TSLM-AI1

Tablet Signal Level Meter
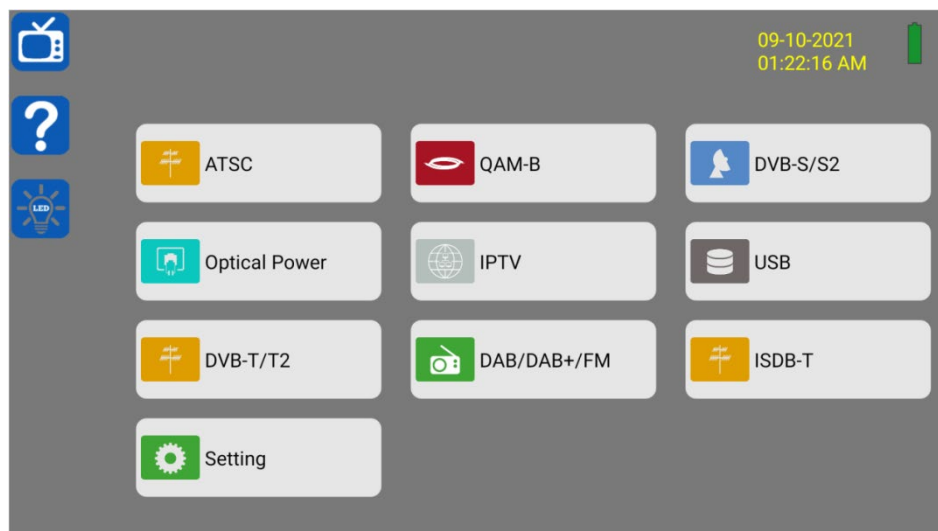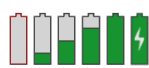## User manual

V :1223.3

Toner Cable Equipment Inc.   969 Horsham Rd. Horsham, PA 19044

T. 215 675 2053, 800 523 5947, info@tonercable.com, www.tonercable.com

1 Main Menu

- Switch on the meter. After booting, main menu appears. The menu consists of various submenus.

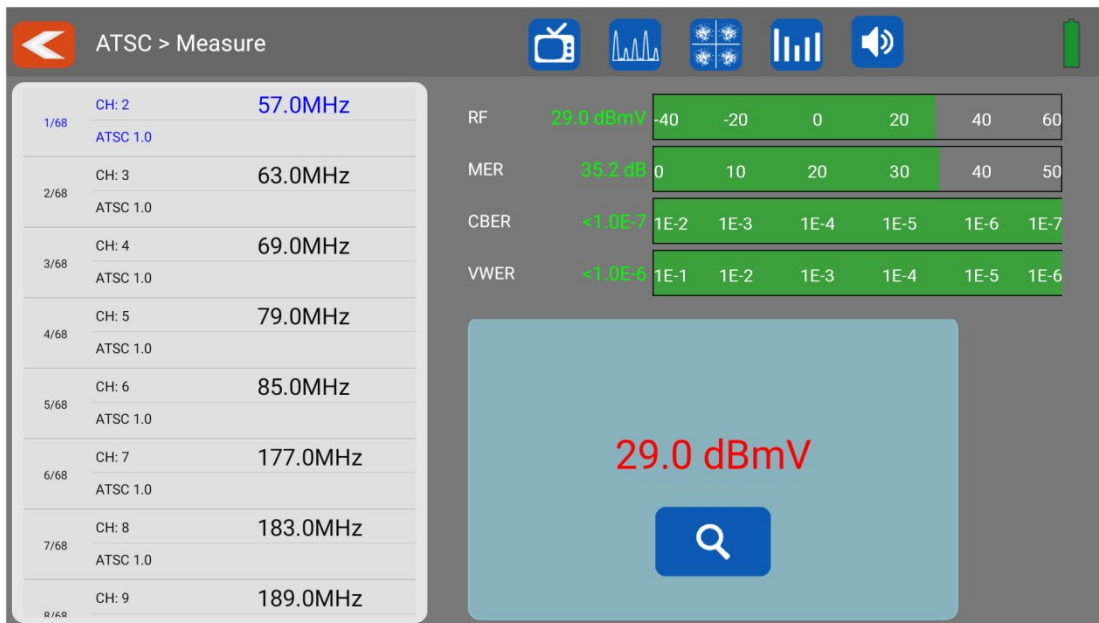- Tap directly on the items enter into sub-menus.

ATSC	Menus for ATSC signal search and analyze
QAM-B	Menus for QAM-B signal search and analyze
DVB-S/S2	Menus for DVB-S/S2 signal search and analyze
Optical Power	Menus for optical power measurement
IPTV	Menus for IPTV and network streams
USB	Menus for USB sticker
DVB-T/T2	Menus for DVB-T/T2 signal search and analyze
DAB/DAB+/FM	Menus for DAB/DAB+ and FM signal search and analyze
ISDB-T	Menus for ISDB-T signal search and analyze
Setting	Menu for basic settings on the meter
11-09-2021 01:22:16 AM	The current time in the meter
	Tap this icon to switch to the playback programme menu.(Live TV)
	Tap this symbol to display user manual
	Tap this symbol to switch on/off LED on the real of device
	The battery status of the meter

1.1 ATSC

1.1.1 ATSC Measurers both 8VSB & ATSC 3.0

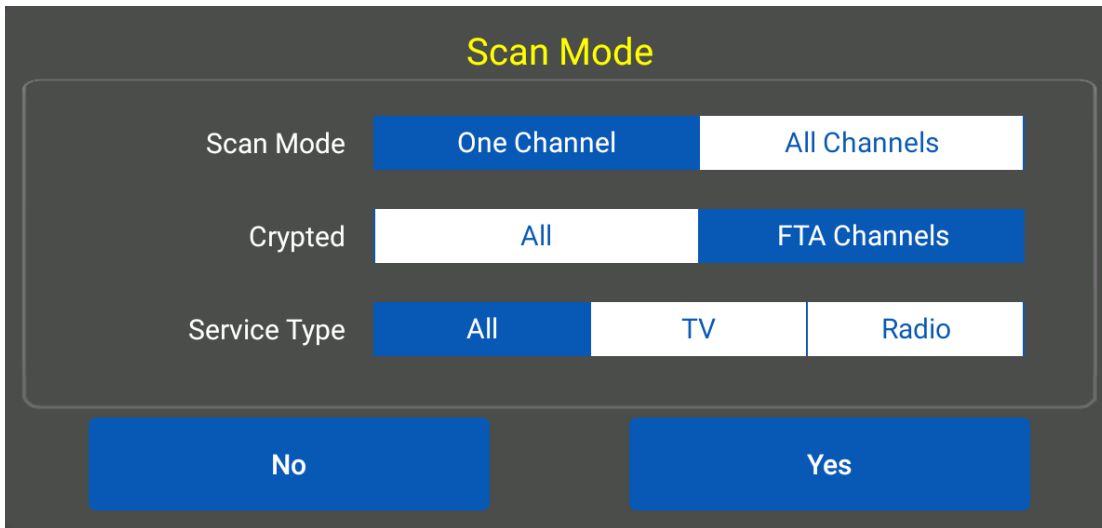**Note:** The meter will measure and identify ATSC3.0 but not play the content in the screen.

	Tap this symbol to exit current menu
	Tap this symbol to switch to the playback program menu. (Live TV)
	Tap this symbol to switch into spectrum menu for QAM-B
	Tap this symbol to switch into constellation menu for QAM-B
	Tap this symbol to switch into TP control menu for QAM-B
	Tap this symbol to tune on/off beep
	Tap this symbol to pop-up program scan config dialogue
	The battery status of the meter

All the available frequency channels for cable are listed on the left of screen. Tap frequency channel range to switch to it. The meter will try to lock and analyze the input signal.

NOTE: FTA is Free To Air channels, normal broadcast TV that is not scrambled
Tap Seach button to pop-up scan config dialogue.

Scan Mode

Scan Mode	**One Channel**	All Channels
Crypted	All	**FTA Channels**
Service Type	**All**	TV / Radio

No   **Yes**

Scan Mode:

- One Channel: Only scan programs of current selected frequency channel.

- All Channels: Scan programs of all available frequency channels.

Crypted:

- All: Scan and store all programs, both FTA programs and crypted programs.

- FTA Channels: Only scan and store FTA programs.

Service Type:

- All: Scan and store TV programs and Radio programs

- TV: Only scan an store TV programs

- Radio: Only scan Radio programs

Tap Yes button to confirm settings and start to scan programs.
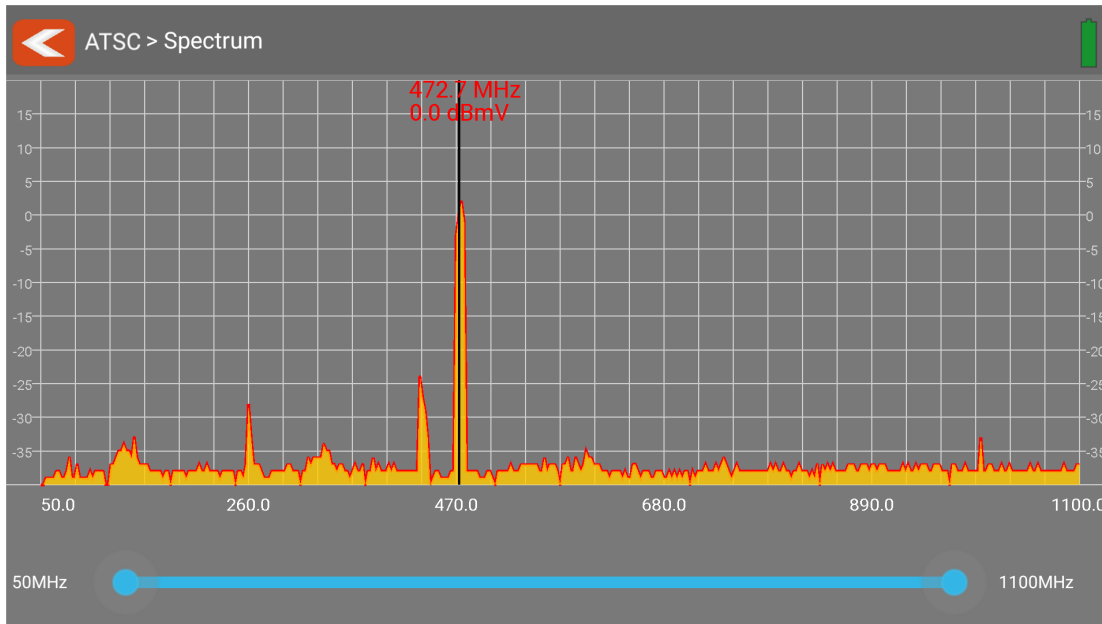Tap No button to exit.

Edit frequency channels

Tap and hold on frequency channels to pop-up edit dialogue.

Frequency(MHz)	57.0
Version	**1.0** 3.0

No   **Yes**
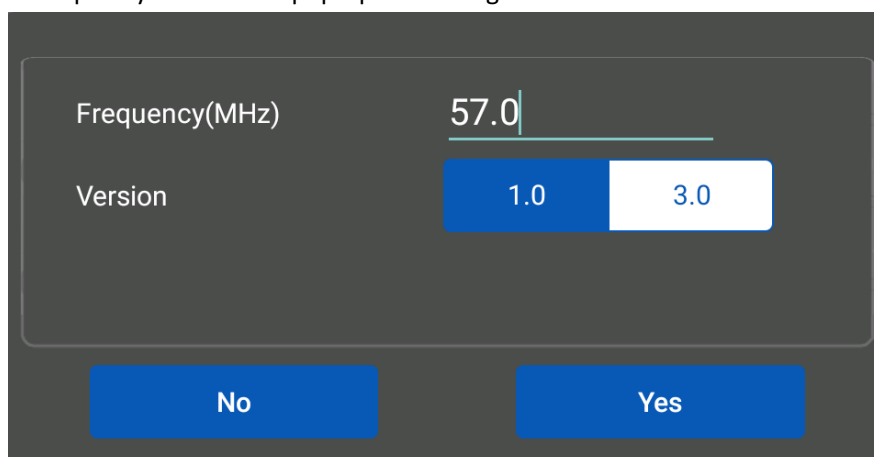
1.1.2 ATSC Spectrum

- The menu displays the spectrum chart of input signal.

- Tap in the spectrum chart to set current frequency.

- Tap or swipe on the IF frequency range setting bar on the bottom of screen to set spectrum frequency range. The input frequency range is 50MHz~1100MHz.

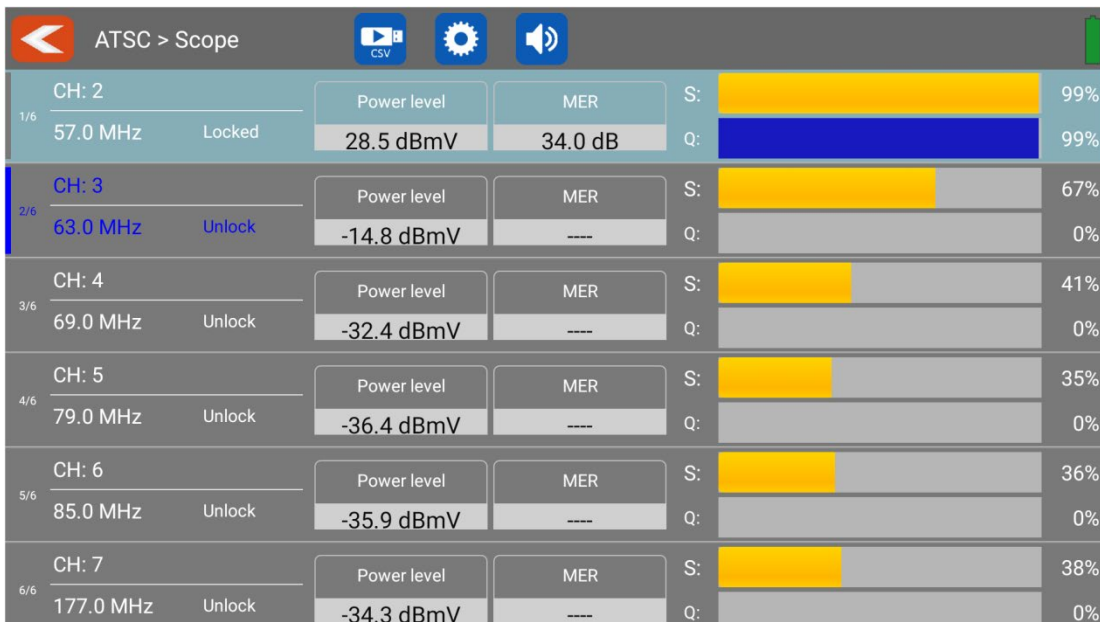|	
![back arrow icon]	Tap this symbol to exit current menu
OFF | 5 V | 12 V | 18 V | 24 V	Antenna power supply switch. Click and hold on (Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power output **NOTE; NOT USED IN TH USA**
472.7 MHz 0.0 dBmV	The current frequency and input power level of it. The meter displays the name of frequency channel if current frequency closes to it(+/- 2MHz)
![battery icon]	The battery status of the meter

1.1.3 ATSC Constellation

The menu shows the constellation chart of input signal if the current frequency channel is locked.

