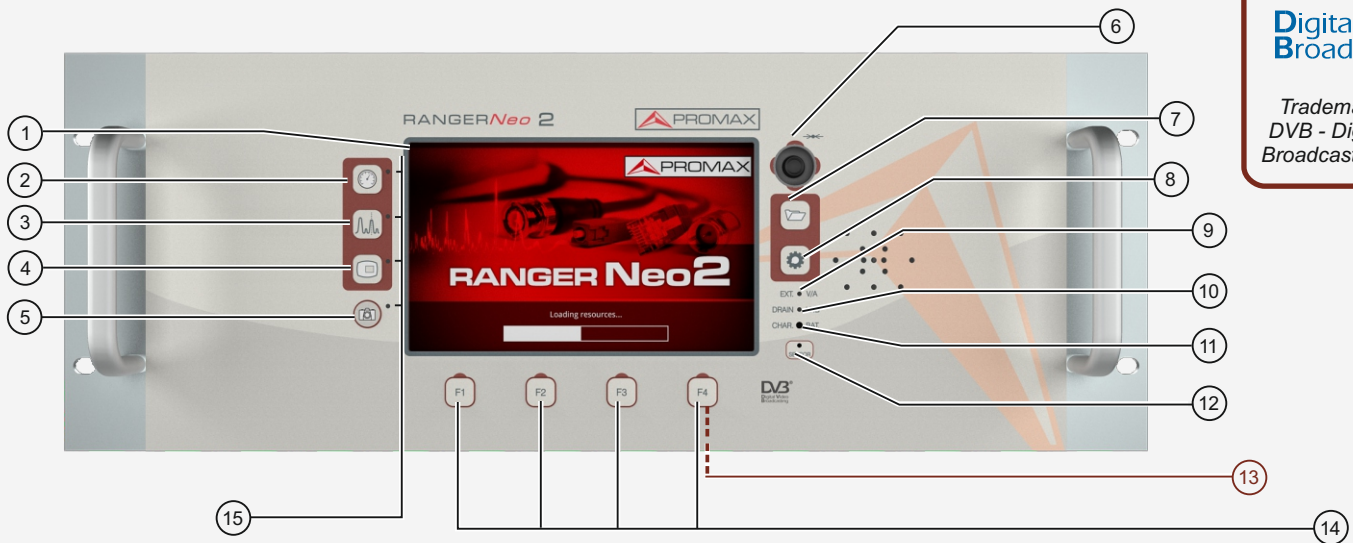


## FRONT VIEW



- |   |  |                                    |
|---|--|------------------------------------|
| ① Touch Screen                                  | ⑥ Joystick                             | ⑪ Battery charging indicator       |
| ② Measurement key                               | ⑦ Installations management key         | ⑫ Light sensor                     |
| ③ Spectrum key                                  | ⑧ Settings key                         | ⑬ <b>Reset (press and hold 5s)</b> |
| ④ TV key  | ⑨ External Audio/Video Input indicator | ⑭ Softkeys                         |
| ⑤ Export (press >1s)<br>/ Reference (press <1s) | ⑩ External unit power Supply indicator | ⑮ Active Function indicator        |

## SCREEN ICONS REFERENCE

### STATUS BAR

- Battery charging**
- Battery not charging, time left indicator**
- Battery not charging. Yellow level indicates charge left**
- Satellite band**
- Current voltage, 22 kHz signal and LNB power level**
- Terrestrial band**
- USB flash drive inserted**
- WIFI signal source**
- Current installation**
- Compressed installation**
- SatCR (SCD/EN50494) commands enabled**
- JESS (SCD2/EN50607) commands enabled**
- Joystick multi-function enabled.**  
Two-letter code indicates the exact function:
  - FR** Frequency tuning
  - CH** Channel tuning
  - SP** SPAN change
  - MK** Marker moving
  - EC** Echo change/zoom
  - AP** Access Point change

\* **Optical Option.** Refer annex on the User's Manual

- Task scheduled**
- 5 GHz RF Auxiliary Input\***
- IPTV signal source**
- OTT streaming**

### SERVICE LIST SELECTOR

- DIGITAL TV service**
- High Definition TV service**
- Digital radio**
- Data**
- Scrambled service**

### DIALOG BOXES

- Error message**
- OK message**
- Question message**
- Warning message**

### VIDEO & AUDIO SETTINGS MENU

- TFT backlight brightness**
- Volume**

- ON:**
- OFF:**



## RF ► SETTINGS

**1**

**2**

Settings

Signal source: RF → IPTV → Wi-Fi

Band: Terrestrial → Satellite

## RF ► SCREENS

**► MEASUREMENT**

MEASUREMENT 1/3

Power: 80.8dBμV Band 65.6 dBμV LM 14.1dB

Freq	554.00 MHz	Power	80.8 dBm	MER	30.5 dB
Offset	2 kHz	C/N	34.7 dB	CBER	6.9E-05
DL	11747.00 MHz			VBER	1.8E-08

CH 31 DVB-S Tools 1/3

**FULL MEASUREMENT**

MEASUREMENTS 2/3

Freq 554.00 MHz Power 80.8 dBm MER 30.5 dB

Offset 2 kHz C/N 34.7 dB CBER 6.9E-05

DL 11747.00 MHz VBER 1.8E-08

CH 31 DVB-T Tools 2/3

**MEASUREMENT + TV + SPECTRUM**

MEASUREMENTS 3/3

DVB-S PARÁMETROS

Bandwidth:	37125 kHz	Spectral Inversion:	Off
Symbol rate:	27500 kSps	Roll-Off Factor:	0.35
Constellation:	QPSK	Code Rate:	1/2
PLS Sequence:	0		

Freq 554.00 MHz Power 80.8 dBm MER 30.5 dB

Offset 2 kHz C/N 34.7 dB CBER 6.9E-05

DL 11747.00 MHz VBER 1.8E-08

CH 31 DVB-S Tools 3/3

**MEASUREMENT + PARAMETERS**

**► SPECTRUM ANALYSER**

SPECTRUM 1/3

Freq: 1147.00 MHz Power: <math>-19.2\text{ dBm}</math> MER: 30.3 dB CBER: 6.7 E-05

DL: 11747.00 MHz C/N: <math>-36.2\text{ dB}</math> LM: 8.9 dB VBER: <math>-1.0\text{ E-08}</math>

CH 31 DVB-T Tools Advance 1/3

**SPECTRUM + MEASUREMENT**

SPECTRUM 2/3

Freq: 1147.00 MHz Power: <math>-19.2\text{ dBm}</math> MER: 30.3 dB CBER: 6.7 E-05

DL: 11747.00 MHz C/N: <math>-36.2\text{ dB}</math> LM: 8.9 dB VBER: <math>-1.0\text{ E-08}</math>

CH 31 DVB-T Tools Advance 2/3

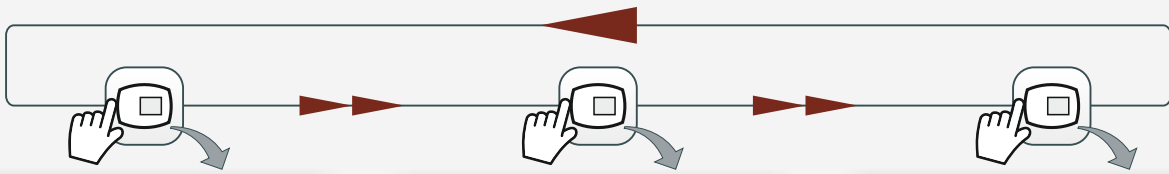
**SPECTRUM + MEASUREMENT + TV**

SPECTRUM 3/3

CH 31 DVB-T Tools Advance 3/3

**FULL SPECTRUM**

## TV MODE



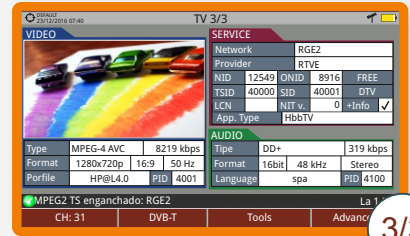
FULL TV

1/3



TV + SPECTRUM + MEASUREMENT

2/3



TV + SERVICE DATA

3/3

## RF MENUS



**Tuning**

- Channel:
- Channel Plan → Channel Plan 1 → Channel Plan 2
- Tune by: → Channel → Frequency
- View all services...



