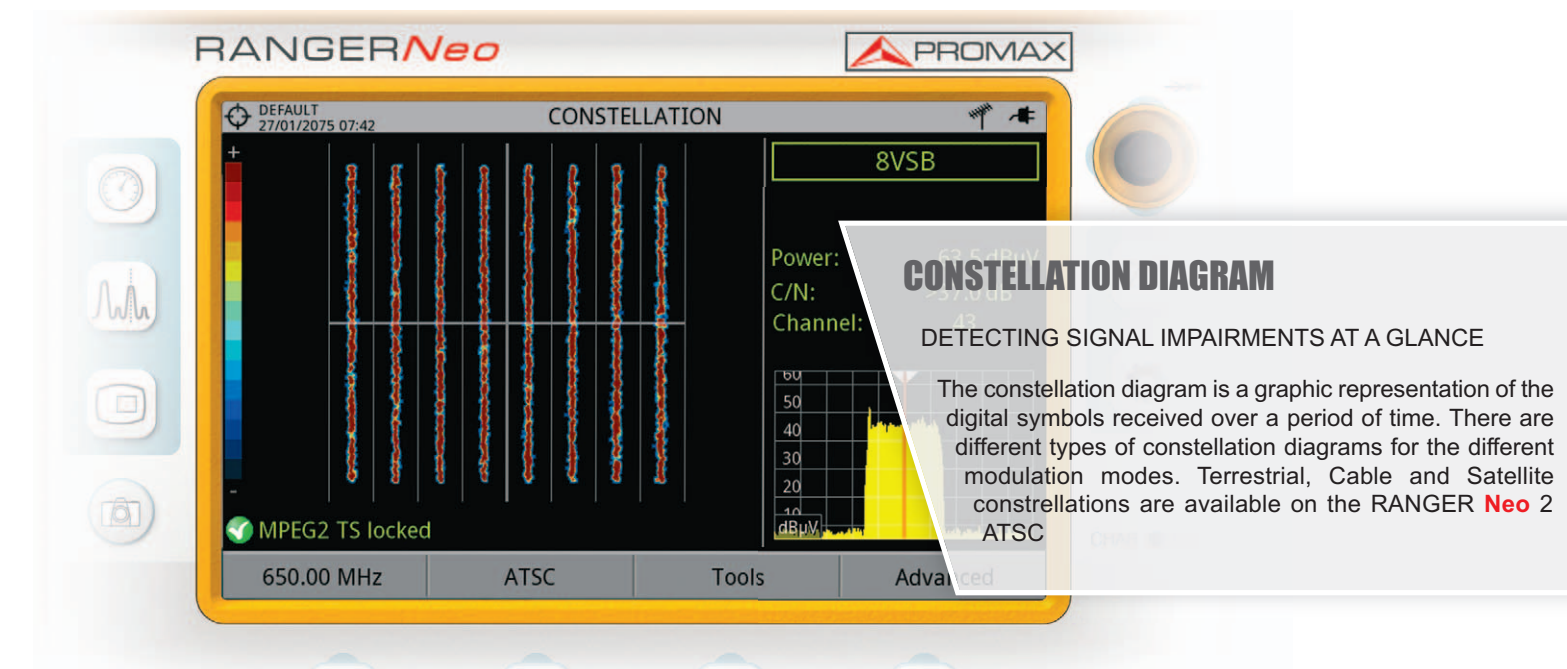
DEFAULT 25/07/2013 15:19 SIGNAL COVERAGE