All the available frequency channels are listed on the left screen. Tap frequency channel range to switch to it.
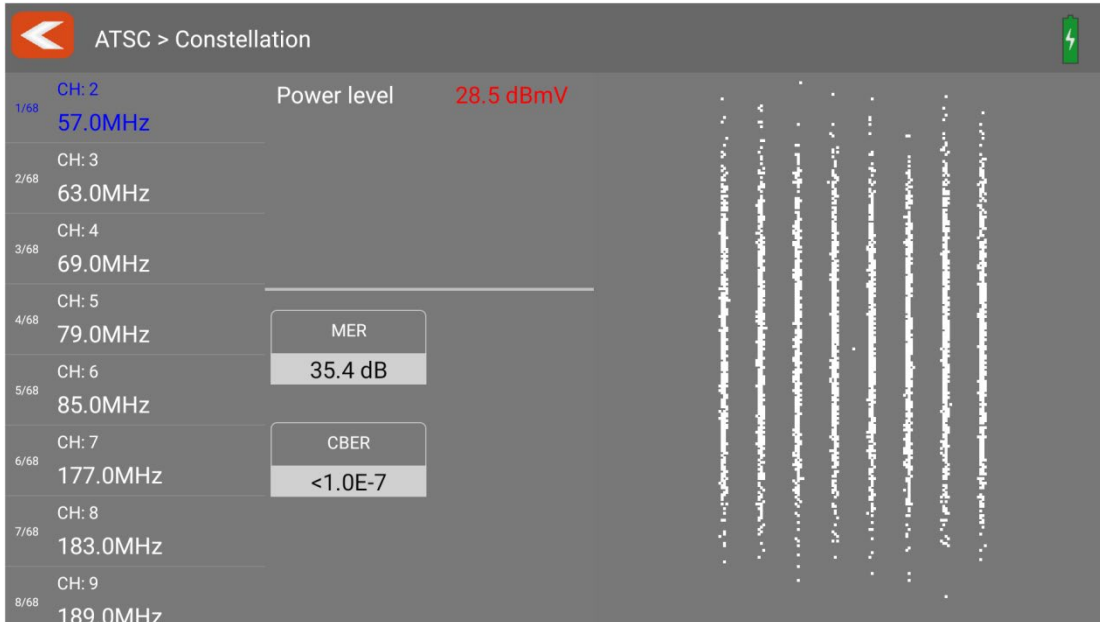
	Tap this symbol to exit current menu
	The battery status of the meter

1.1.4 ATSC Scope

The menu shows frequency channels` signal testing results on one screen. The meter will check channels one by one automatically.
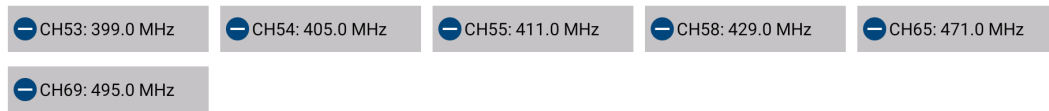

	Tap this symbol to exit current menu
	Tap this symbol to export test results data log of this menu as CSV format to USB stick

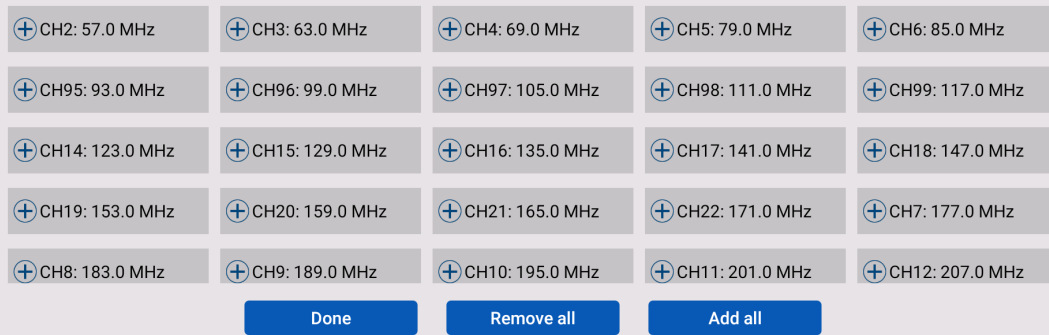|	
⚙	Tap this symbol to set all frequency channels for this menu in dialogue
🔊 🔇	Tap this symbol to tune on/off beep
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on(Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power out put
🔋	The battery status of the meter

Frequency channel setting dialogue:

Tap setting symbol to enter into frequency channel set dialogue.

The frequency channels in scope

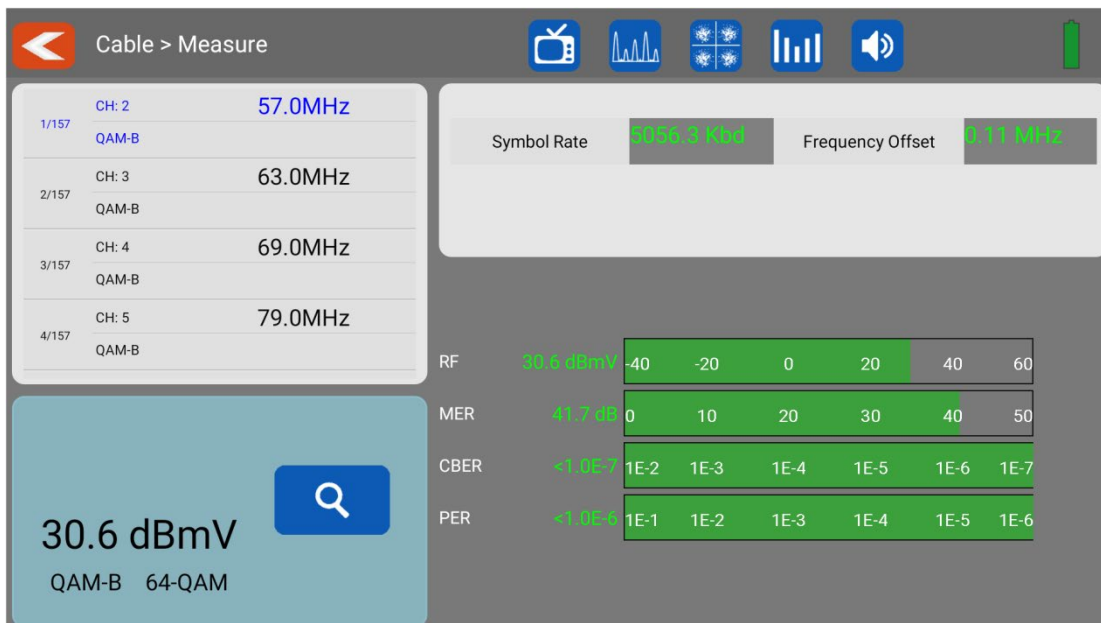|				
⊖ CH53: 399.0 MHz	⊖ CH54: 405.0 MHz	⊖ CH55: 411.0 MHz	⊖ CH58: 429.0 MHz	⊖ CH65: 471.0 MHz
⊖ CH69: 495.0 MHz				

The rest frequency channels

⊕ CH2: 57.0 MHz	⊕ CH3: 63.0 MHz	⊕ CH4: 69.0 MHz	⊕ CH5: 79.0 MHz	⊕ CH6: 85.0 MHz
⊕ CH95: 93.0 MHz	⊕ CH96: 99.0 MHz	⊕ CH97: 105.0 MHz	⊕ CH98: 111.0 MHz	⊕ CH99: 117.0 MHz
⊕ CH14: 123.0 MHz	⊕ CH15: 129.0 MHz	⊕ CH16: 135.0 MHz	⊕ CH17: 141.0 MHz	⊕ CH18: 147.0 MHz
⊕ CH19: 153.0 MHz	⊕ CH20: 159.0 MHz	⊕ CH21: 165.0 MHz	⊕ CH22: 171.0 MHz	⊕ CH7: 177.0 MHz
⊕ CH8: 183.0 MHz	⊕ CH9: 189.0 MHz	⊕ CH10: 195.0 MHz	⊕ CH11: 201.0 MHz	⊕ CH12: 207.0 MHz

Done   **Remove all**   **Add all**

- Tap any frequency channel in top of screen to remove it from scope frequency channel list.

- Tap any frequency channel in bottom of screen to add it to scope frequency channel list.

- Tap Done button to confirm and exit the dialogue.

- Tap Remove all button to remove all frequency channels from scope list.

- Tap Add all button to add all frequency channels to scope list.
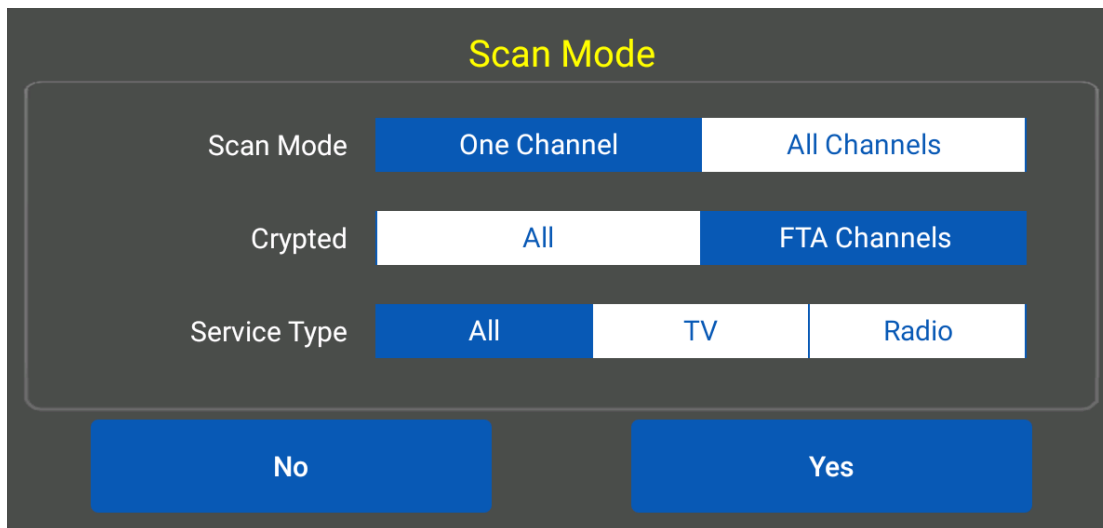
1.2 QAM-B (Cable TV Channels)

1.2.1 QAM-B Measure

	Tap this symbol to exit current menu
	Tap this symbol to switch to the playback program menu. (Live TV)
	Tap this symbol to switch into spectrum menu for QAM-B
	Tap this symbol to switch into constellation menu for QAM-B
	Tap this symbol to switch into TP control menu for QAM-B
	Tap this symbol to tune on/off beep
	Tap this symbol to pop-up program scan config dialogue
	The battery status of the meter

All the available frequency channels for cable are listed on the left of screen. Tap frequency channel range to switch to it. The meter will try to lock and analyze the input signal.

Tap Seach button to pop-up scan config dialogue.

Scan Mode

Scan Mode	One Channel	All Channels
Crypted	All	FTA Channels
Service Type	All	TV	Radio

No	Yes

Scan Mode:

- One Channel: Only scan programs of current selected frequency channel.

- All Channels: Scan programs of all available frequency channels.

Crypted:

- All: Scan and store all programs, both FTA programs and crypted programs.

- FTA Channels: Only scan and store FTA programs.
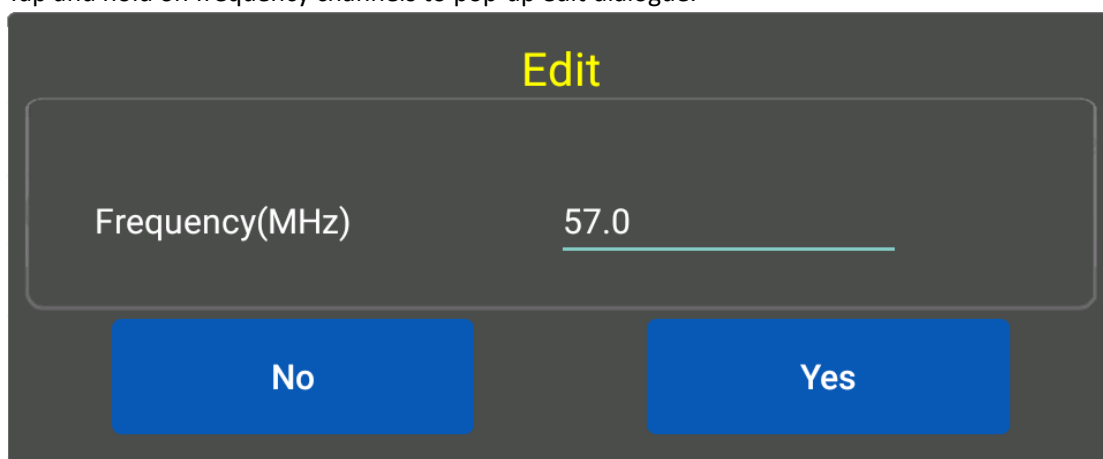
Service Type:

- All: Scan and store TV programs and Radio programs

- TV: Only scan an store TV programs

- Radio: Only scan Radio programs

Tap Yes button to confirm settings and start to scan programs.
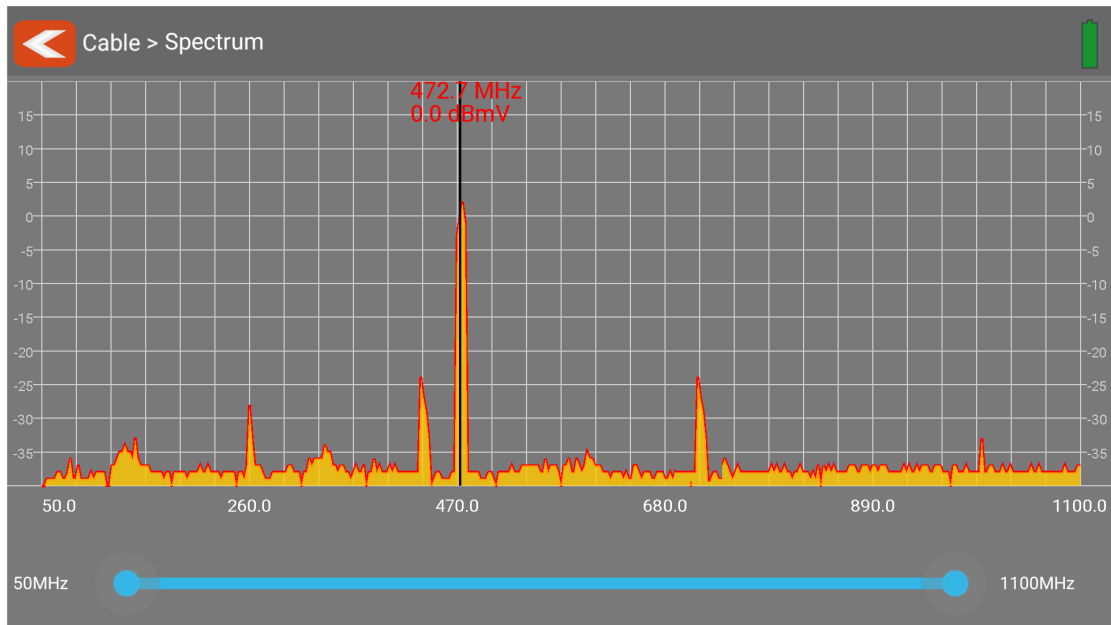Tap No button to exit.