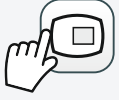
**Tuning**

- Frequency:
- Channel Plan: → Channel plan 1 → Channel Plan 2
- Tune By: → Channel → Frequency
- Center Freq: ○
- Ref. Level: ○
- Span: ○
- Center tuned frequency
- View all services...



**Signal Parameters**

- Signal Type:
- View Advanced Parameters



### Tools

- Select Service...
- Signal Monitoring
- Explore Channel Plan
- Discover FM Stations
- Field Strength:  Off  On
- Datalogger  New...  Test & Go
- TS Analyser
- TS Recording...
- Echoes
- Cosntellation
- MER by carrier
- Shoulder Attenuation
- LTE Ingress Test
- Attenuation Test
- Task Planner...
- Merogram
- Spectrogram
- Wi-Fi Configuration
- Analogue Input  Antenna  External



### Advanced

- Average:
- Spectrum Line:
- Tone Level:
- Marker:  Normal
- Marker Trace:  Off  Permanent  Curtain
- Max.Hold:  Off  Permanent  Curtain
- Min.Hold:  Off  On
- Persistence:
- Detector Type::  PEAK  RMS
- Resolution Bandwidth:  2 kHz  10 kHz  20 kHz  40 kHz  100 kHz
- Vertical Range:  10 dB/div  5 dB/div  2 dB/div  1 dB/div
- Dashed BW:  Off  On
- Reference:  Set  Clear

Outline  Solid  Transparency

Off  On

Off  On

Normal

Off  Permanent  Curtain

Off  Permanent  Curtain

Off  On

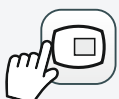
PEAK  RMS

2 kHz  10 kHz  20 kHz  40 kHz  100 kHz

10 dB/div  5 dB/div  2 dB/div  1 dB/div

Off  On

Set  Clear

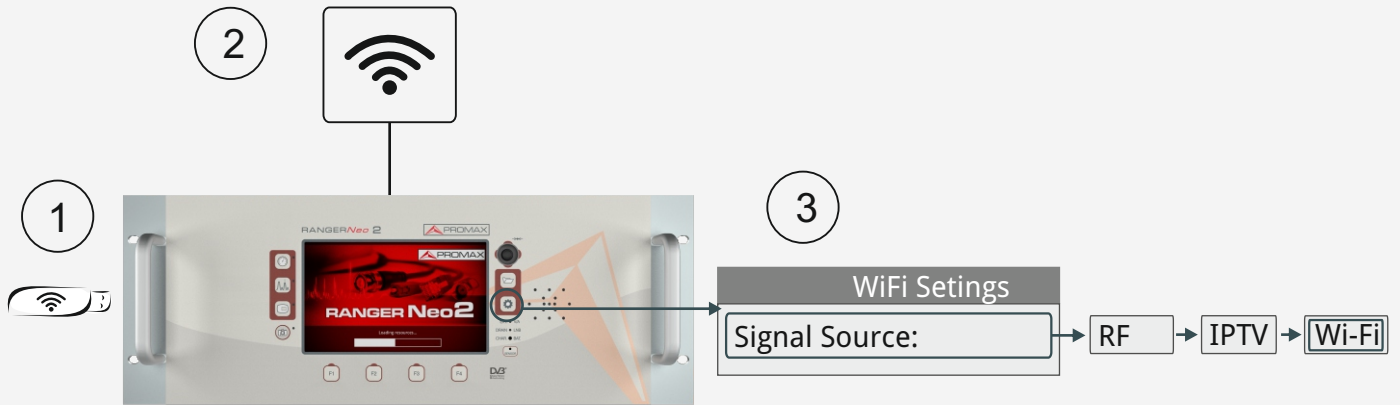


### Advanced

- Audio:
- Discovered URLs:
- TS Data:
- Aspect Ratio  4:3  16:9

4:3  16:9

## WIFI ► SETTINGS



## WIFI ► SCREENS

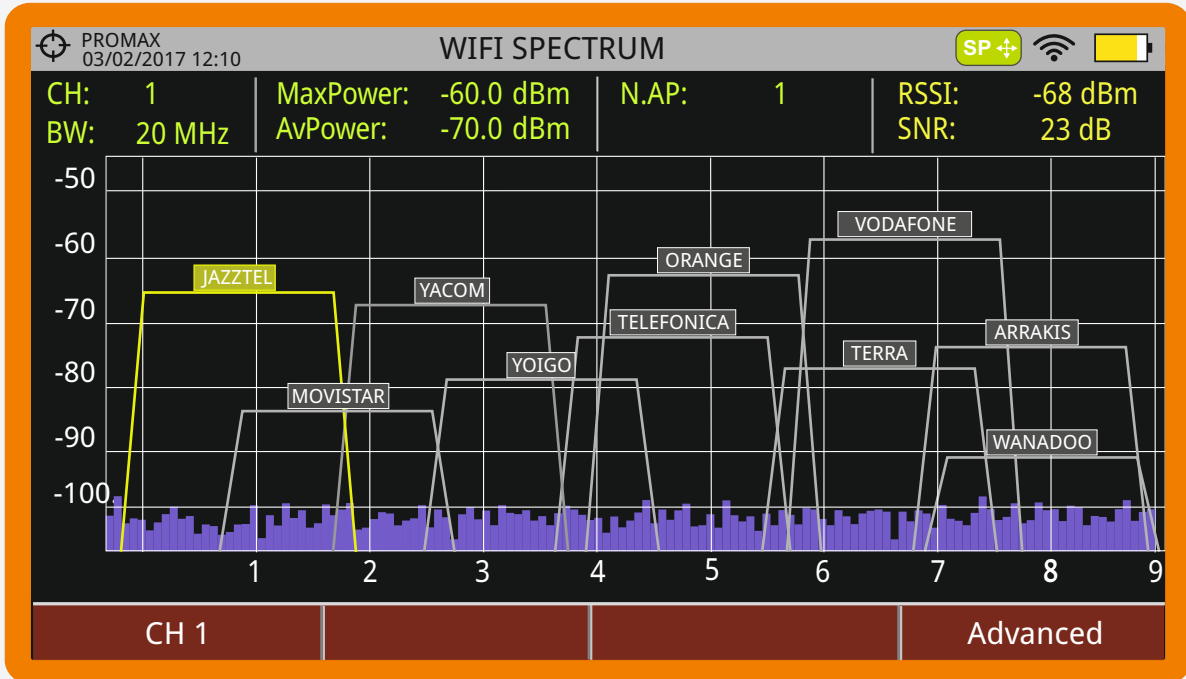
### ► SITE SURVEY

PROMAX 22/12/2016 12:10		SITE SURVEY					
SSID	BSS	CH	RSSI(dBm)	Security	Device		
JAZZTEL	01:23:45:67:89:ab	1	-86	WPA	Wireless Router...		
MOVISTAR	aa:bb:cc:dd:ee:ff	2	-72	WPA2	WAP6969N		
YACOM	98:76:54:32:10:fe	3	-84	WPE			
YOIGO	a1:b2:c3:d4:e5:f6	4	-74	None			
ORANGE	22:44:66:88:ab:cd	5	-70	WPA			
VODAFONE	13:57:92:46:80:31	6	-88	WPA			
ARRAKIS	ca:ac:ed:de:fb:bf	7	-78	WPA			
TELEFONICA	57:26:21:44:a6:89	8	-76	WPA			
TERRA	11:85:e5:74:0c:53	9	-80	WPA			
WANADOO	b4:07:32:41:a6:1c	10	-82	WPA			