Frequency: 482.00 MHz
 Profile: Lite
 PLP Id: 0
 Power: 54.2 dBµV
 C/N: >24.0 dB

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



RANGER Neo PROMAX

DEFAULT 27/01/2015 07:42 CONSTELLATION

8VSB

Power: 63.0 dBµV
 C/N: 43
 Channel: 43

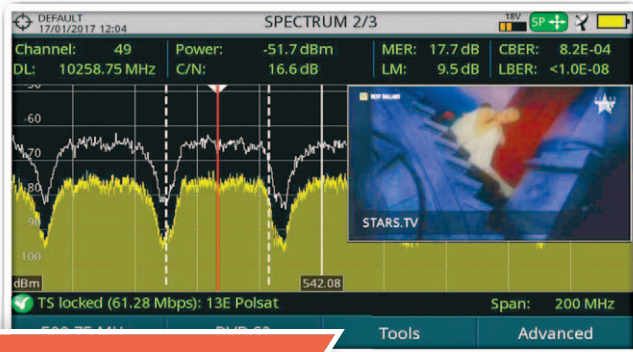
CONSTELLATION DIAGRAM
 DETECTING SIGNAL IMPAIRMENTS AT A GLANCE

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 2 ATSC

MPEG2 TS locked
 650.00 MHz ATSC Tools Advanced

Fast and accurate spectrum analyser

PROFESSIONAL SPECTRUM ANALYSER



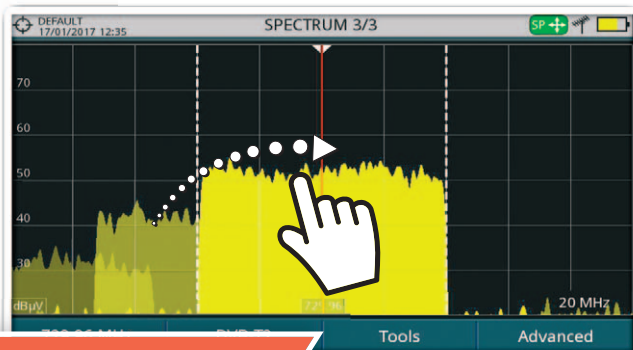
Reference traces

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



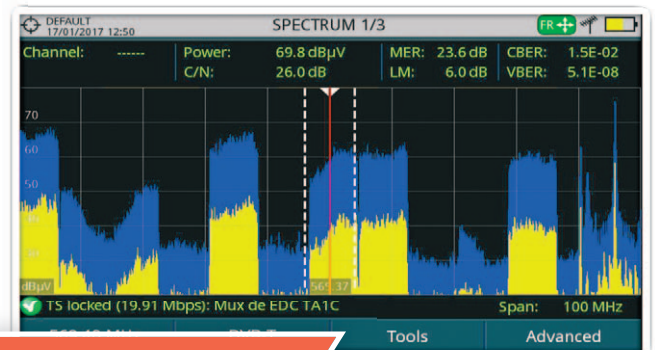
Triple split display

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



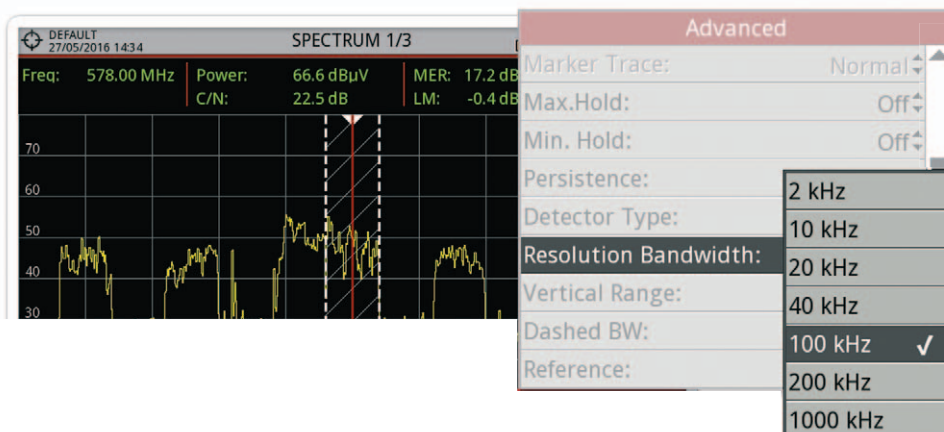
Touch screen

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.

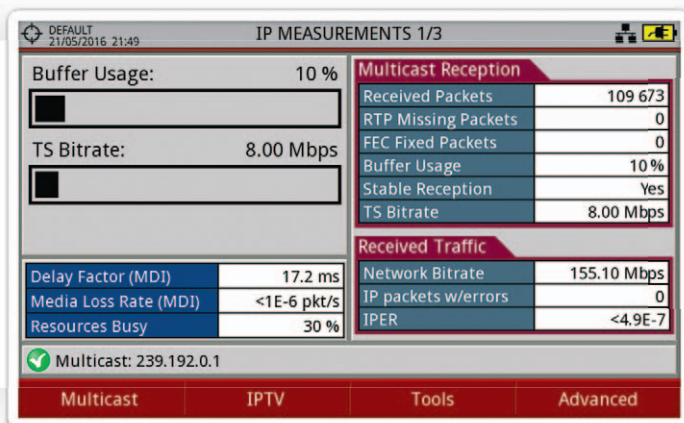


High resolution filters

Having the proper resolution filters is critical in some applications. RANGER *Neo* 2 ATSC includes a very narrow 2 kHz filter.