Edit frequency channels
Tap and hold on frequency channels to pop-up edit dialogue.

Edit

Frequency(MHz)   57.0

No	Yes

1.2.2 QAM-B Spectrum

- The menu displays the spectrum chart of input signal.

- Tap in the spectrum chart to set current frequency.

- Tap or swipe on the IF frequency range setting bar on the bottom of screen to set spectrum frequency range. The input frequency range is 50MHz~1100MHz.

	Tap this symbot to exit current menu
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on(Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power out put
472.7 MHz 0.0 dBmV	The current frequency and input power level of it. The meter displays the name of frequency channel if current frequency closes to it (+/- 2MHz)
	The battery status of the meter

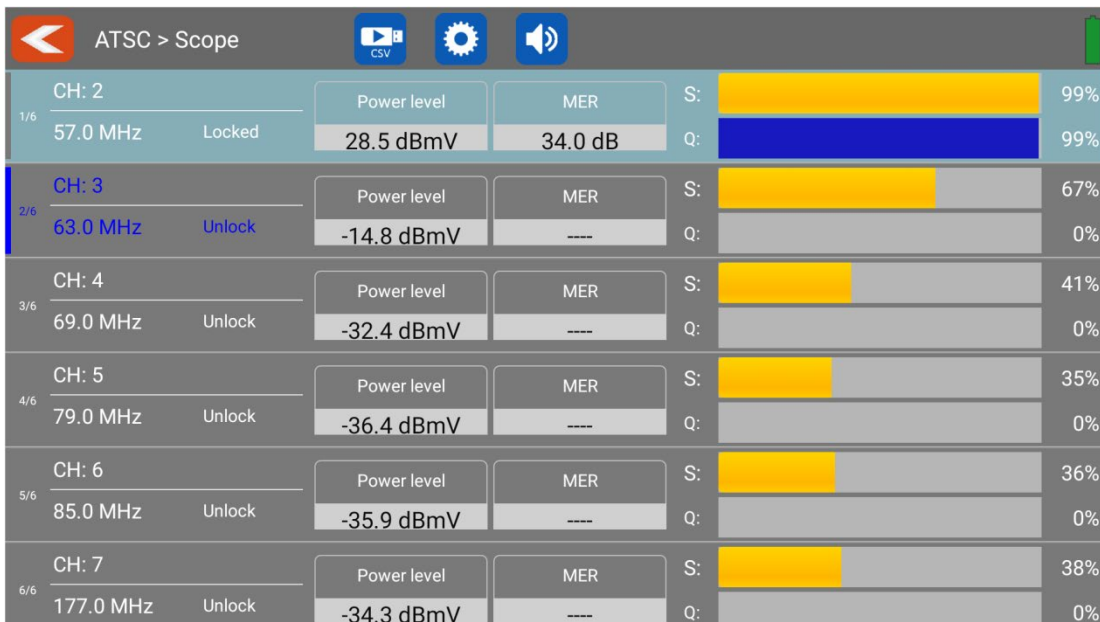### 1.2.3 QAM-B Constellation

The menu shows the constellation chart of input signal if the current frequency channel is locked.
All the available frequency channels are listed on the left screen. Tap frequency channel range to switch to it.

	Tap this symbol to exit current menu
	The battery status of the meter

1.2.4 QAM-B Scope

The menu shows frequency channels` signal testing results on one screen. The meter will check channels one by one automatically.
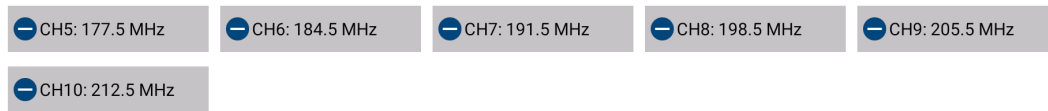

	Tap this symbol to exit current menu
	Tap this symbol to export test results data log of this menu as CSV format to USB sticker

⚙	Tap this symbol to set all frequency channels for this menu in dialogue
🔊 🔇	Tap this symbol to tune on/off beep
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on (Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power output **NOTE; Not used in the USA**
🔋	The battery status of the meter

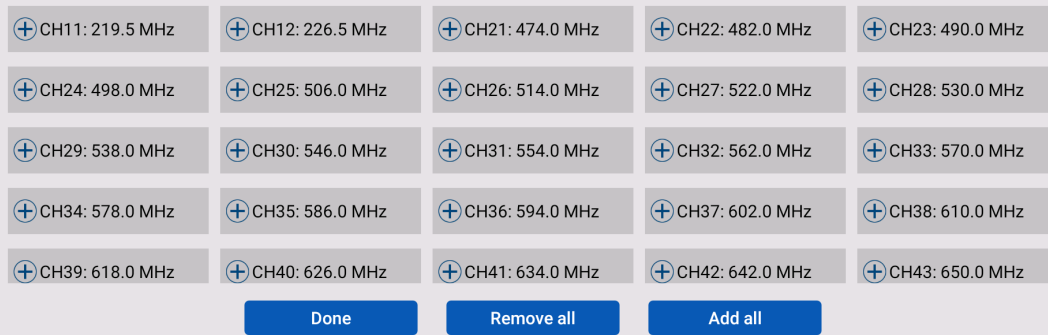**Frequency channel setting dialogue:**

Tap setting symbol to enter into frequency channel set dialogue.

The frequency channels in scope

⊖CH5: 177.5 MHz	⊖CH6: 184.5 MHz	⊖CH7: 191.5 MHz	⊖CH8: 198.5 MHz	⊖CH9: 205.5 MHz
⊖CH10: 212.5 MHz				

The rest frequency channels

⊕CH11: 219.5 MHz	⊕CH12: 226.5 MHz	⊕CH21: 474.0 MHz	⊕CH22: 482.0 MHz	⊕CH23: 490.0 MHz
⊕CH24: 498.0 MHz	⊕CH25: 506.0 MHz	⊕CH26: 514.0 MHz	⊕CH27: 522.0 MHz	⊕CH28: 530.0 MHz
⊕CH29: 538.0 MHz	⊕CH30: 546.0 MHz	⊕CH31: 554.0 MHz	⊕CH32: 562.0 MHz	⊕CH33: 570.0 MHz
⊕CH34: 578.0 MHz	⊕CH35: 586.0 MHz	⊕CH36: 594.0 MHz	⊕CH37: 602.0 MHz	⊕CH38: 610.0 MHz
⊕CH39: 618.0 MHz	⊕CH40: 626.0 MHz	⊕CH41: 634.0 MHz	⊕CH42: 642.0 MHz	⊕CH43: 650.0 MHz

Done **Remove all** **Add all**

- Tap any frequency channel in top of screen to remove it from scope frequency channel list.

- Tap any frequency channel in bottom of screen to add it to scope frequency channel list.

- Tap Done button to confirm and exit the dialogue.

- Tap Remove all button to remove all frequency channels from scope list.

- Tap Add all button to add all frequency channels to scope list.

1.3 DVB-S/S2 (Satellite)

1.3.1 Satellite Measurement

- All available satellites and the respective transponders are listed on the left side of the screen.

- Tap on the satellite area to switch to it. Hold on the satellite to open a pop-up dialogue. In this you can

edit the satellite (Satellite Antenna setup, Edit Satellite, Add Satellite and Delete Satellite).

● Tap on the transponder area to switch to it. Hold on the transponder to open a pop-up dialogue. In this you can edit the transponder (frequency, polarization and symbol rate).
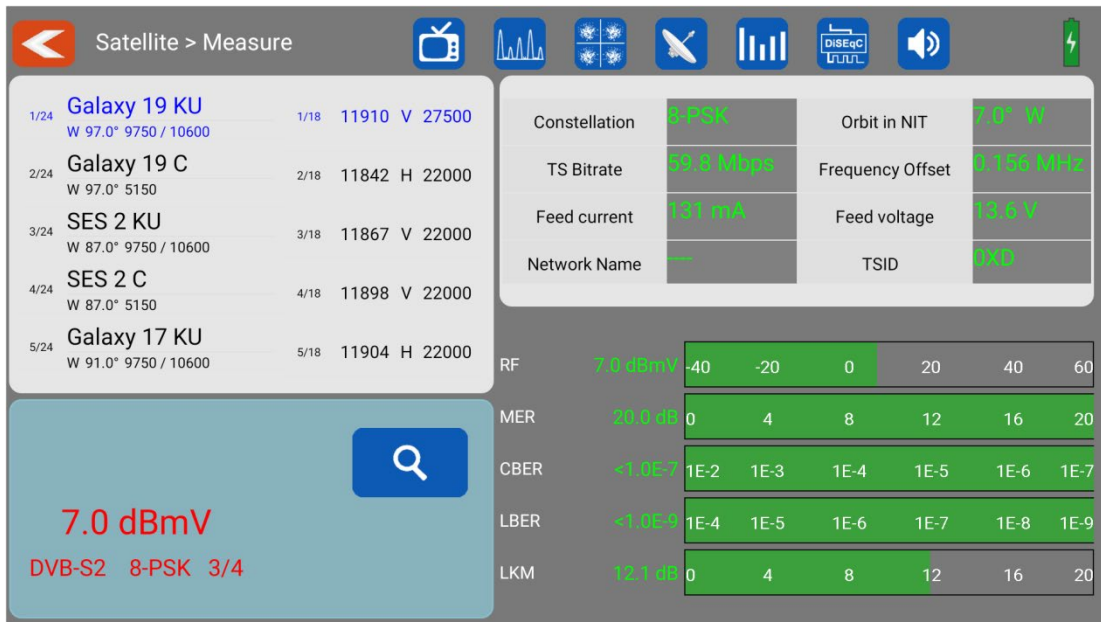
	Tap this symbol to exit current menu
	Tap this symbol to switch to the playback program menu. (Live TV)
	Tap this symbol to switch into spectrum menu for satellite
	Tap this symbol to switch into constellation menu for satellite
	Tap this symbol to switch into angle calculate menu for satellite
	Tap this symbol to switch into TP control menu for satellite
	Tap this symbol to switch into DiSEqC monitor menu NOTE DiSEqC is not normally used
	Tap this symbol to tune on/off beep
	Tap this symbol to pop-up program scan config dialogue

	The battery status of the meter

Scan configure dialogue:
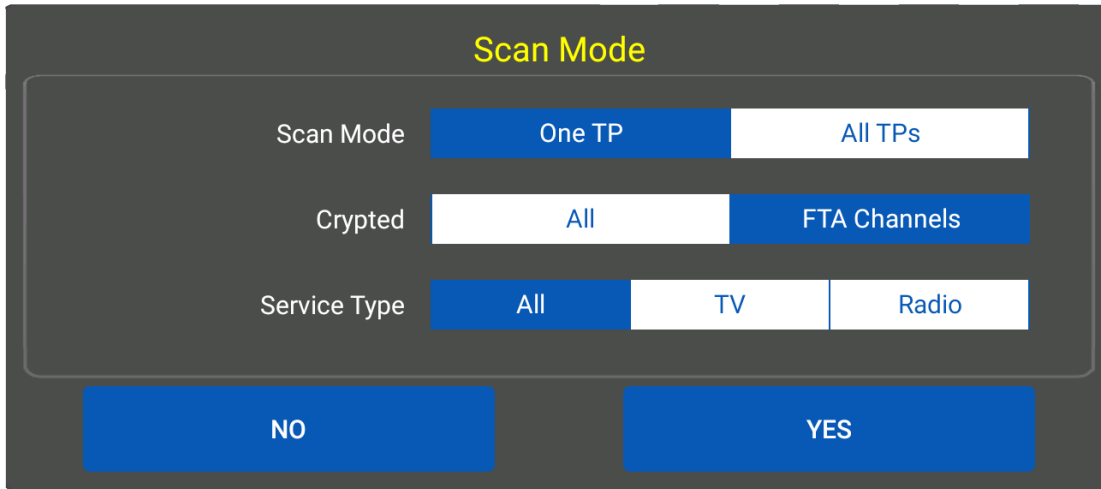
Scan Mode:

- One TP: Only scan program of current selected transponder;

- All TPs: Scan program of all transponders of current satellite;

Encrypted:

- All: Scan and save all program, both FTA and encrypted ones;
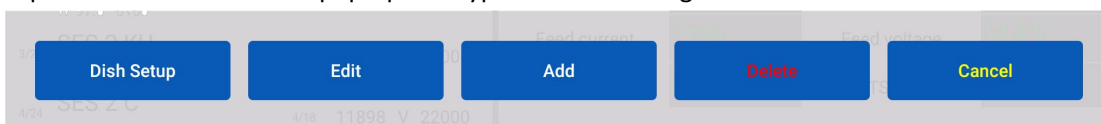
- FTA Channels: Only scan FTA programs

Service Type:

- All: Scan and save TV programs and Radio programs;

- TV: Only scan TV programs;

- Radio: Only scan Radio programs
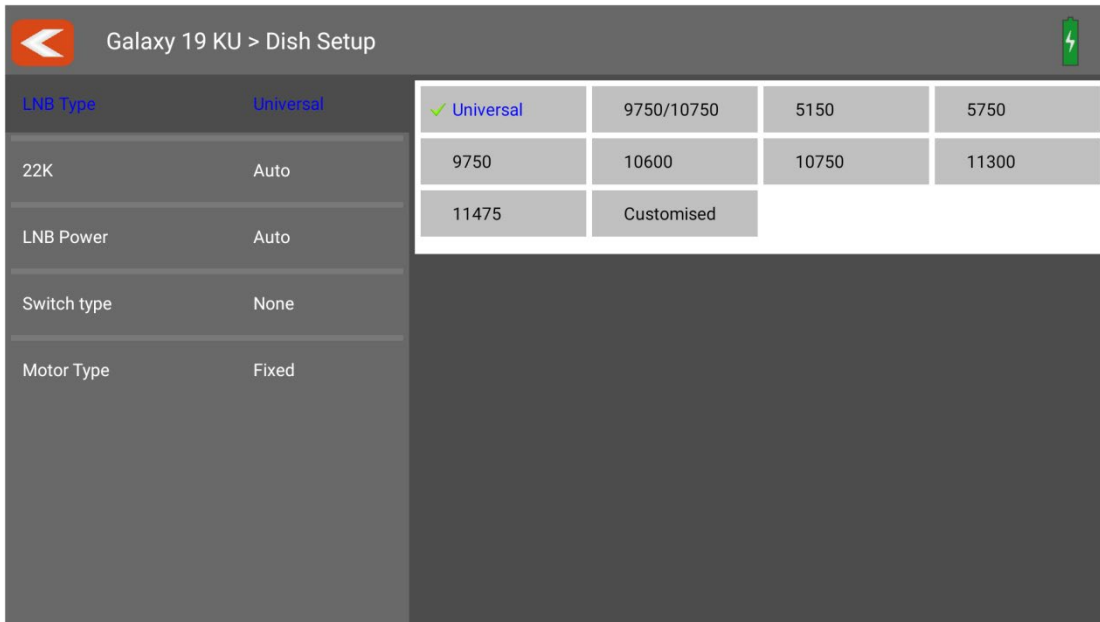
Scan results menu:

All the available programs display on the screen. Tap on each program to play it and switch to the playback program menu. (Live TV).