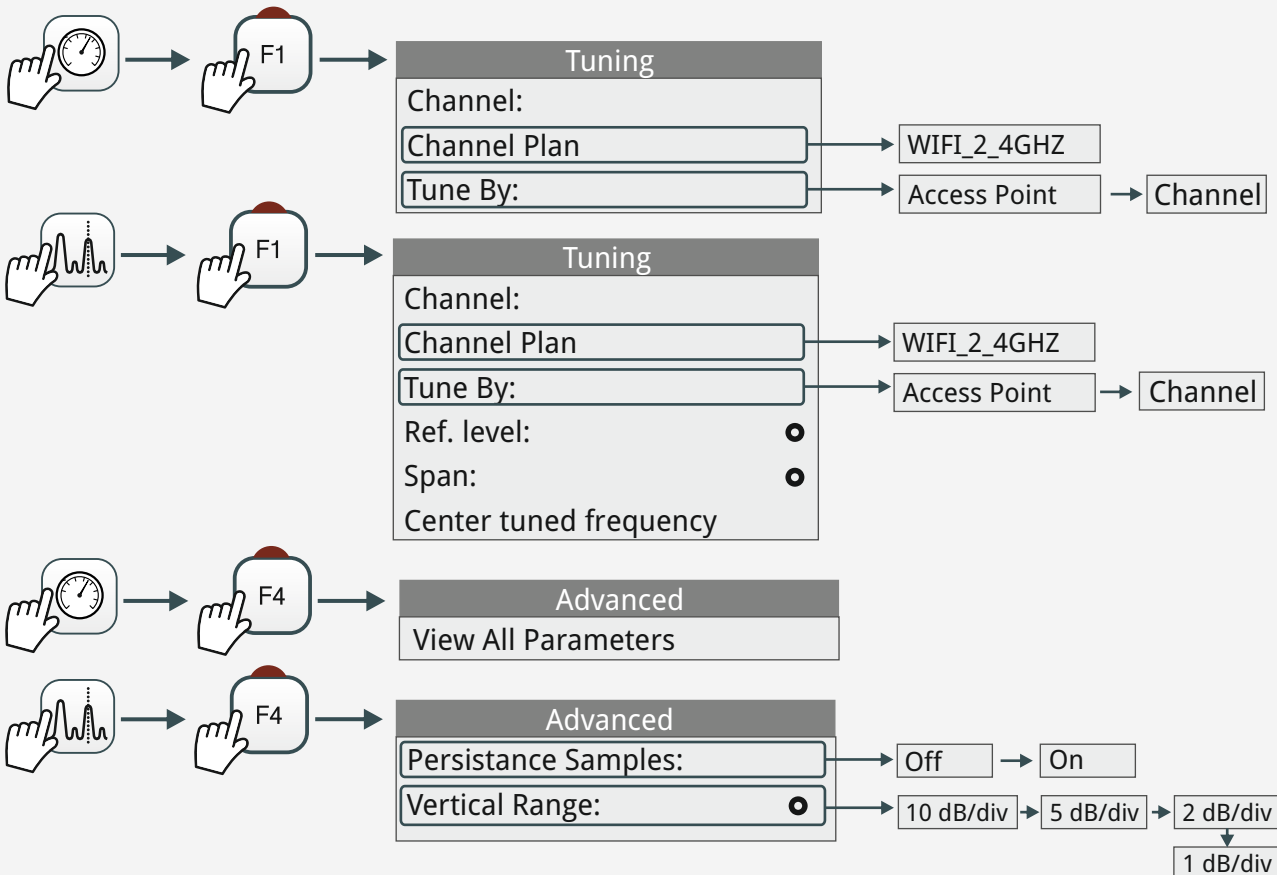
CH 1 | Advanced



## WIFI SPECTRUM



## WIFI MENUS



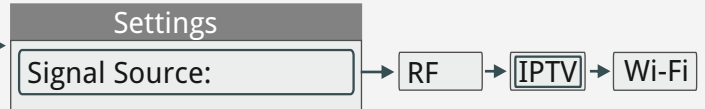
## IPTV ip.tv ▶ SETTINGS

1

ip.tv



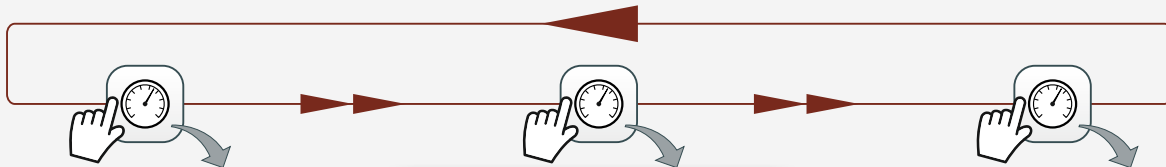
2



## IPTV ip.tv ▶ SCREENS



### ▶ IP MEASUREMENTS



IP MEASUREMENTS 1/3	
Buffer Usage:	0 %
TS Bitrate: TS:	4.90 Mbps
Delay Factor (MDI)	0.0 ms
Media Loss Rate (MDL)	<1E-6 pkts/s
Resources Busy	0 %
<b>Multicast Reception</b>	
Received Packets:	9729
RTP Missing Packets:	0
FEC Fixed Packets:	0
Buffer Usage:	0 %
Stable Reception:	No
TS Bitrate:	4.90 Mbps
<b>Received Traffic</b>	
Network Bitrate:	19.73 Mbps
IP packets w/errors:	0
IPER:	0 %

1/3

IP MEASUREMENTS 2/3	
Delay Factor (MDI)	239.192.0.1
Media Loss Rate (MDL)	1234
Resources Busy	UDP
<b>Multicast Reception</b>	
Received Packets:	41145
RTP Missing Packets:	0
FEC Fixed Packets:	0
Buffer Usage:	0 %
Stable Reception:	No
TS Bitrate:	5.66 Mbps
<b>Received Traffic</b>	
Network Bitrate:	19.54 Mbps
IP packets w/errors:	0
IPER:	0 %

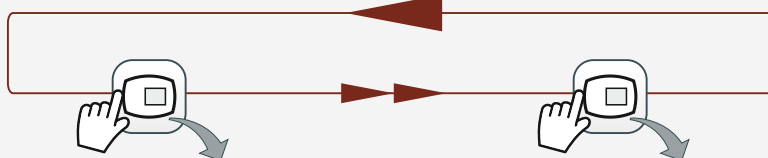
2/3

MEDIDAS IP 3/3	
<b>IP Parameters</b>	
Ethernet Speed:	1 Gbps
IGMP Version:	OFF
Multicast Address:	239.192.0.1
Protocol:	UDP
FEC Status:	Inactivo
FEC Rows(s):	-----
FEC Column(s):	-----
TS Packets/IP Frame:	7
<b>Multicast Reception</b>	
Received Packets:	48829
RTP Missing Packets:	0
FEC Fixed Packets:	0
Buffer Usage:	0 %
Stable Reception:	No
TS Bitrate:	3.89 Mbps
<b>Received Traffic</b>	
Network Bitrate:	19.59 Mbps
IP packets w/errors:	0
IPER:	0 %