Enjoy a wide variety of functions

EXTENDED IP FUNCTIONS the future of content delivering



Network bitrate

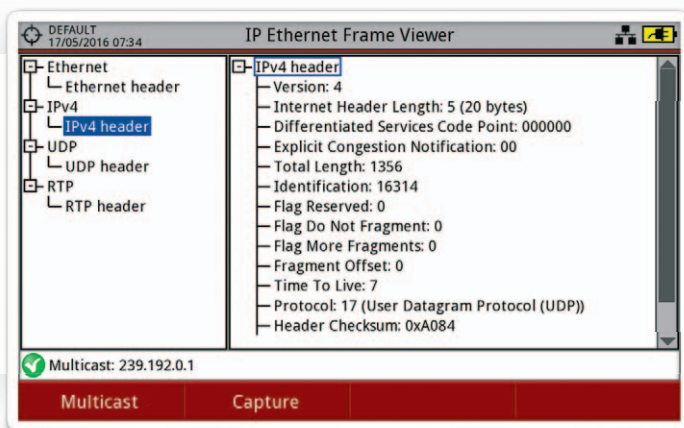
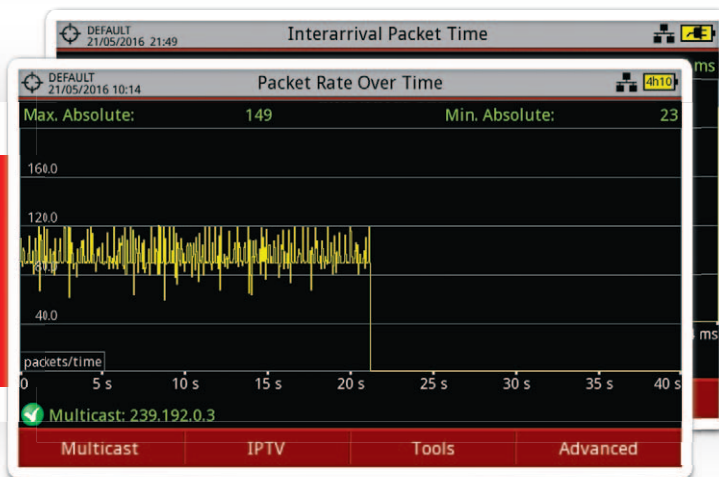
The network bitrate gives you an indication of the network load and possibility of overload.

Media Delivery Index

A key quality measurement formed by the Delay Factor and the Media Loss Rate.

PING, Trace, Average packet delay and IPDV

They are very useful to identify the reasons for communication problems, anything from complete service interruptions to uncontrolled delays which can be as important in terms of service performance.