Tap and hold on satellite to pop-up edit type selection dialogue.

Satellite Antenna Setup:

Tap to enter into setup menu.

✓ Universal	9750/10750	5150	5750
9750	10600	10750	11300
11475	Customised		

LNB Type	Universal
22K	Auto
LNB Power	Auto
Switch type	None
Motor Type	Fixed

LNB Type:

Tap this range to show all LNB types on the right of screen. Then tap each value to set. User need to input LO high and LO low value manually if customized is selected.

Universal	9750/10750	5150	5750
9750	10600	10750	11300
11475	✓ Customised		

LNB Low	9750
LNB High	10600

Confirm

22K:

Tap this range to show 22K setting values on the right of screen. Tap each value to set.

On	Off	✓ Auto

LNB Power:

Tap this range to show antenna power supply values on the right of screen. Tap each value to set.

13V	18V	Off	✓ Auto

Switch Type:

Note: DiSEqC, SCR and SCD2 are not used in the US.

User can select all kinds of switch type and respective values.

None ✓	DisEqc1.0	DisEqc1.1	DisEqc1.2
SCR_port_A	SCR_port_B	SCD2_port_A	SCD2_port_B
SCD2_port_C	SCD2_port_D		

DiSEqC1.2 and USALS:

Note: DiSEqC and USALS are not used in the US.

DiSEqC 1.2 menu as below

These menus are in this manual for our European customers

	Tap this symbol to exit current menu
	The battery status of the meter
Move to East	Tap this symbol to send move to east DiSEqC command
Move to West	Tap this symbol to send move to west DiSEqC command
Stop	Tap this symbol to send stop moving DiSEqC command
Set East Limit	Tap this symbol to send limitation to move to east DiSEqC command
Set West Limit	Tap this symbol to send limitation to move to west DiSEqC command
Disable Limits	Tap this symbol to send disable all move limitation DiSEqC command
Move to Center	Tap this symbol to send move to center DiSEqC command
Goto Position	Tap this symbol to send goto position DiSEqC command
Store Position	Tap this symbol to send store current position DiSEqC command

The USALS menu as below:

	Tap this symbol to exit current menu

	The battery status of the meter
Move to East	Tap this symbol to send move to east DiSEqC command
Move to West	Tap this symbol to send move to west DiSEqC command
Stop	Tap this symbol to send stop moving DiSEqC command
Set East Limit	Tap this symbol to send limitation to move to east DiSEqC command
Set West Limit	Tap this symbol to send limitation to move to west DiSEqC command
Disable Limits	Tap this symbol to send disable all move limitation DiSEqC command
Move to Center	Tap this symbol to send move to center DiSEqC command
Goto Position	Tap this symbol to send go to position DiSEqC command

Tap Local position to set field test current local position. User can choose in the city list directly. User also can set longitude and latitude manually.

Edit Satellite:
Tap EDIT button to pop-up dialogue to edit satellite parameters. Such as name and position
Add:
Tap to pop-up dialogue to add a new satellite.
Delete:
Tap to delete current satellite and also all the programs of the satellite
Cancel:
Tap to exit this dialogue

Tap and hold on transponder to pop-up edit type selection dialogue.

1.3.2 Satellite spectrum
- The menu displays the spectrum chart of input signal.

- Tap in the spectrum chart to set current frequency.

- Tap or swipe on the IF frequency range setting bar on the bottom of screen to set spectrum frequency range.

	Tap this symbol to exit current menu
13 V 18 V	LNB power supply switch. Tap to switch between 13V and 18V for LNB power
22K On 22K Off	LNB 22K switch. Tap to switch between 22K on and 22K off
LO: 10600	LNB LO setting button. Tap it to pop-up LO setting dialogue. The frequency range which displays in spectrum chart depends on the LO setting value. The frequency range set to IF LO set to NONE
DiSEqC1.0: None	LNB switch setting button. Tap it to pop-up switch setting dialogue
	The battery status of the meter

1.3.3 Satellite Constellation

The menu shows the constellation chart of input signal if the current transponder is locked.

All the transponders of current satellite are listed on the left screen. Tap transponder area to switch to it.
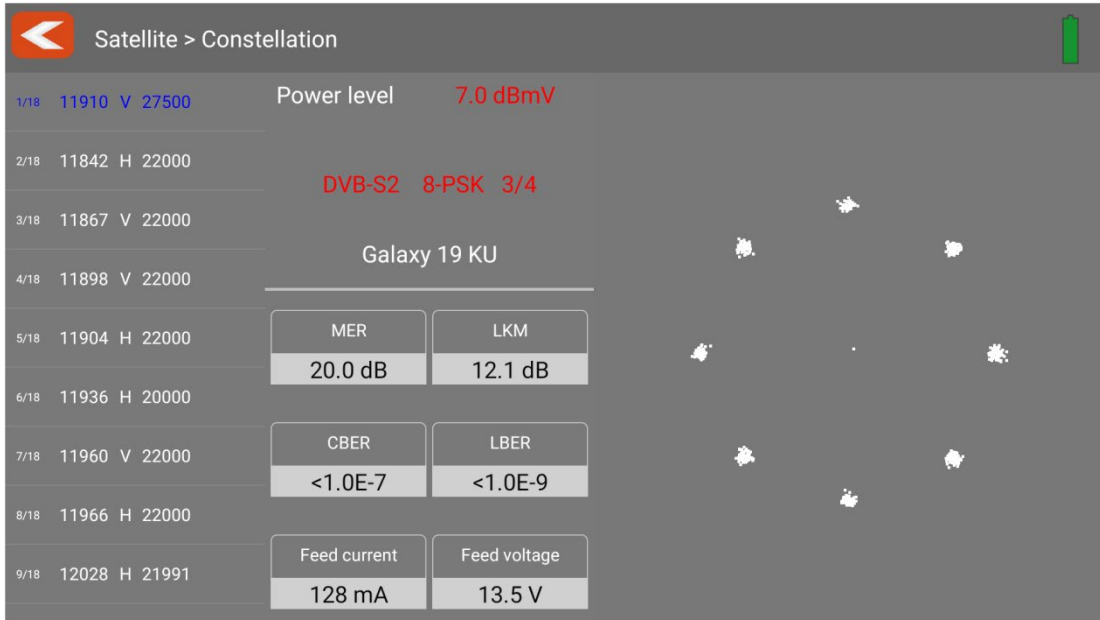
	Tap this symbol to exit current menu
	The battery status of the meter

1.3.4 Angle Calculate

The menu calculates the right azimuth and elevation of antenna according to the satellite orbit and testing local longitude and latitude.

All the stored satellites in the meter are listed on the left of screen. Tap satellite area to switch to it.
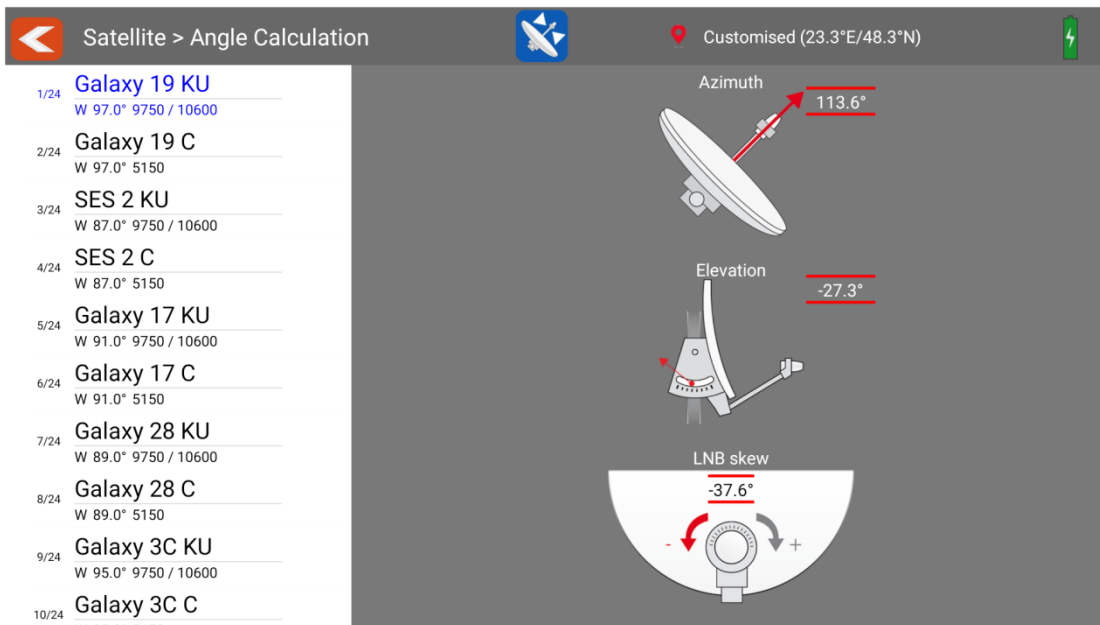
Tap to enter into LNB position alignment monitor menu. Align the meter to monitor the whole progress of antenna installation to help antenna installers to find out the right azimuth and elevation.

12.10°
97.20°

29.92°

168.51°

Astra 19.2E

N
330°   30°
300°   60°
270°   90°
240°   120°
210°   150°
180°
168.51°

29.92°

Azimuth: 127.30°   Elevation: 17.40°
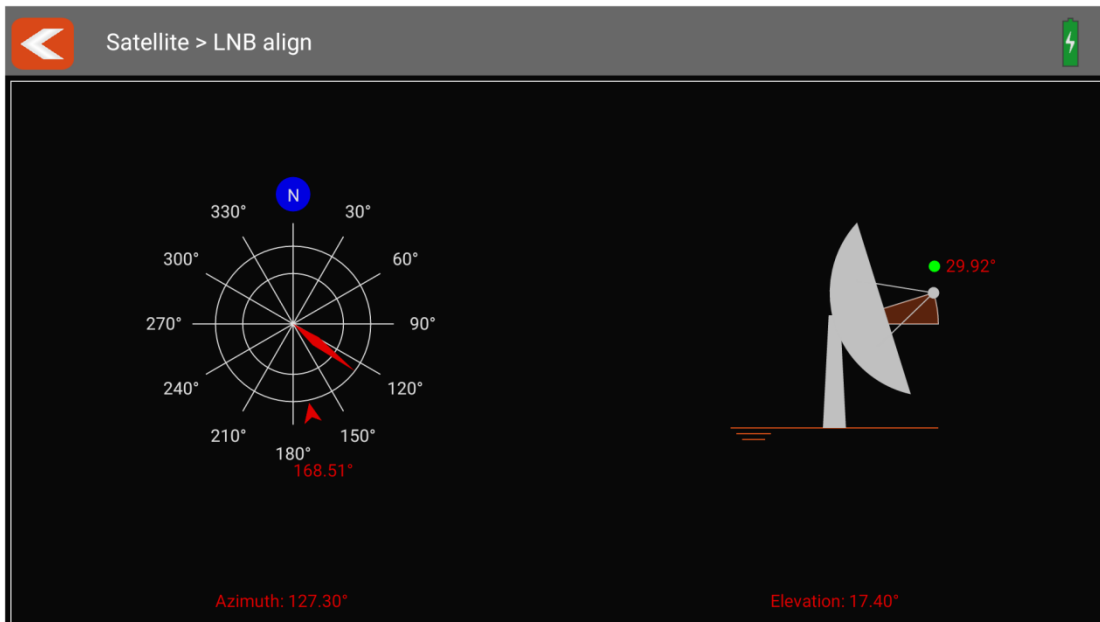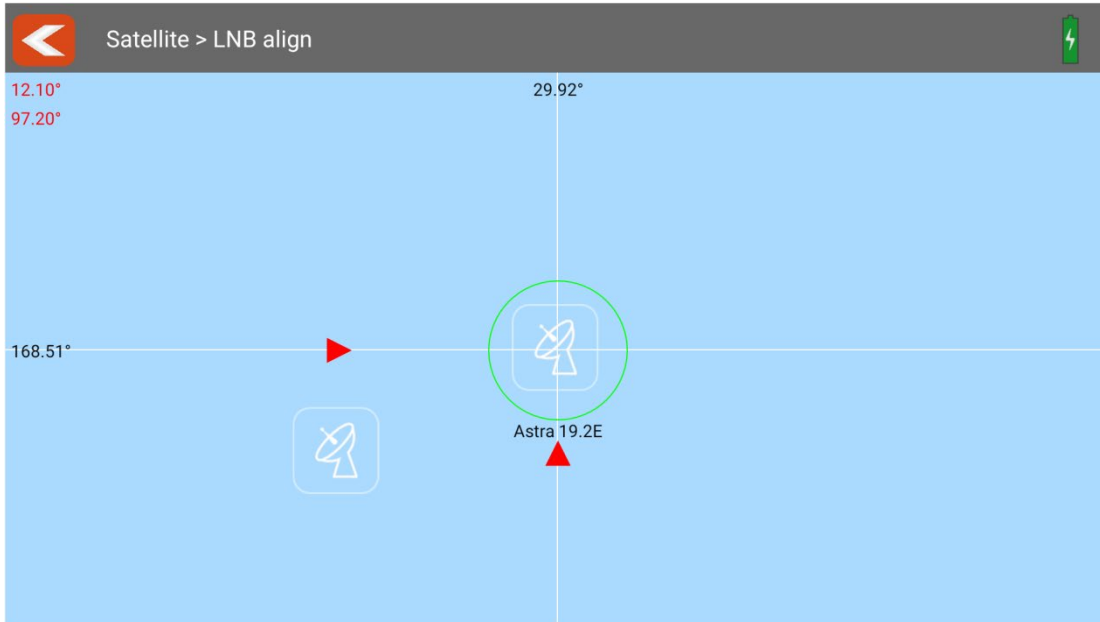
Local Position