3/3



### ▶ IPTV



TV 1/3	
[Video Content]	

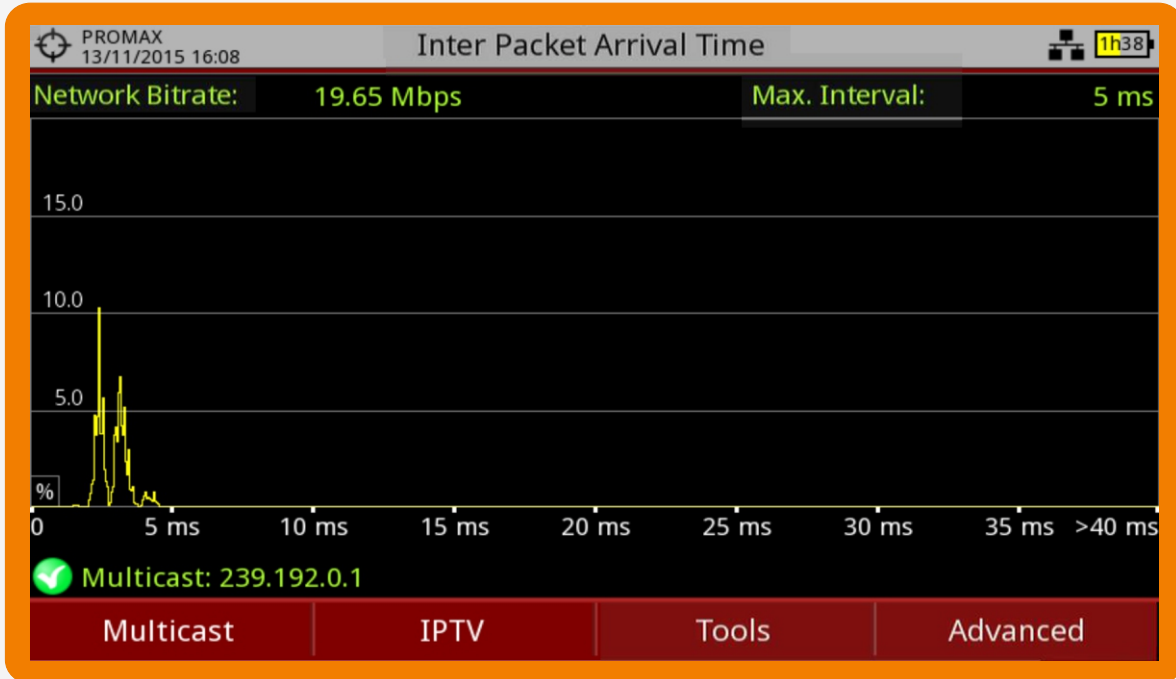
1/3

TV 3/3	
<b>SERVICE</b>	
Network:	RGE2
Provider:	RTVE
NID:	12549
ONID:	8916
LIBRE:	
TSID:	40000
SID:	40001
DTV:	
LCN:	Info
App. Type:	HbbTV
<b>AUDIO</b>	
Type:	DD+
Formato:	1280x720p
Format:	16bit
Idiom:	spa
Profile:	HP@L4.0
PID:	1001
Type:	DD+
Format:	16bit
Idiom:	spa

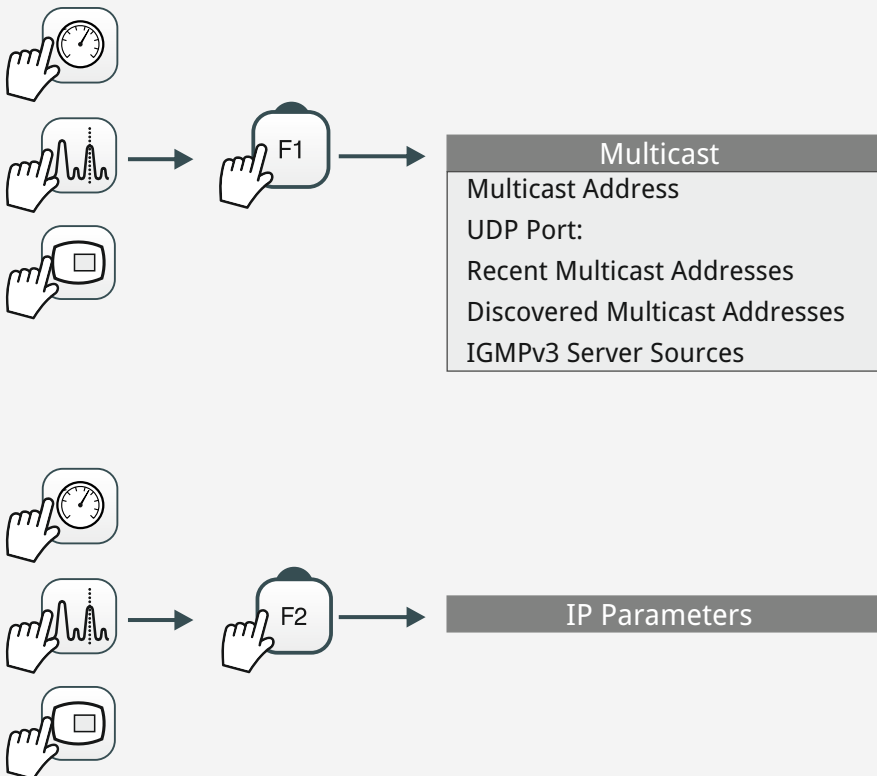
3/3



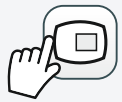
## INTER PACKET ARRIVAL TIME



## IPTV ip.tv ► MENUS







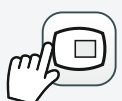
Tools	
Select Service...	
TS Analyser	
TS Recording...	
View IP Network Log...	
IPTV Graph Inter Packet Arrival Time	
IP Ethernet Frame Viewer	
Ping and delay measurements..	
Task Planner...	