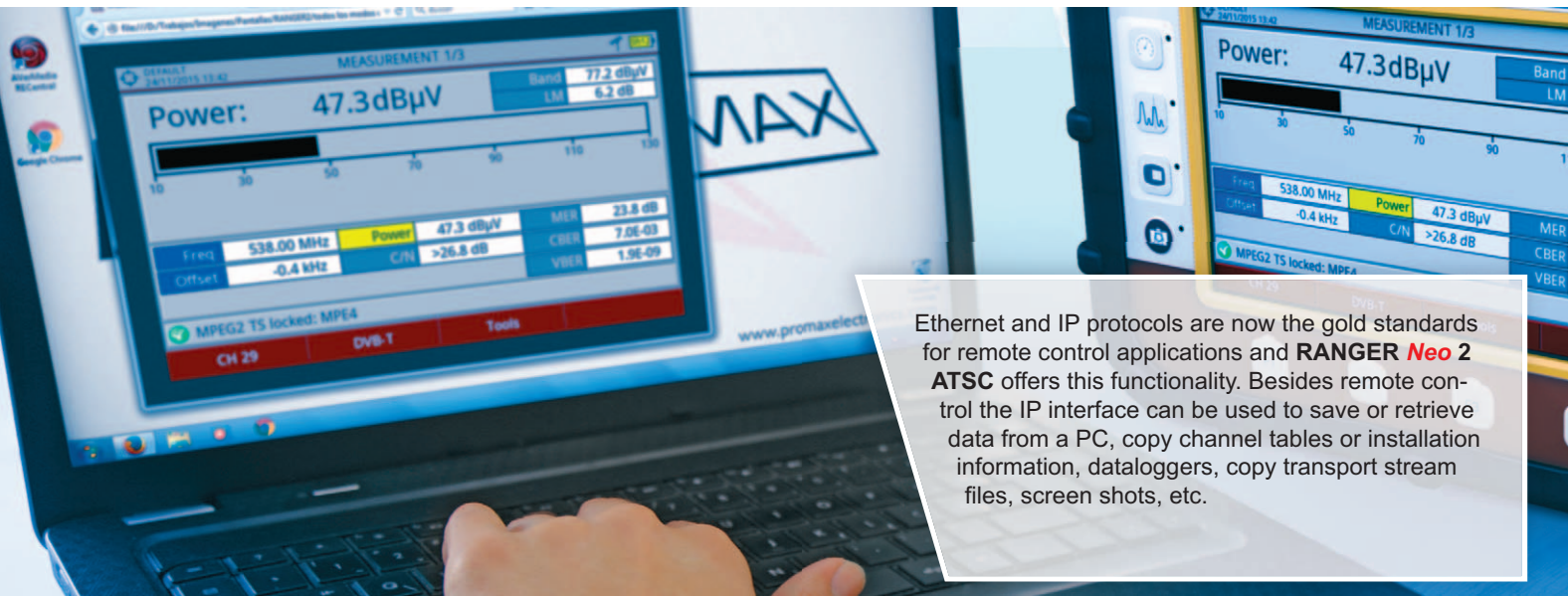


IP Ethernet frame viewer

IP Ethernet frame viewer captures a multicast packet displaying all its frame details, for example Time-To-Live (TTL), all fields of RTP protocol, etc... It is very helpful to study IPTV signalisation problems.

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 2 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, copy transport stream files, screen shots, etc.

MORE INTERNAL MEMORY up 7 GB for user data



There is more data a **RANGER Neo 2 ATSC** 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.

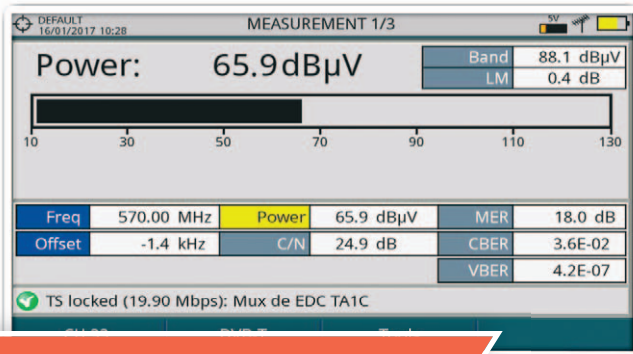
Even though the information can be downloaded to a PC or even copied to a memory stick in the field, the 7 GB of internal memory in the **RANGER Neo 2 ATSC** are far from negligible.

File Information	
Duration:	00:03
Timestamp:	24/05/2016 07:15
Max. Bitrate:	19.91 Mbps
Recorded Source	
ts_test1	
Internal Memory	
Free Capacity:	7 MB
Total Capacity:	0 MB