Tap it to enter into local position dialog. User can select local city to get latitude and longitude directly. And also customized according to local latitude and longitude.

| Customised (23.3°E/48.3°N)	Aberdeen (2.0°W/57.0°N)	Adelaide (138.5°E/34.9°S)	Algiers (3.0°E/36.9°N)	Amsterdam (4.9°E/52.3°N)	Ankara (32.9°E/39.9°N)
Asuncion (57.7°W/25.1°S)	Athens (23.7°E/37.9°N)	Auckland (174.7°E/36.9°S)	Bangkok (100.5°E/13.7°N)	Barcelona (2.0°E/41.3°N)	Beijing (116.3°E/39.9°N)
Belem (48.3°W/1.3°S)	Belfast (5.9°W/54.5°N)	Belgrade (20.5°E/44.9°N)	Berlin (13.3°E/52.5°N)	Birmingham (1.9°W/52.3°N)	Bogoto (74.1°W/4.5°N)
Bombay (72.7°E/19.0°N)	Bordeaux (0.5°W/44.9°N)	Bremen (8.7°E/53.0°N)	Brisbane (153.0°E/27.3°S)	Bristol (2.5°W/51.3°N)	Brussels (4.3°E/50.9°N)
Bucharest (26.0°E/44.3°N)	Budapest (19.0°E/47.5°N)	BuenosAires (58.3°W/34.5°S)	Cairo (31.3°E/30.0°N)	Calcutta (88.3°E/22.5°N)	Canton (113.1°E/23.0°N)

Local Longitude	23.3	**EAST**	WEST
Local Latitude	48.3	SOUTH	**NORTH**

Done

1.3.5 Transponder Control

- The menu shows 4 transponders testing results on one screen. It shows the signal level and MER as progress bar. It is very useful to help find out the right position of antenna during installation progress.

- Tap the transponder area directly to change transponder.
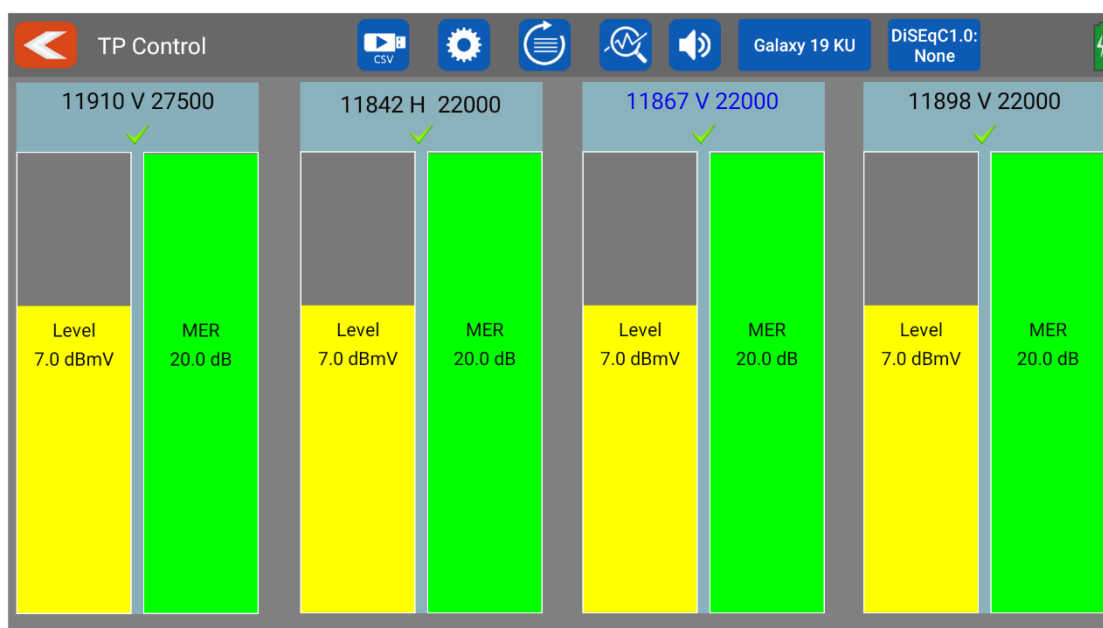
	Tap this symbol to exit current menu
	Tap this symbol to export test results data log of this menu as CSV format to USB sticker
	Tap this symbol to set all transponders for this menu in transponder

22

	setting dialogue
	Tap this symbol to switch stop and run status of the menu
	Tap this symbol to pop-up NIT information dialogue. The meter tries to get satellite orbit and ONID from NIT if any transponders locks the signal
	Tap this symbol to tune on/off beep
Galaxy 19 KU	The button of current satellite, tap to select satellite for this menu in dialogue
DiSEqC1.0: None	The LNB switch button, tap to set LNB switch parameters in dialogue
	The battery status of the meter

Transponder setting dialogue:

The transponders in scope

⊖ 10714 H 22000	⊖ 10743 H 22000	⊖ 11778 V 29500	⊖ 11797 H 27500

The rest transponders

⊕ 10729 V 22000	⊕ 10758 V 22000	⊕ 10773 H 22000	⊕ 10788 V 22000	⊕ 10802 H 22000
⊕ 10817 V 22000	⊕ 10832 H 22000	⊕ 10847 V 22000	⊕ 10861 H 23500	⊕ 10876 V 22000
⊕ 10891 H 22000	⊕ 10906 V 22000	⊕ 10920 H 22000	⊕ 10935 V 22000	⊕ 10964 H 22000
⊕ 10979 V 22000	⊕ 10993 H 22000	⊕ 11008 V 22000	⊕ 11023 H 23500	⊕ 11038 V 22000
⊕ 11052 H 22000	⊕ 11067 V 22000	⊕ 11082 H 22000	⊕ 11097 V 22000	⊕ 11111 H 22000

Done   **Remove all**

● Tap each transponder in the top of screen area to delete it from TP control menu.

● Tap each transponder in the bottom of screen area to add it to TP control menu.

● Tap Remove all button to remove all transponder from the top of screen area.

● Tap Done button to confirm and exit this dialogue.

Satellite setting dialogue:

Galaxy 19 KU	Galaxy 19 C	SES 2 KU	SES 2 C	Galaxy 17 KU
Galaxy 17 C	Galaxy 28 KU	Galaxy 28 C	Galaxy 3C KU	Galaxy 3C C
Galaxy 16 KU	Galaxy 16 C	SES 3 KU	SES 3 C	AMC 15 KU
AMC 15 C	Eutelsat 113 KU	Eutelsat 113 C	Eutelsat 117 KU	Eutelsat 117 C
Galaxy 18	AMC 21 KU	AMC 21 C	EchoStar 16	

This dialogue lists all available satellites which store in the meter. Tap any satellite to switch current satellite to it and exit the dialogue.

Nit information dialogue:

This dialogue displays ONID and satellite orbit from NIT of live stream if any transponder locks the signal. Tap Cancel button to exit this dialogue.

Try to get satellite orbit in NIT

ONID: 0X800   Orbit Position 7.0° W

Cancel
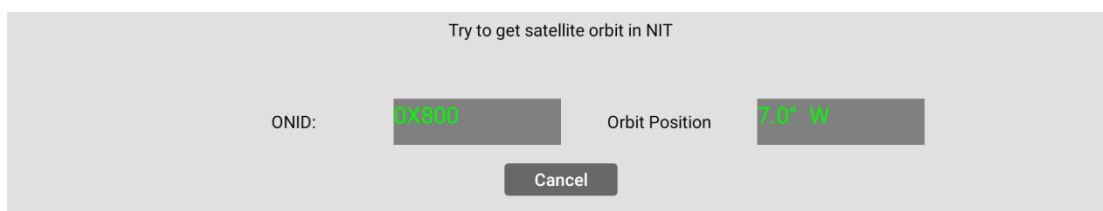
LNB switch dialogue:

None	DisEqc1.0	DisEqc1.1	✓ DisEqc1.2 Position 14	SCR_port_A	SCR_port_B	SCD2_port_A
SCD2_port_B	SCD2_port_C	SCD2_port_D				

Position 1	Position 2	Position 3	Position 4	Position 5	Position 6	Position 7
Position 8	Position 9	Position 10	Position 11	Position 12	Position 13	✓ Position 14
Position 15	Position 16					

Confirm

User can set LNB switch parameters in this dialogue. Such as switch type, port (User Band) and frequency of user band.
Tap Confirm button to confirm settings and exit this dialogue.

This is left in the manual for our European customers, DiSEqC is not used in the US

1.3.6 DiSEqC Monitor

This menu displays the input antenna power supply value, 22K status and DiSEqC command of other satellite meter. Please connect other satellite meter to this combo meter with cable line before enter into this menu.
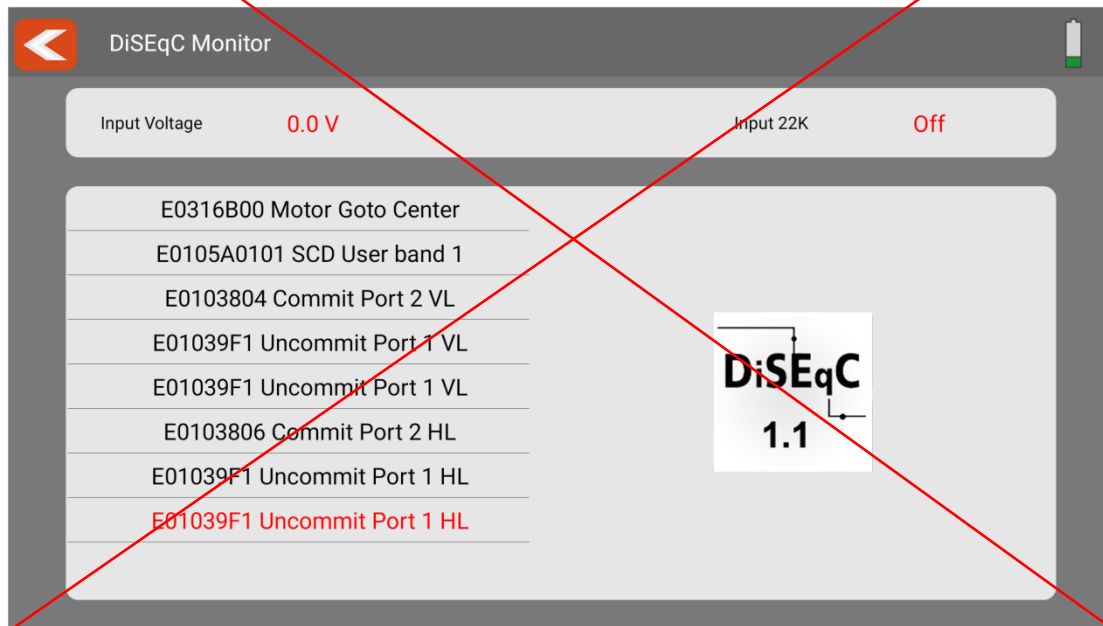
1.4 Optical Power

In this menu, user can test optical power. The meter displays the last 14 times testing results in one screen.
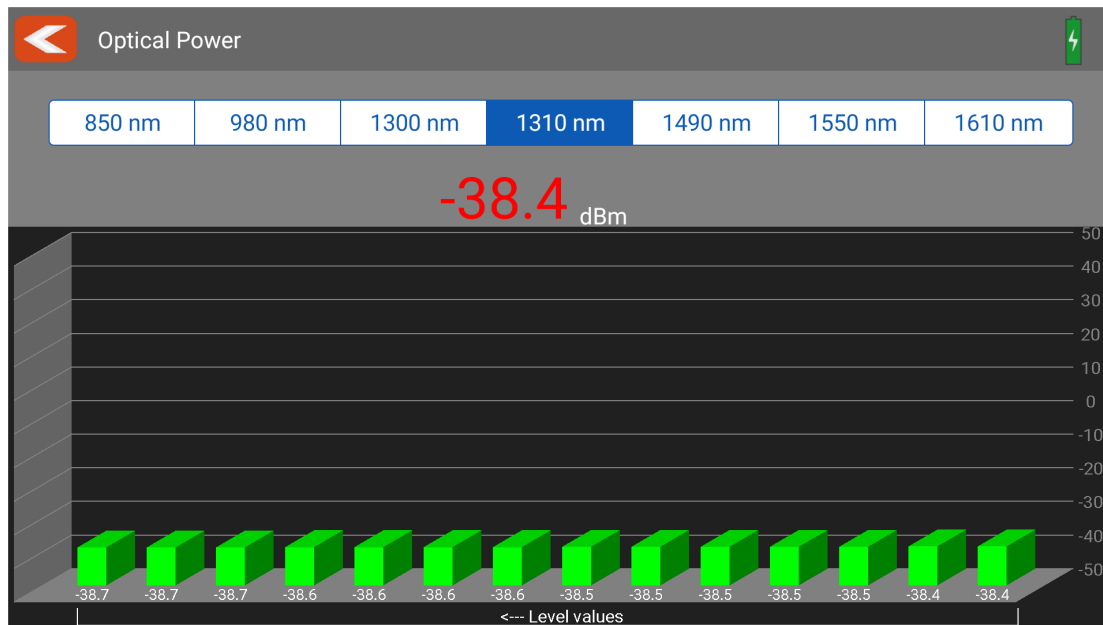
1.5 IPTV

In this menu, user can play IPTV, network streams, video and audio. User can see hints on screen for each function during the first time to use.
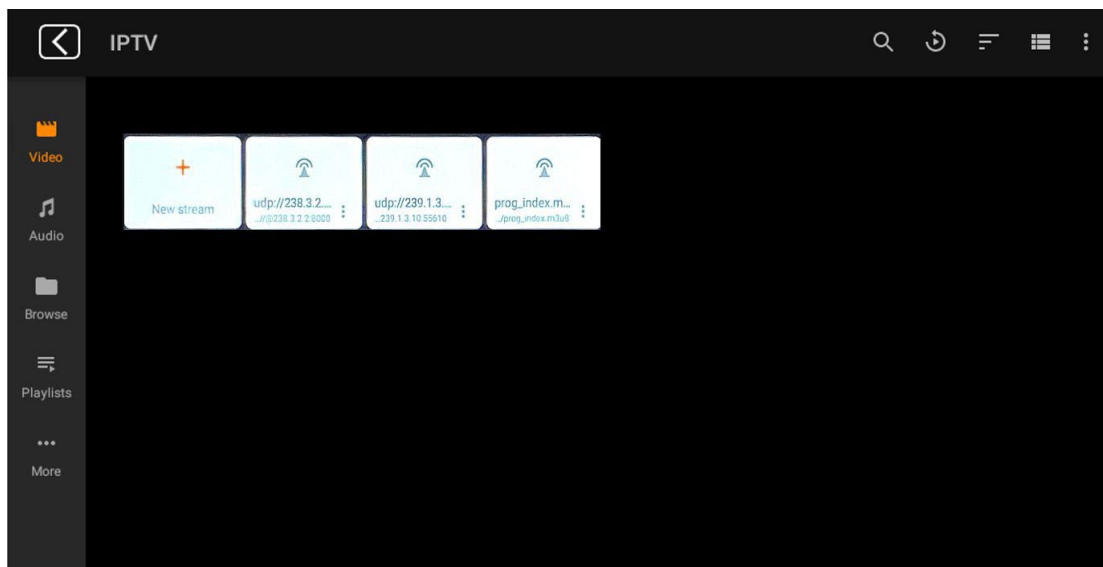
	Tap this symbol to exit current menu
Video	Tap this symbol to scan and show all available videos in memory
Audio	Tap this symbol to scan and show all available audios in memory
Browse	Tap this symbol to scan and show all available files in memory
Playlists	Tap this symbol to show play lists
More	Tap this symbol to add network streams and IPTVs.