Advanced	
Reset IP measures	



Advanced	
Span	
Restart analysis	



Advanced	
Audio	
Discovered URLs	
TS Data	



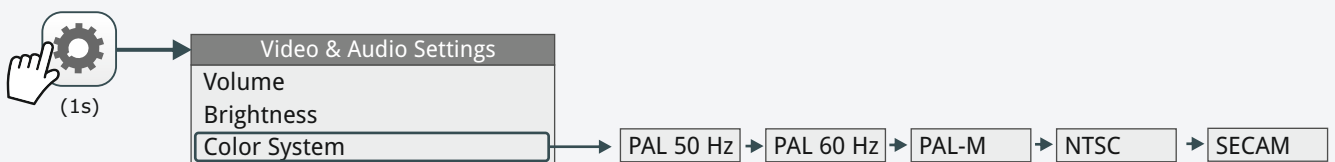
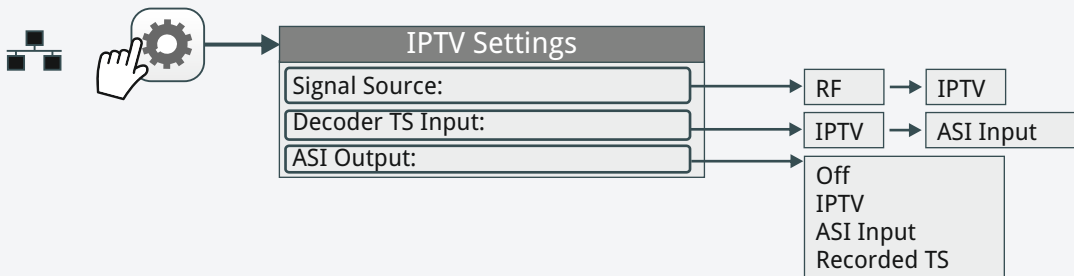
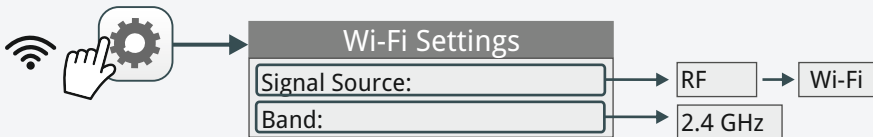
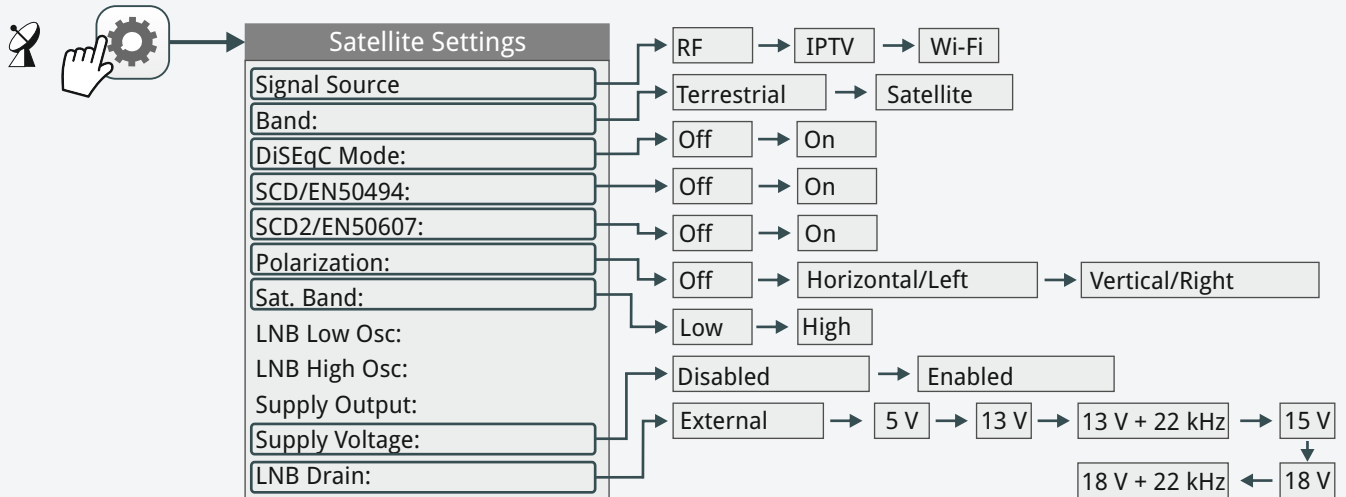
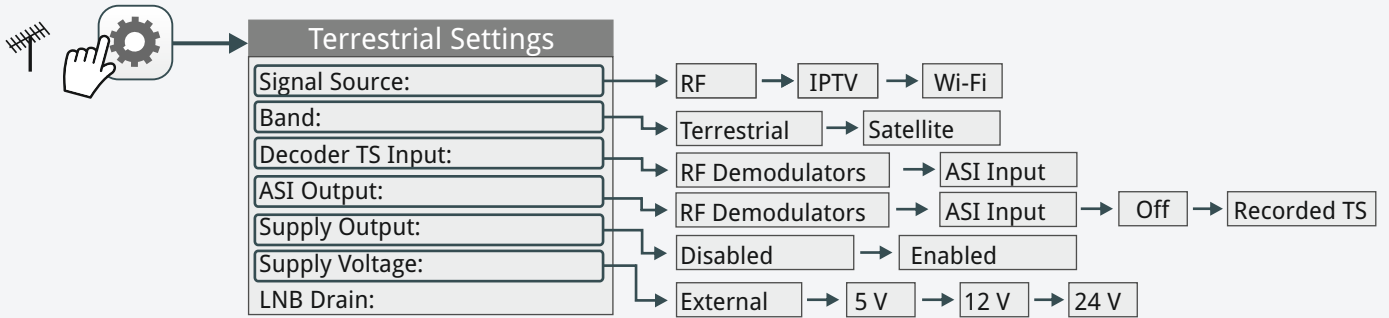
## ▶ PREFERENCES MENU



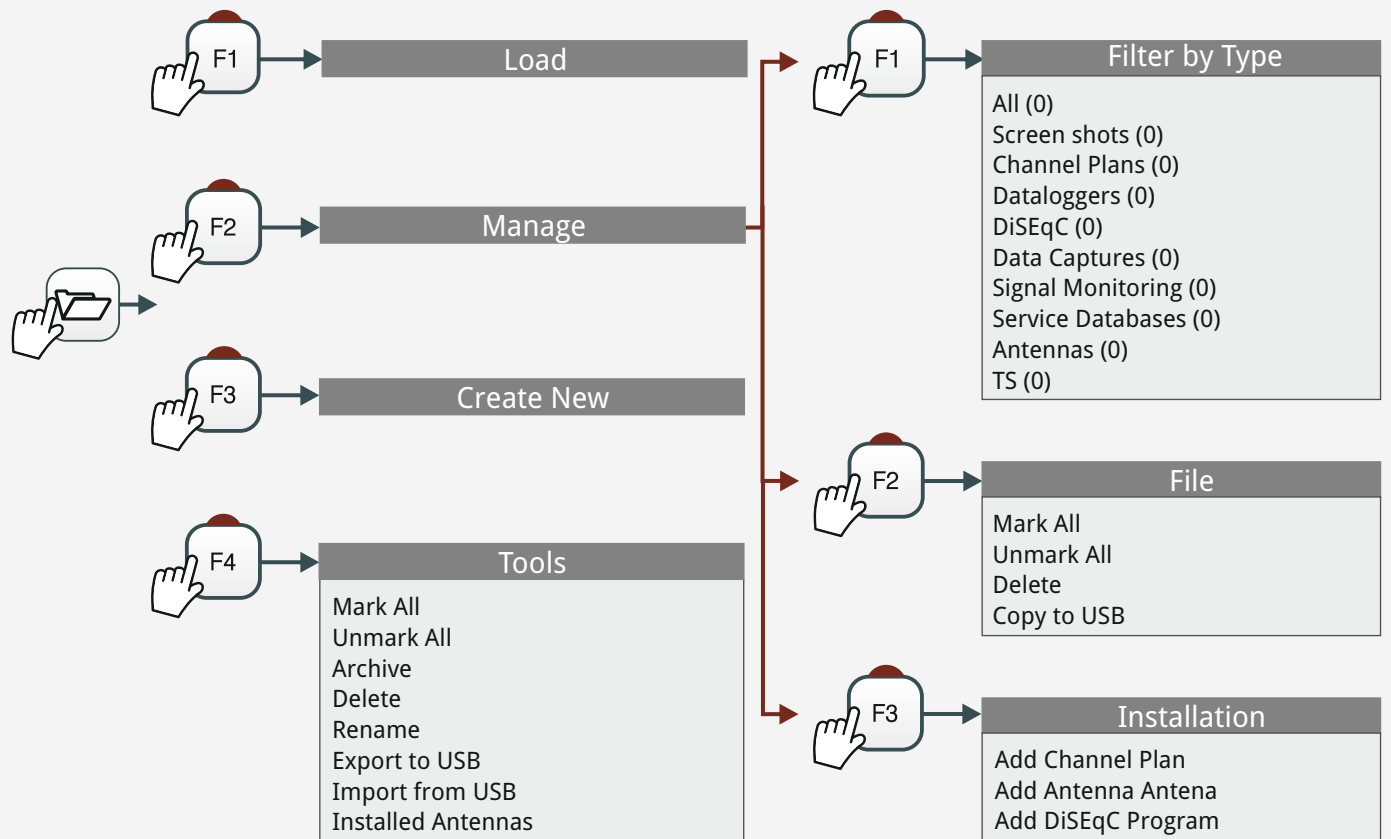
(1s)