7GB

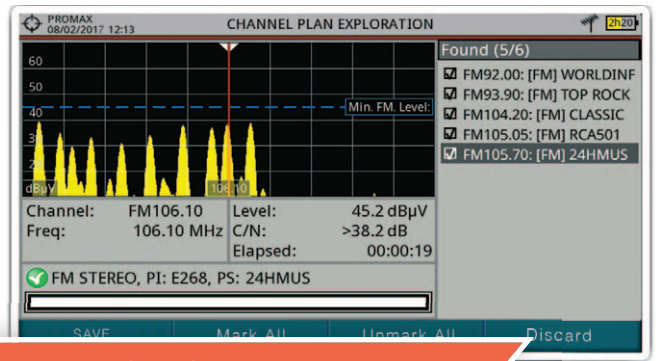
Enjoy a wide variety of functions

MANY USEFUL FUNCTIONS



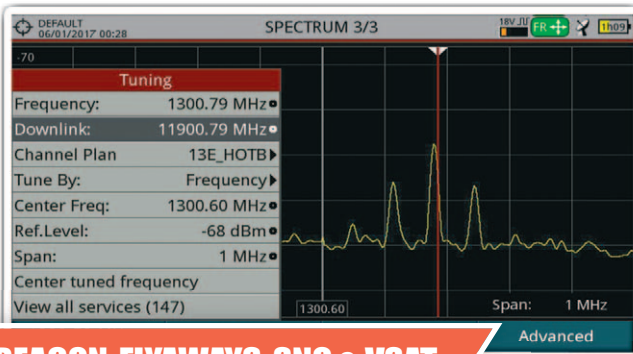
Simultaneous measurements

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



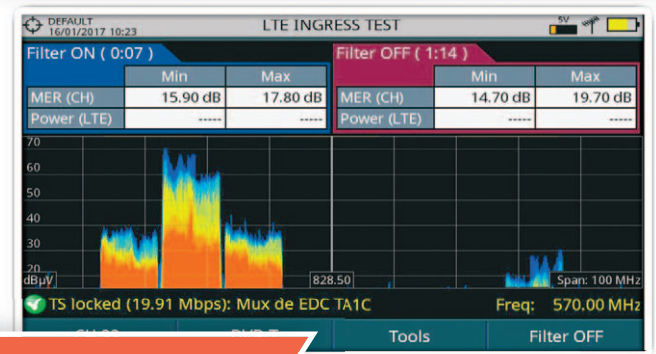
FM RADIO RECEIVER & ANALYZER

FM radio signals can be scanned, measured and demodulated



BEACON-FLYAWAYS, SNG & VSAT

Satellite BEACON signals can be clearly seen thanks to the 1 MHz SPAN and 10 kHz resolution filters.



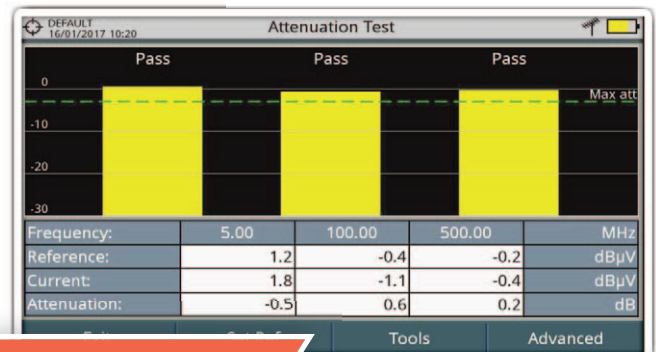
LTE ingress test

Should you install an LTE filter? Test your TV distribution system.

CH	Signal Type	Power/Level	C/N	MER	LM
26	ATSC	65.8 dBµV	>32.9 dB	26.6 dB	9.0 dB
27	ATSC	64.1 dBµV	>31.2 dB	25.6 dB	8.0 dB
31	ATSC	66.3 dBµV	>33.2 dB	30.6 dB	13.0 dB
33	ATSC	65.8 dBµV	>33.2 dB	29.5 dB	11.9 dB
34	ATSC	69.4 dBµV	>35.7 dB	30.8 dB	13.2 dB
36	ATSC	77.1 dBµV	42.0 dB	33.4 dB	15.8 dB
37	Unknown	36.3 dBµV	>2.6 dB		

Datalogger and Test&Go

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



Attenuation test

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

A new breed of analysers for a new world

TRANSPORT STREAM ANALYZER



Transport stream recording and analysis



Home network, commercial, point to point



Extended IPTV functions

H.265

H.265 HEVC analyser and decoder

7GB

Fast-storage 7 GB capacity for user data

5GHz

5 GHz RF input (optional)



Webservice control via Ethernet port



Common Interface slot for encrypted channels



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 2 ATSC		
DIGITAL STANDARDS	ATSC, TS 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 ASI-TS input and output (BNC Female, 75 Ω) IPTV Input for Measurements and Decoding, UDP / RTP, RJ45 Ethernet 10 / 100 / 1000 Mbps HDMI output IP input for remote control Analogue Video / Audio input Common Interface module for slot for CA-modules 2 USB connectors for data transferring and GPS module (Type A)		
FUNCTIONS	<p>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 FM RDS radio measurements and decoding Screenshots and Datalogger for measurement reports Field strength Measurement</p>	<p>Wideband LNB WiFi 2.4 GHz LTE 1.8 GHz OTT LTE TS Recording Signal monitoring CC Analysis Task planner</p>	<p>TS Analysis Resolution Bandwidth: 2, 10, 20, 40, 100, 200 kHz, 1 MHz Web server PSIP IPTV Multicast Shoulder Attenuation Service Recording DVB-S2 multistream</p>
MEASUREMENT MODE Frequency Margin	<p>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</p>		
SPECTRUM ANALYZER Frequency Margin	<p>From 5 - 1000 MHz (Terrestrial) From 250 - 2500 MHz (Satellite) From 10 - 130 dBμV Full / 500 / 200 / 100 / 50 / 20 / 10 MHz</p>		
OPTIONS OP-002-PS OP-002-WL OP-002-DAB+ OP-002-GPS OP-002-19	<p>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</p>		
TS-Analysis	Real-time Transport Stream analyser with TS tables display, bitrate analysis & TR 101290 alarms monitoring		
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