1.6 USB

This menu list all supported and available files in meter and USB sticker.

Tap device name in device list to enter into device folder.
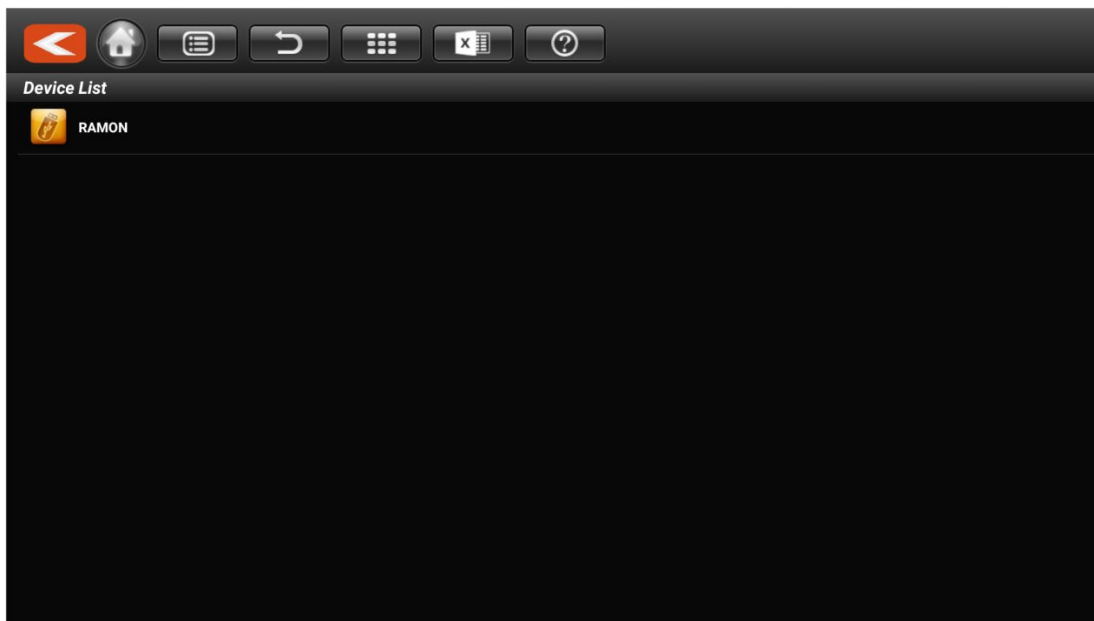
	Tap this symbol to exit current menu
	Tap this symbol to back to device list
	Tap this symbol to previous folder
	Tap this symbol to export satellites and programs data to current folder. The name as Combo_Meter_Database+date+time.xls

	Tap this symbol to pop-up help dialogue

How to import satellites and programs:

1. The file name must include "Combo_Meter_Database"

2. The file type must be xls

3. The file content format must same as exported ones

4. Tap the file name in file list to export into meter

How to make screenshot:

1. Screenshot saves in USB sticker only. The function will be available once USB sticker works

2. Press POWER button to make screenshot

3. Screenshot saves under Combo_Meter folder as png

4. Tap png name to preview it on meter

1.7 DVB-T/T2(Terrestrial)

NOTE: DVB-T/T2 is for European off air Broadcast channels and not used in the US

1.7.1 Terrestrial Measure

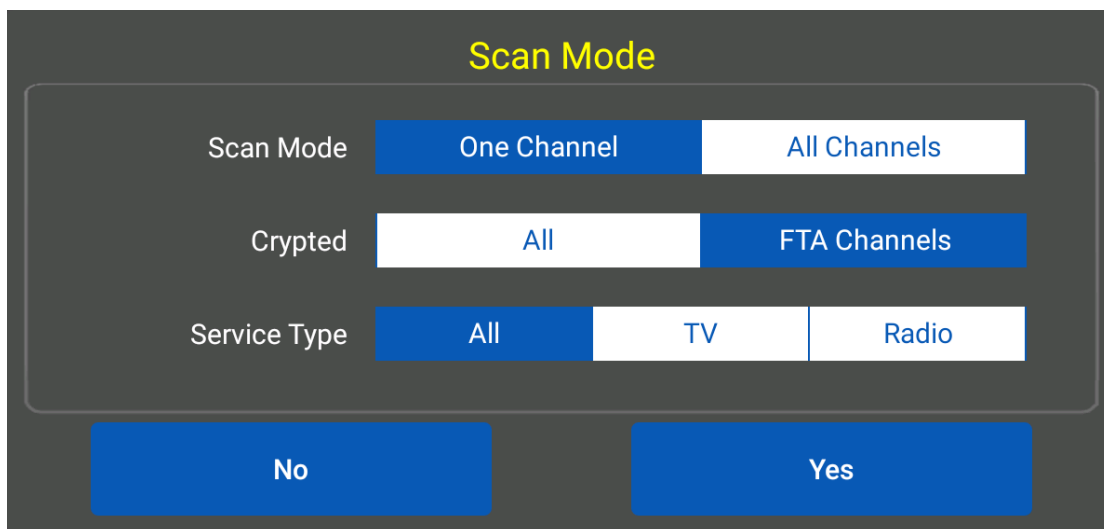|	
	Tap this symbol to exit current menu
	Tap this symbol to switch to the playback program menu. (Live TV)
	Tap this symbol to switch into spectrum menu for terrestrial

	Tap this symbol to switch into constellation menu for terrestrial
	Tap this symbol to switch into scope menu for terrestrial
	Tap this symbol to switch into echo menu for terrestrial
	Tap this symbol to tune on/off beep
	Tap this symbol to pop-up program scan config dialogue
	The battery status of the meter
0V	Click and hold on (Long click) this symbol to tune off antenna power supply
5V	Click and hold on (Long click) this symbol to output 5V to antenna
12V	Click and hold on (Long click) this symbol to output 12V to antenna
18V	Click and hold on (Long click) this symbol to output 18V to antenna
24V	Click and hold on (Long click) this symbol to output 24V to antenna

Tap frequency channel range to switch to it. The meter will try to lock and analyze the input signal.
Tap Seach button to pop-up scan config dialogue.

Scan Mode

Scan Mode	One Channel	All Channels
Crypted	All	FTA Channels
Service Type	All	TV	Radio

No	Yes

Scan Mode:

- One Channel: Only scan programs of current selected frequency channel.

- All Channels: Scan programs of all available frequency channels.

Crypted:

- All: Scan and store all programs, both FTA programs and crypted programs.

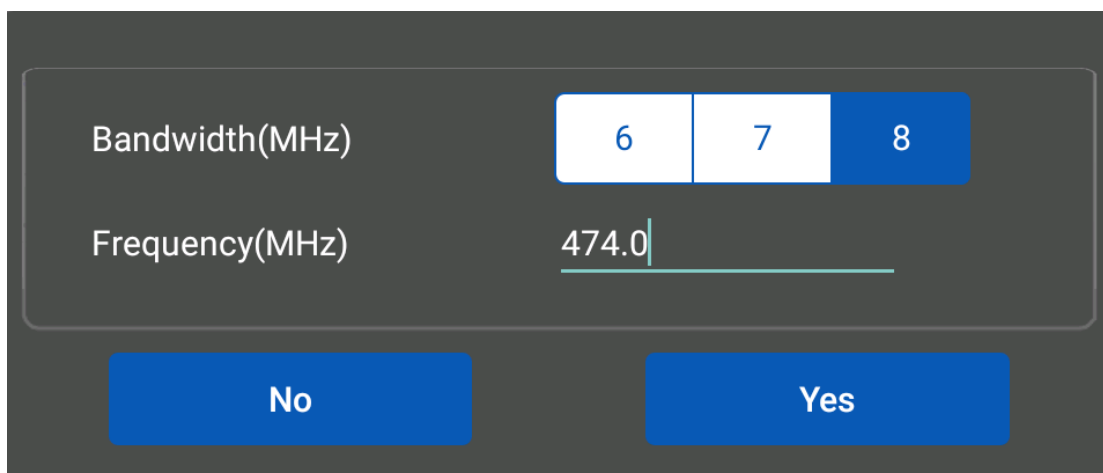- FTA Channels: Only scan and store FTA programs.

Service Type:

- All: Scan and store TV programs and Radio programs

- TV: Only scan an store TV programs

- Radio: Only scan Radio programs

Tap Yes button to confirm settings and start to scan programs.
Tap the No button to exit.

Edit frequency channels:
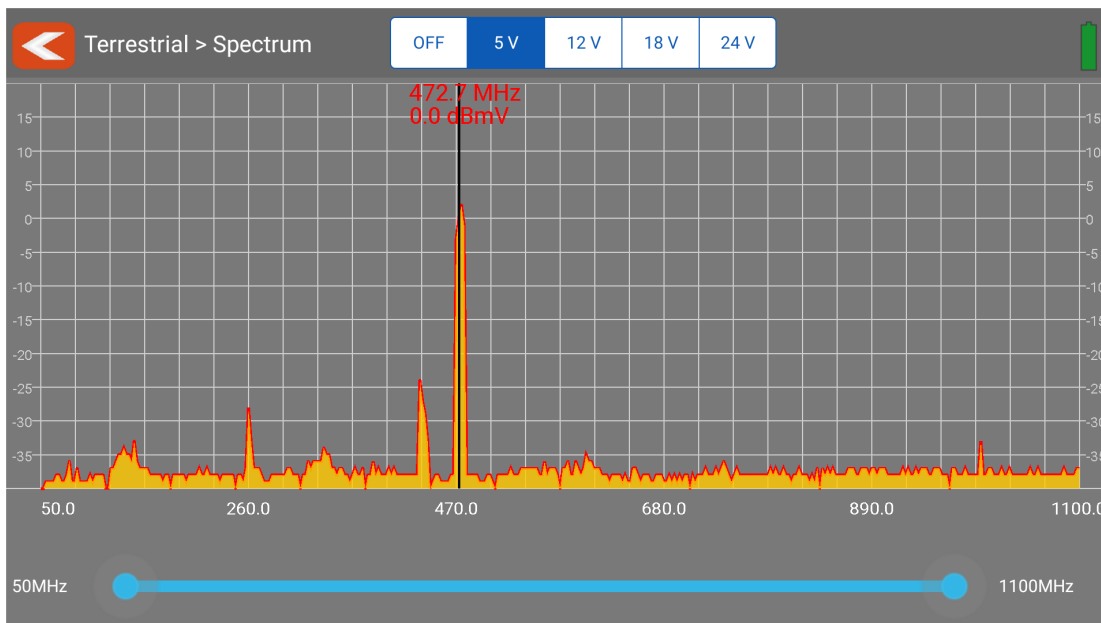Tap and hold on frequency channels to pop-up edit dialogue.
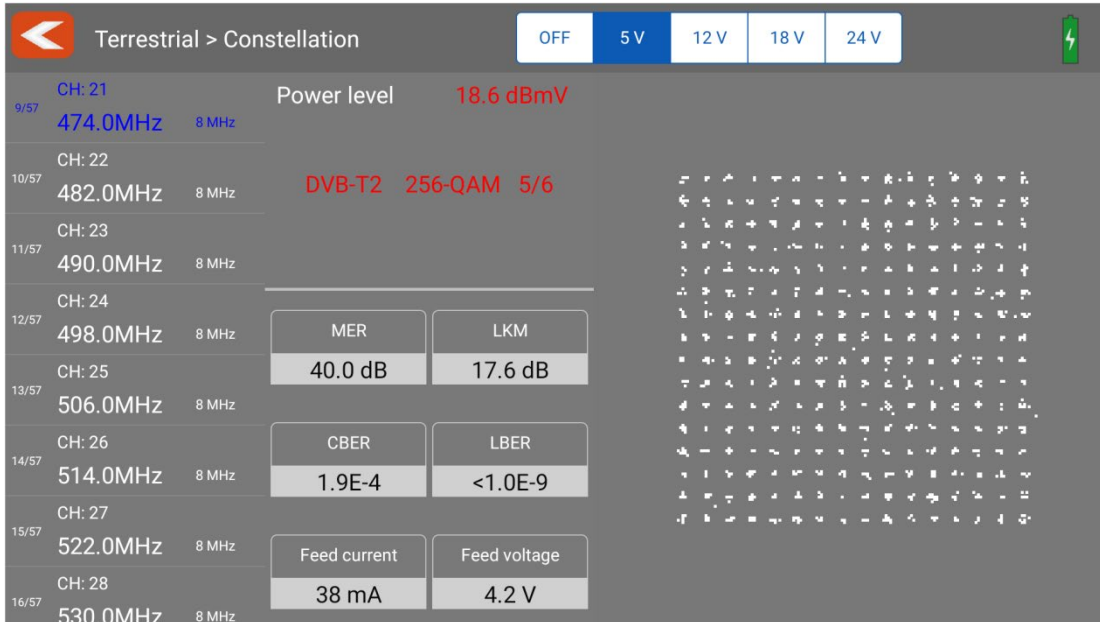

1.7.2 Terrestrial Spectrum

- The menu displays the spectrum chart of input signal.

- Tap in the spectrum chart to set current frequency.

- Tap or swipe on the IF frequency range setting bar on the bottom of screen to set spectrum frequency range. The input frequency range is 50MHz~1100MHz.