Preferencias	
Equipment	Provider Name, SN Release, Date Free System Memory, Free Data Memory, User Company
Appearance	Language: Power Off, TFT Screen, Vibration:: Values Format:
Time & Date	Skin: Brightness, Color System, Boot screen:
Measures	Date: Time: Date Format: Time Zone:
Tools	Terrestrial Units: Sat. Band: Min. TER. Power: Min. FM. Level:
Stealth-ID	Satellite Units: Ref. Level: Min. SAT. Power: Inp. Impedance:
Security	Optical Units: Terr. Downlink: Min. TER. Level:
IPTV	Datalogger PSI: Export button: LTE Filter F. Max:
Network	Database services: LTE Filter F. Min: Center Freq:
	Analog Terrestrial → <input type="checkbox"/> ANALOG → <input type="checkbox"/> FM
	Digital Terrestrial → <input type="checkbox"/> DVB-T → <input type="checkbox"/> DVB-C → <input type="checkbox"/> DVB-T2 → <input type="checkbox"/> DVB-C2
	Digital Satellite → <input type="checkbox"/> DVB-S → <input type="checkbox"/> DVB-S2 → <input type="checkbox"/> DSS
	PIN Code 1234
	MAC: DHCP: IP Address: Mask: Gateway: IGMP Version
	MAC: DHCP: IP Address: Mask: Gateway:

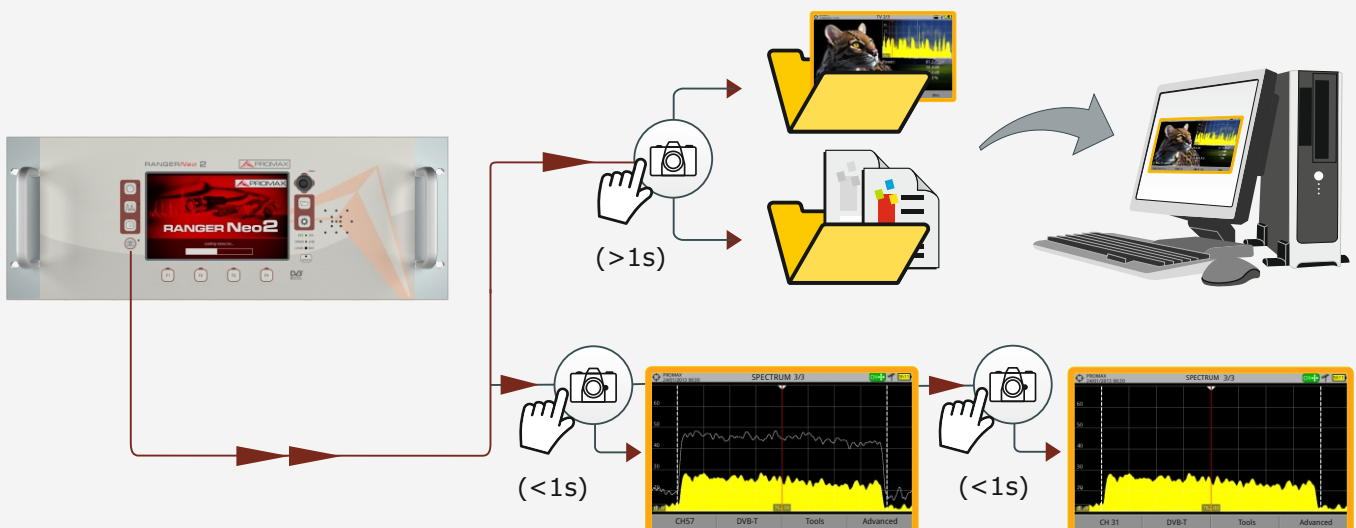
## SETTINGS MENU



## INSTALLATION MANAGEMENT



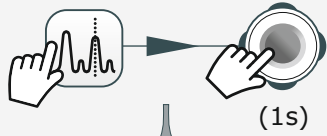
## EXPORT\* IMAGE / DATA / SPECTRUM REFERENCE



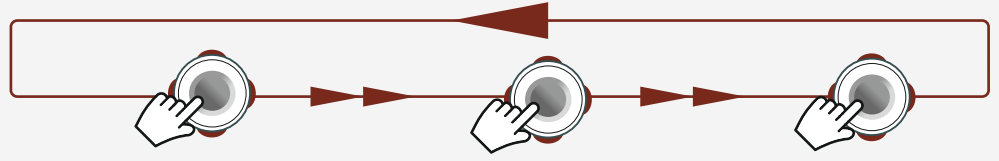
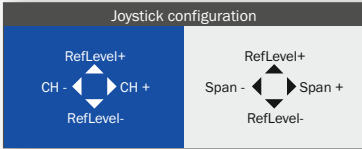
\* Export settings in Preferences



## ▶ JOYSTICK



(1s)



**Access Point**  
change



**Frequency**  
tuning



**Channel**  
tuning

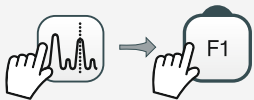


**SPAN**  
Change



**Marker moving**  
(Marker ON)

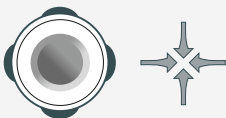
## PARAMETER EDITION



Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.00 MHz ●



Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.00 MHz ●



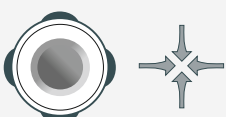
Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.00 MHz ●



Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.00 MHz ●

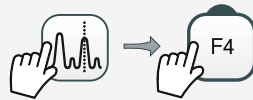


Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.10 MHz ●



Tuning	
Channel:	44
Channel Plan	CCIR ▶
Tune By:	Channel ▶
Center Freq:	658.10 MHz ●

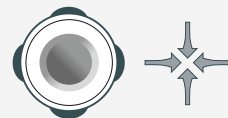
## PARAMETER SELECTION



Advanced	
Average	0 ●
Spectrum Line	Outline ▾



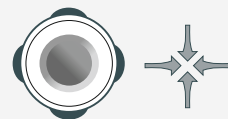
Advanced	
Average	0 ●
Spectrum Line	Outline ▾



Advanced	
Average	0 ●
Spectrum Line	Outline ▾
	Outline
	Solid
	Trans.



Advanced	
Average	0 ●
Spectrum Line	Outline ▾
	Outline
	Solid
	Trans.

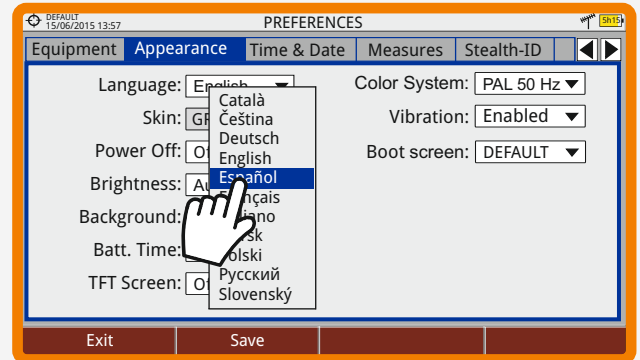
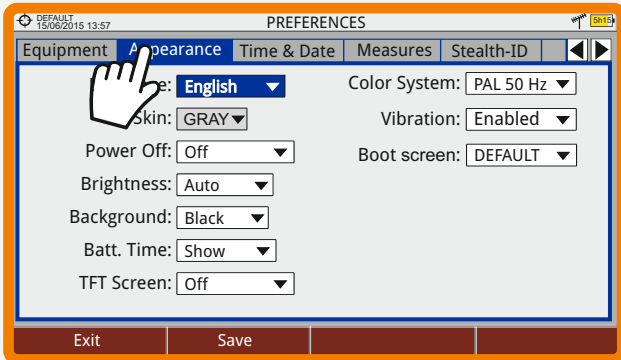


Advanced	
Average	0 ●
Spectrum Line	Solid ▾

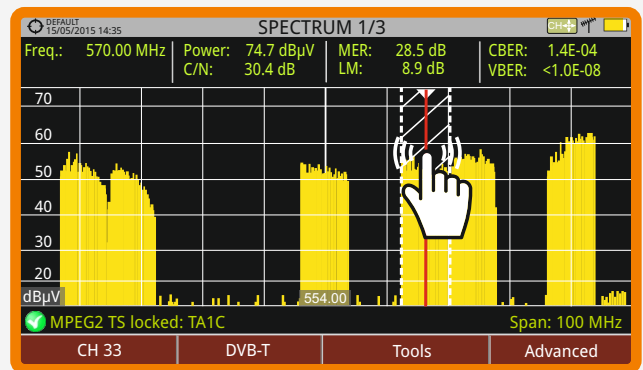
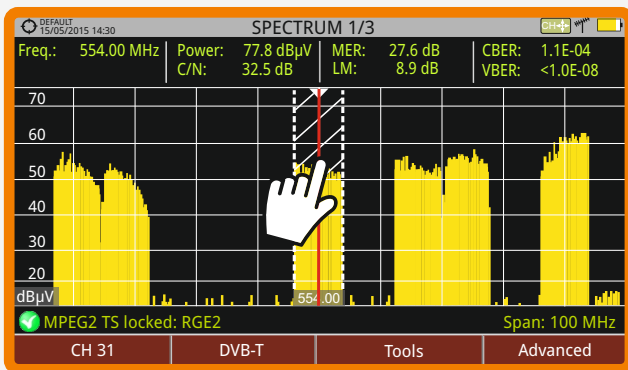


## TOUCH SCREEN

### MENU SELECTION



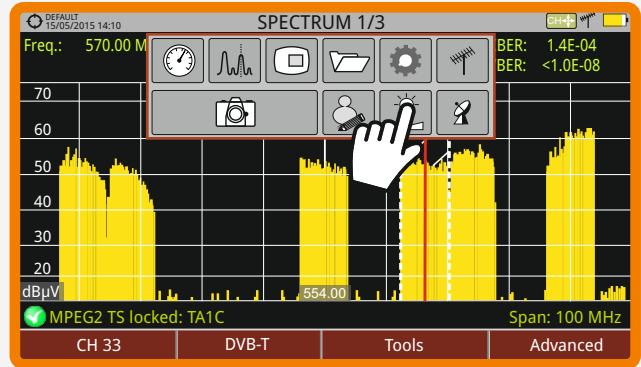
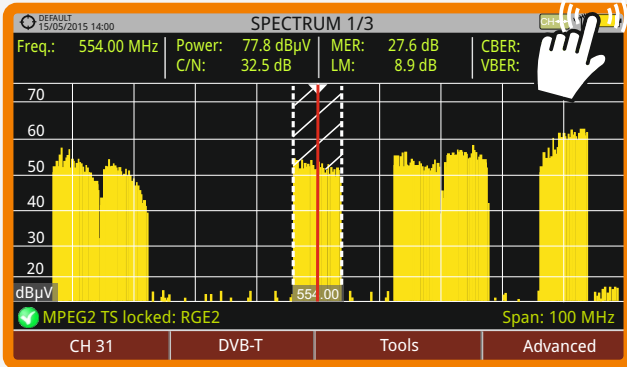
### FREQUENCY SELECTION



### VIRTUAL KEYBOARD WRITING



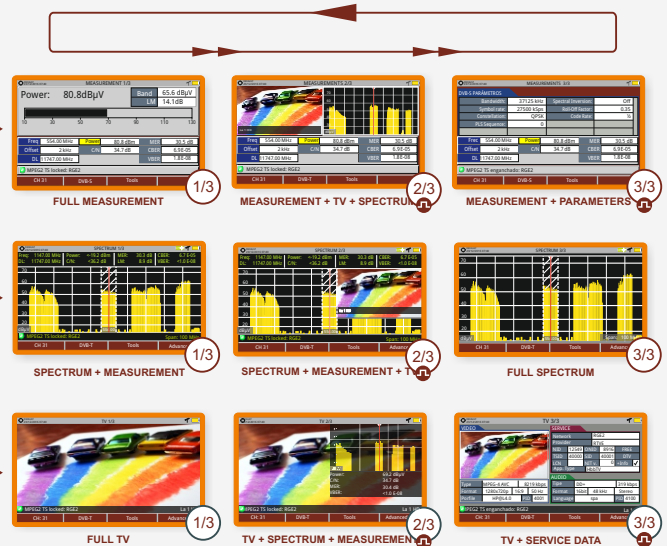
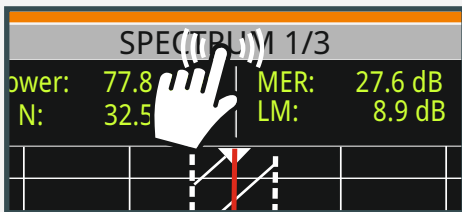
## ▶ TOOLBAR



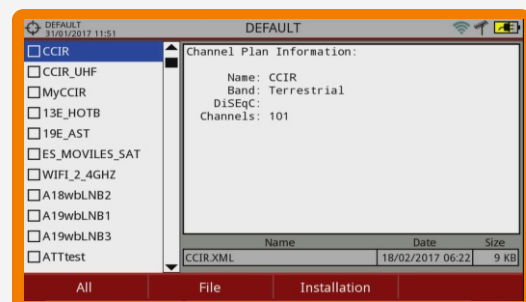
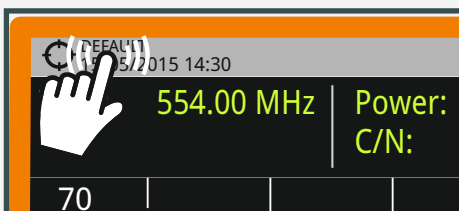
## TOOLBAR ICONS

- Measurement Mode
- Settings
- Video & Audio Settings
- Spectrum Analyser Mode
- Terrestrial Band
- Preferences
- TV Mode
- Satellite Band
- Screen Capture
- Installations Management