	Tap this symbol to exit current menu
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on(Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power output
472.7 MHz 0.0 dBmV	The current frequency and signal level. The meter may display the name of the channel it is available and within +/- 2MHz
	The battery status of the meter

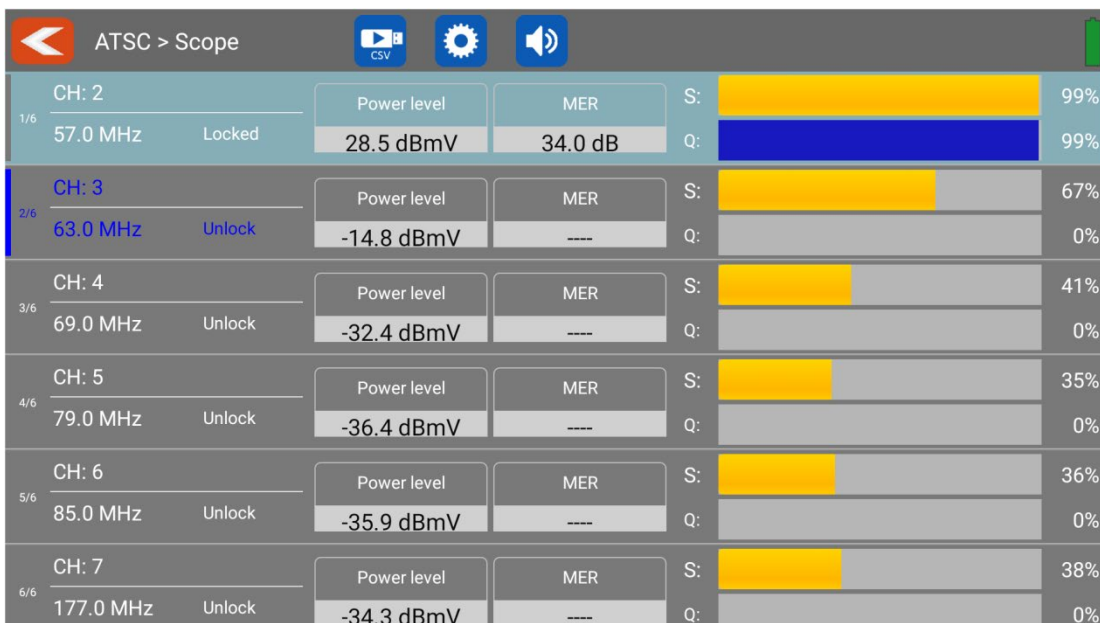### 1.7.3 Terrestrial Constellation (DVB-T/T2)

The menu shows the constellation chart of input signal if the current frequency channel is locked.

All the available frequency channels of current transmitter are listed on the left screen. Tap frequency channel range to switch to it.

	Tap this symbol to exit current menu
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on (Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power out put
	The battery status of the meter

1.7.4 Scope

The menu shows frequency channels` signal testing results on one screen. The meter will check channels one by one automatically.

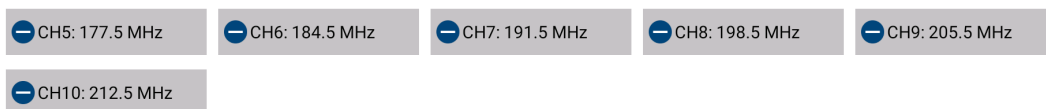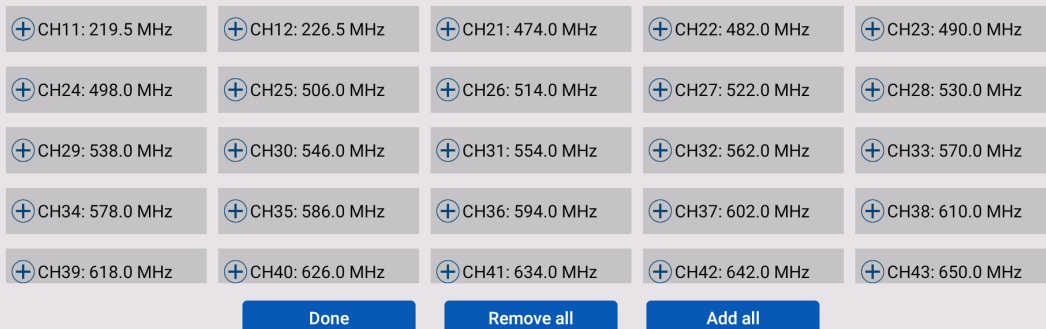|	
	Tap this symbol to exit current menu
	Tap this symbol to export test results data log of this menu as CSV format to USB sticker
	Tap this symbol to set all frequency channels for this menu in dialogue
	Tap this symbol to tune on/off beep
OFF 5 V 12 V 18 V 24 V	Antenna power supply switch. Click and hold on (Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power out put
	The battery status of the meter

Frequency channel setting dialogue:

Tap setting symbol to enter into frequency channel set dialogue.

The frequency channels in scope

CH5: 177.5 MHz   CH6: 184.5 MHz   CH7: 191.5 MHz   CH8: 198.5 MHz   CH9: 205.5 MHz

CH10: 212.5 MHz

The rest frequency channels

CH11: 219.5 MHz   CH12: 226.5 MHz   CH21: 474.0 MHz   CH22: 482.0 MHz   CH23: 490.0 MHz

CH24: 498.0 MHz   CH25: 506.0 MHz   CH26: 514.0 MHz   CH27: 522.0 MHz   CH28: 530.0 MHz

CH29: 538.0 MHz   CH30: 546.0 MHz   CH31: 554.0 MHz   CH32: 562.0 MHz   CH33: 570.0 MHz

CH34: 578.0 MHz   CH35: 586.0 MHz   CH36: 594.0 MHz   CH37: 602.0 MHz   CH38: 610.0 MHz

CH39: 618.0 MHz   CH40: 626.0 MHz   CH41: 634.0 MHz   CH42: 642.0 MHz   CH43: 650.0 MHz

Done   Remove all   Add all

- Tap any frequency channel in top of screen to remove it from scope frequency channel list.

- Tap any frequency channel in bottom of screen to add it to scope frequency channel list.

- Tap Done button to confirm and exit the dialogue.

- Tap Remove all button to remove all frequency channels from scope list.

- Tap Add all button to add all frequency channels to scope list.

1.7.5 Echoes (DVB-T/T2)

This menu shows echoes while testing.
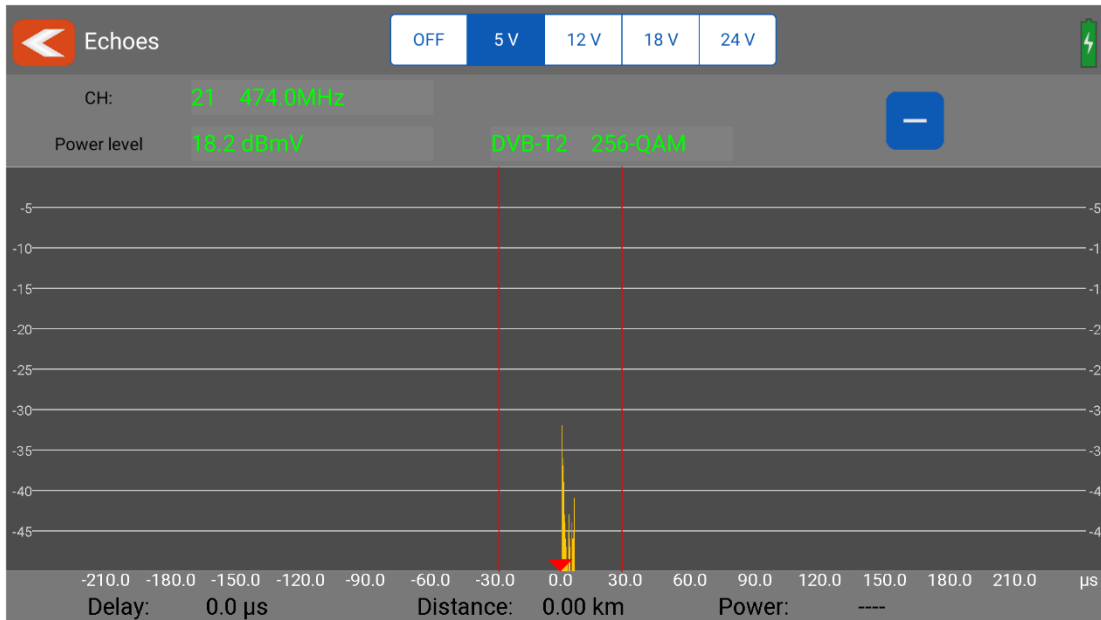
- Tap frequency to pop-up dialogue to select frequency channel.

- Tap on the echo chart to set current time delay and show echo parameters.

- Tap and hold on (Long click) to switch between off, 5V, 12V, 18V and 24V for antenna power output.

- Tap MINUS button to switch to -150~150μs.

- Tap PLUS button to switch to -220~220μs.

1.8 DAB/DAB+/FM

1.8.1 DAB/DAB+ Measurement

The meter will take some time to scan all frequency's. User can listen to programs and see signal parameters after scanning progress is finished.

NOTE: DAB and DAB+ is not used in the US, it is a European Digital

FM Broadcast format
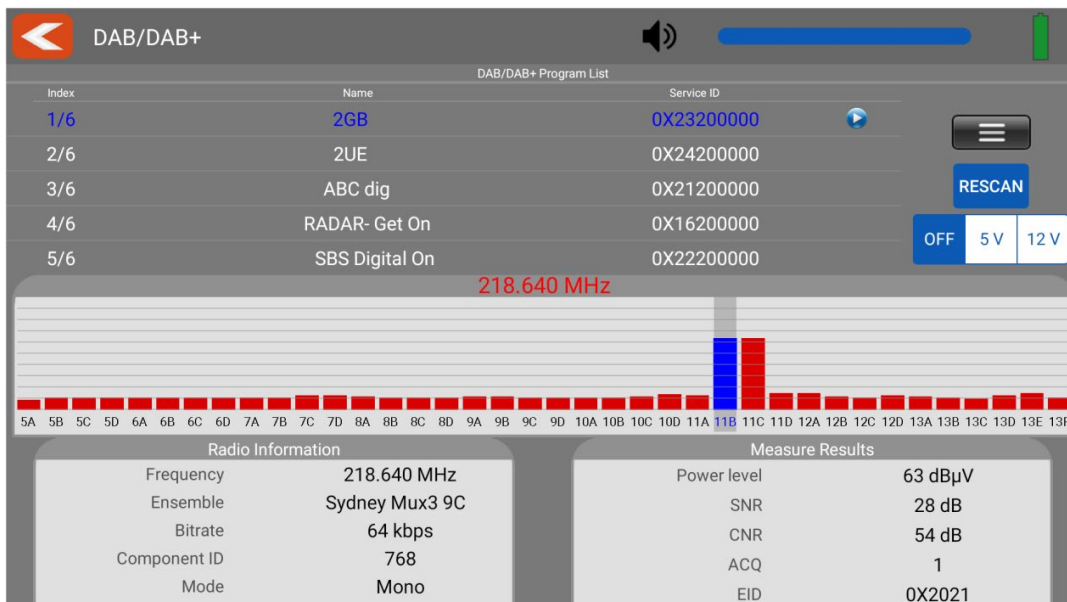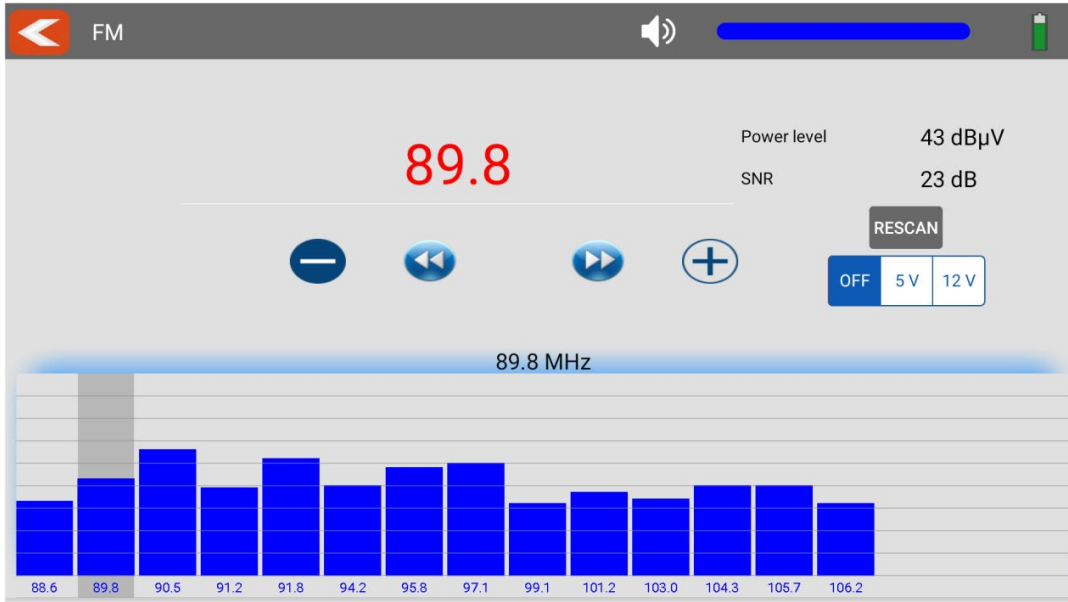
Tap programs in program list to switch to it.

Tap frequency channel range in the frequency channel chart to switch to it.

	Tap this symbol to exit current menu
	The battery status of the meter
	The volume setting bar
	Tap this symbol to enter into list mode
	Tap this symbol to rescan all frequency channels
	Antenna power supply switch. Click and hold on (Long click) to switch between off, 5V and 12V for antenna power out put

1.8.2 FM Measurement

The meter will take some time to scan all the FM frequencies. User can listen to programs and see signal parameters after scanning progress finished.