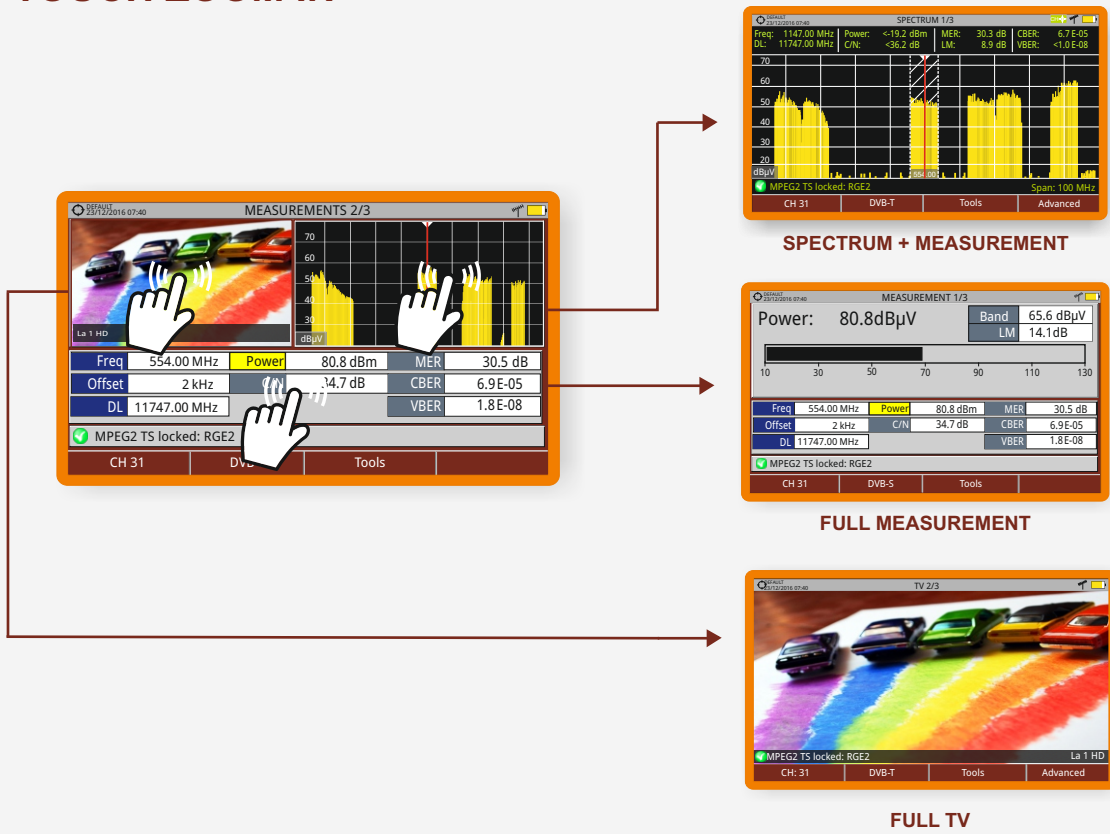
## ▶ MODE SCREENS



## ▶ INSTALLATIONS MANAGEMENT



## ▶ ONE-TOUCH ZOOM IN



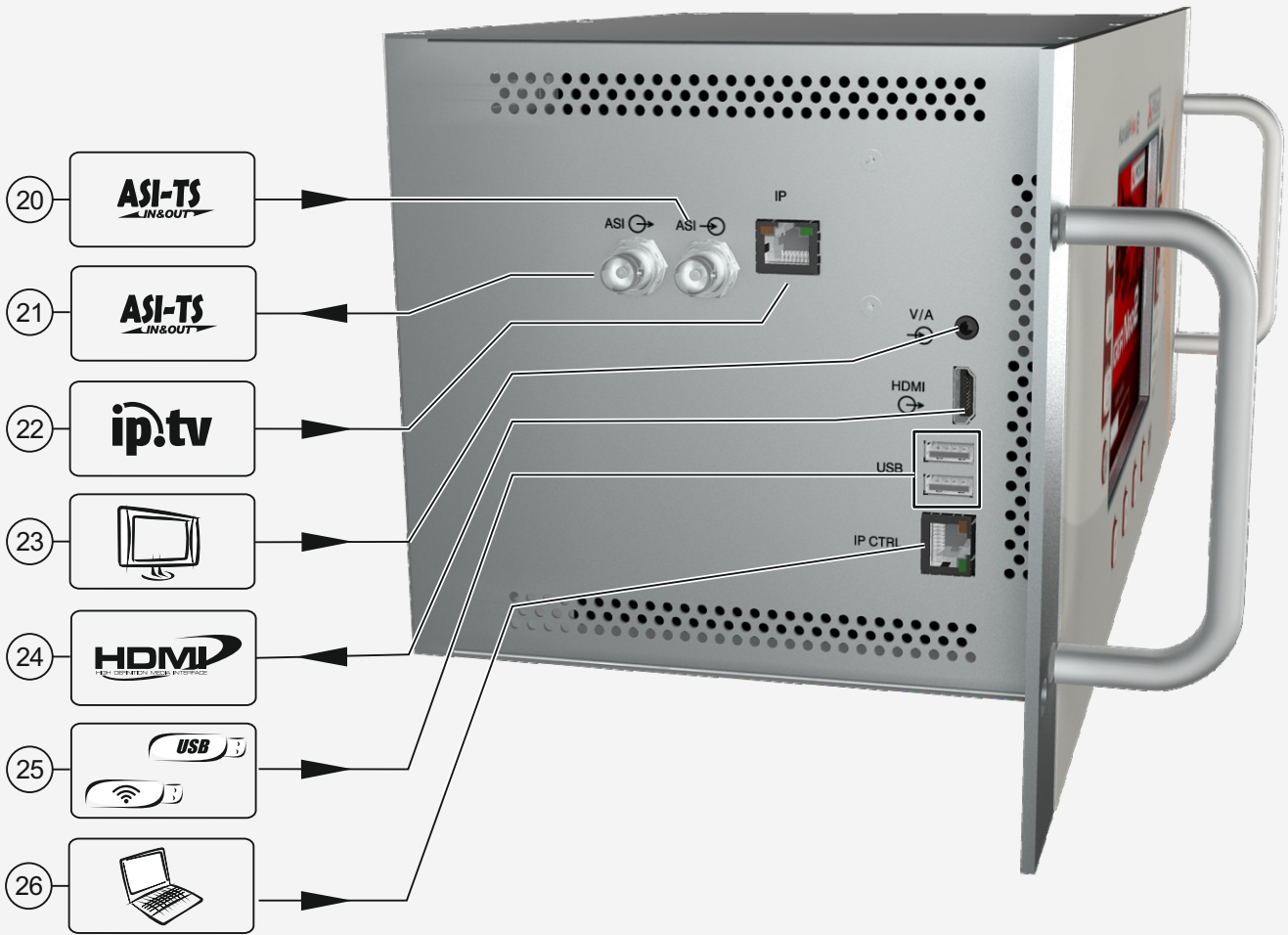
## TOP VIEW



15 Power input connector      16 ON / OF slide switch      17 Fuse holder

18 Input connector for **CAM** module      19 **RF** input connector

## SIDE VIEW



- 20 ASI-TS input
  - 21 ASI-TS output
  - 22 ETHERNET connector
  - 23 Video Audio input
  - 24 HDMI output
  - 25 USB connectors
  - 26 ETHERNET connector for PC (NetUpdate) (\*\* webservice)
- \*\* password : Password



### RESET

If the device crashes, press the ON/OFF button for 10 seconds. If the device does not respond then press the F4 key for 6 seconds and then release to reset (see user's manual for more information).