The frequency range of FM is 88 MHz to 108 MHz

FM ISDB-T

89.8

Power level   43 dBµV
SNR   23 dB

RESCAN

OFF 5 V 12 V

89.8 MHz

88.6 89.8 90.5 91.2 91.8 94.2 95.8 97.1 99.1 101.2 103.0 104.3 105.7 106.2

	Tap this symbol to exit current menu
	The battery status of the meter
	The volume setting bar
	Tap this symbol to enter into list mode
	Tap to switch to the previous FM frequency
	Tap to switch to the next FM frequency
	Tap to plug 1KHz to current frequency
	Tap to minus 1KHz to current frequency
RESCAN	Tap this symbol to rescan all frequency channels
OFF 5 V 12 V	Click and hold on (Long click) to switch between off, 5V and 12V for antenna power out put

1.9 ISDB-T

NOTE: ISDB-T is not used in the US it is here for our customers in Latin and South America

1.9.1 ISDB-T Measurement

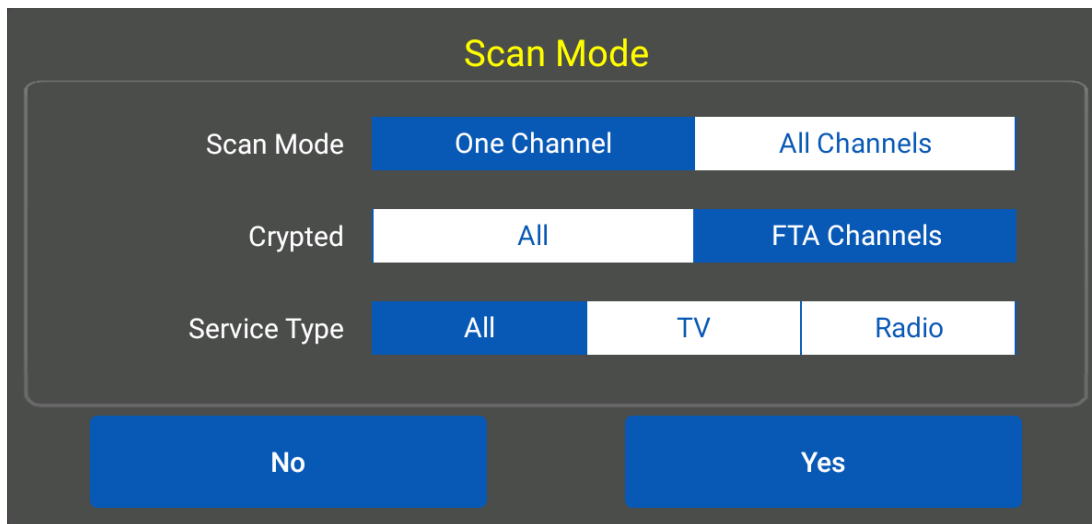|	
	Tap this symbol to exit current menu
	Tap this symbol to switch to the playback program menu.(Live TV)
	Tap this symbol to switch into spectrum menu for QAM-B
	Tap this symbol to switch into constellation menu for QAM-B
	Tap this symbol to switch into TP control menu for QAM-B
	Tap this symbol to tune on/off beep
	Tap this symbol to pop-up program scan config dialogue
	The battery status of the meter

All the available frequency channels for cable are listed on the left of screen. Tap frequency channel range to switch to it. The meter will try to lock and analyze the input signal.

Tap Seach button to pop-up scan config dialogue.

Scan Mode

Scan Mode	One Channel	All Channels
Crypted	All	FTA Channels
Service Type	All	TV	Radio

No	Yes

Scan Mode:

- One Channel: Only scan programs of current selected frequency channel.

- All Channels: Scan programs of all available frequency channels.

Crypted:

- All: Scan and store all programs, both FTA programs and crypted programs.

- FTA Channels: Only scan and store FTA programs.

Service Type:

- All: Scan and store TV programs and Radio programs

- TV: Only scan and store TV programs

- Radio: Only scan Radio programs

Tap Yes button to confirm settings and start to scan programs.
Tap No button to exit.

Edit frequency channels
Tap and hold on frequency channels to pop-up edit dialogue.

Edit

Frequency(MHz)	497.143
Layer	One-Seg Full-Seg
Bandwidth(MHz)	6 7 8

No   Yes
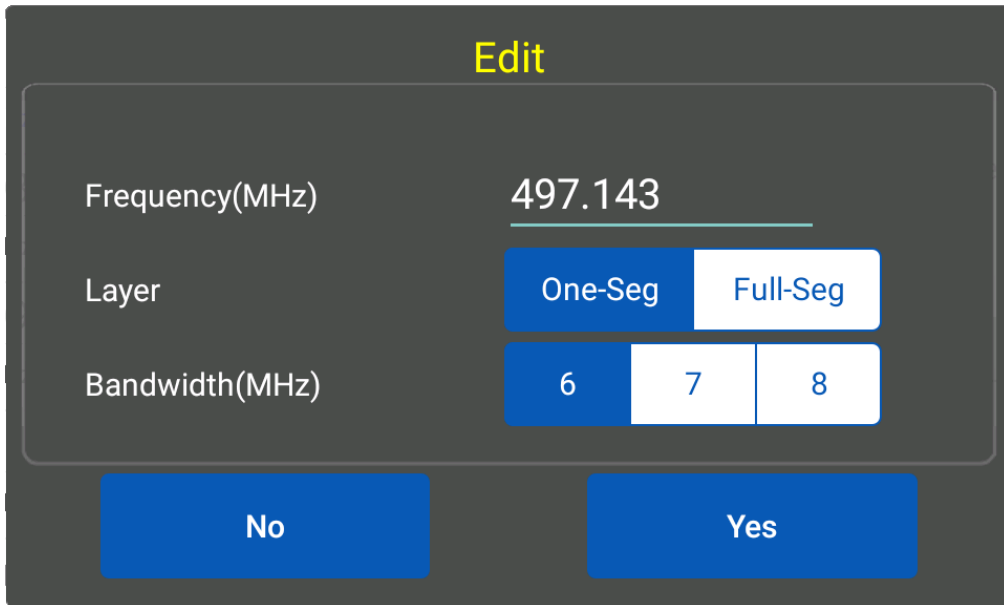
1.9.2 ISDB-T Spectrum

Please refer to 1.7.2 Terrestrial Spectrum
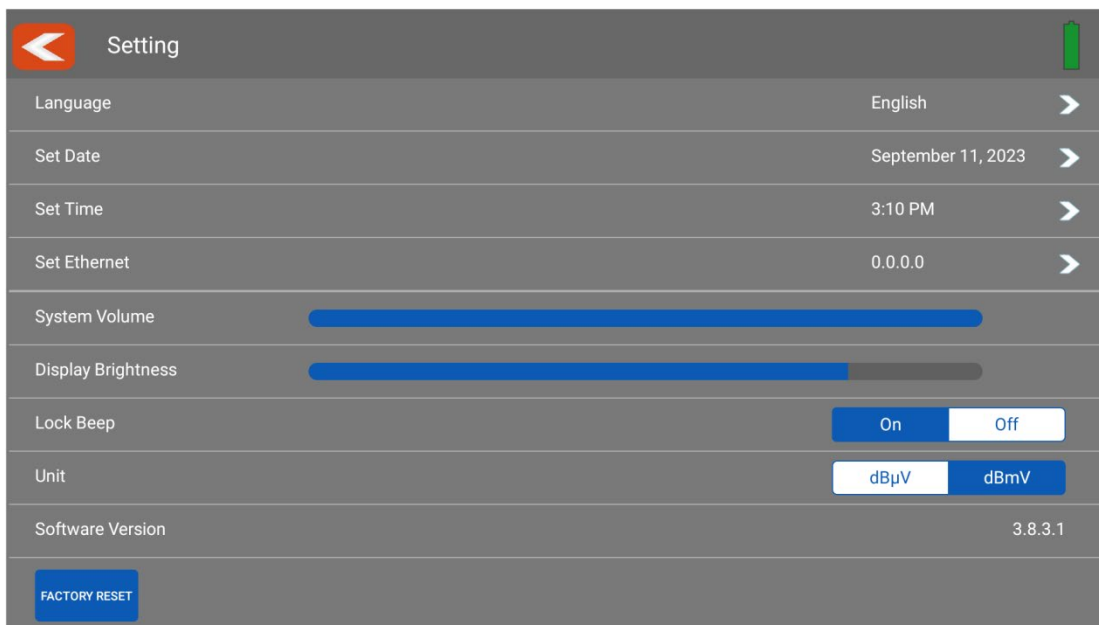
1.9.3 ISDB-T Constellation

The menu shows the constellation chart of input signal if the current frequency channel is locked.
All the available frequency channels are listed on the left screen. Tap frequency channel range to switch to it.
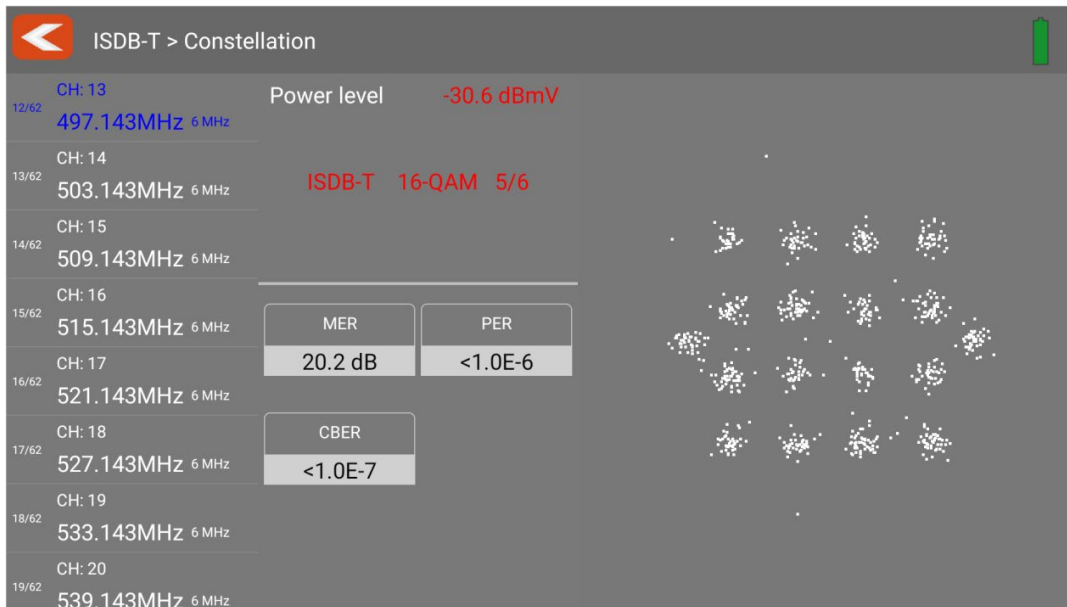
	Tap this symbol to exit current menu
	The battery status of the meter

1.10 Setting

This menu for basic settings on meter.

Tap language range to pop-up dialogue to select OSD language.

Tap set date to pop-up dialogue to set date.

Tap set time to pop-up dialogue to set time.

Tap set ethernet to pop-up dialogue to enter into ethernet setting menu.

Tap factory reset to do factory reset. It will delete all user customized settings and set to default.

1.11 Playback program menu (Live TV)

In this menu, user can playback previously recorded programs stored on a USB Memory stick.

Swipe from the bottom to up to open program information bar.

Swipe your finger on screen to open function menu on the top of screen.
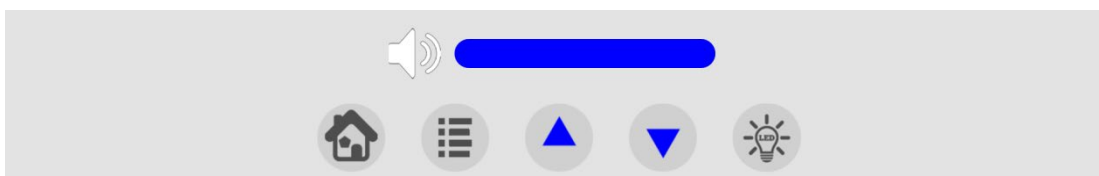
	Swipe to set volume of meter
	Tap this symbol to enter into main menu
	Tap this symbol to enter into channel list menu
	Tap this symbol to zap to previous program
	Tap this symbol to zap to next program

	Tap this symbol to tune on/off LED light on the back of meter

1.12 Channel list

This menu lists all stored program in meter of current DVB system.

Tap program name to switch to it.

	Tap to switch program list between TV and radio
	Tap this symbol to exit channel list
	Tap this symbol to pop-up satellites list dialogue to switch the respective program of selected satellite (Only for satellite)
	Tap this symbol to pop-up dialogue to find out program according to input string
	Tap this symbol to enter into program edit menu

1.13 Program Edit

In this menu, user can edit stored program in meter.
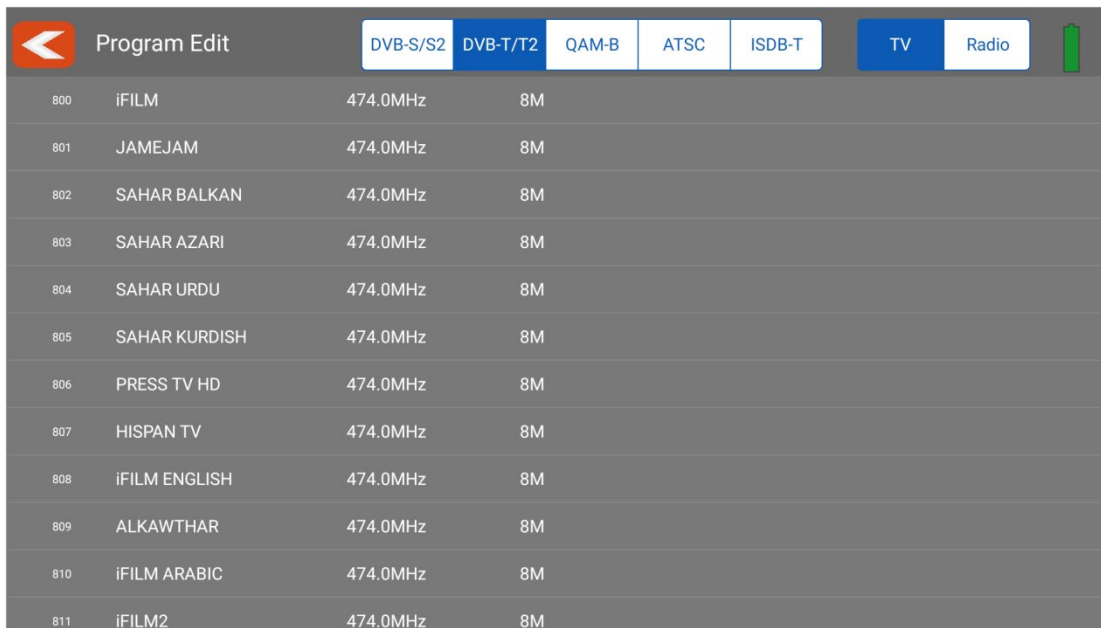
	Tap this symbol to exit current menu
DVB-S/S2 DVB-T/T2 QAM-B ATSC ISDB-T	Tap to switch program list between DVB-S/S2, DVB-T/T2, QAM-B, ATSC and ISDB-T
TV Radio	Tap to switch program list between TV and radio
	The battery status of the meter

Tap on each item in list to enter into edit mode to edit it.

Tap DELETE to delete it from meter.

Tap RENAME to rename the name of program.

Tap MOVE to enter into move mode, tap the right position to move the program.

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