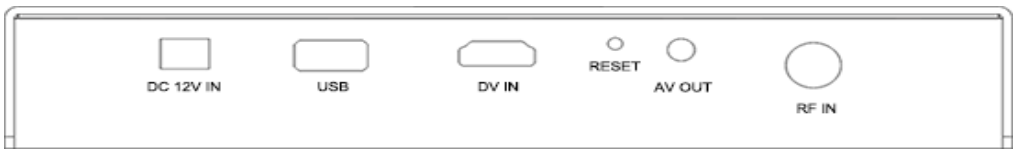
AD INSTRUMENTS
DTVLINK-6
User's Manual

1. INTERFACE, BUTTONS AND INDICATORS

1.1 INTERFACE:



DC 12V IN: The DC power supply in jack of meter. Please check the output voltage of adapter carefully before plug-in. The meter would be damaged if the input voltage is higher than 12V.

USB: The USB port for USB device to plug-in.

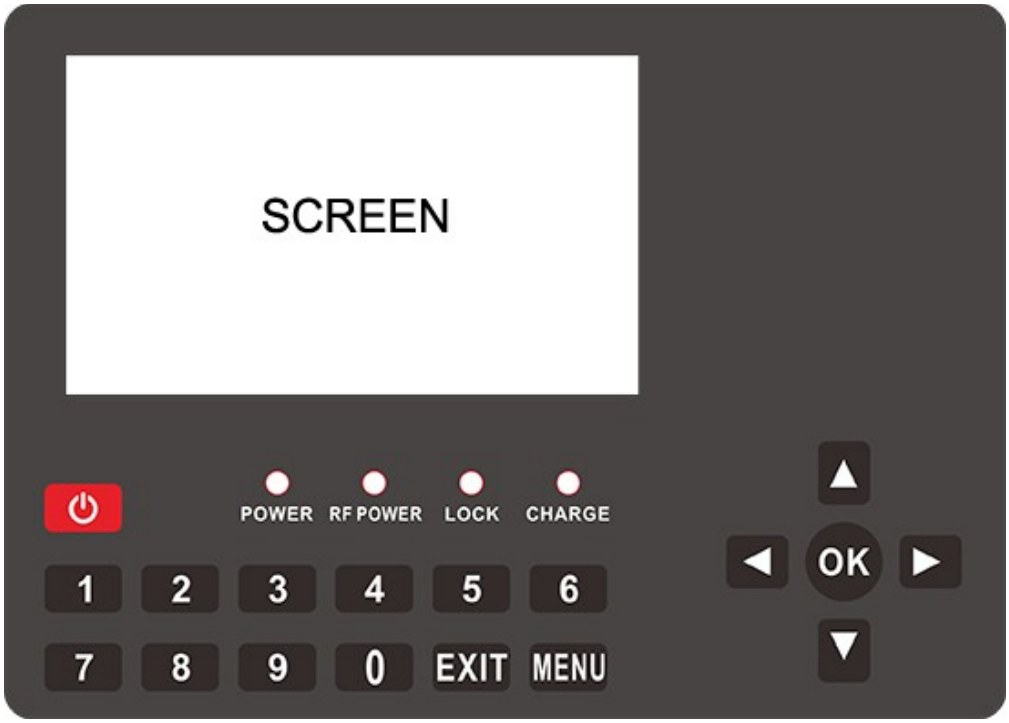
DV IN: The digital video input port.

RESET: The reset button of the meter.

AV OUT: The analog video and audio output port.

RF IN: The antenna or LNB RF signal input port. RF type, female.

1.2 BUTTONS AND INDICATORS



0-1

SCREEN: The screen for display for meter

Indicators:

POWER: The red LED will be on if the meter is working

RF POWER: The yellow LED will be on if the power supply of LNB/antenna is on

LOCK: The green LED will be on if the connected signal locks

CHARGE: The LED will be RED if the meter is in-charging. And it will be green if the battery if full

Buttons:

POWER: Press and hold on about 3 second to turn on or turn off the meter

MENU: Enter or exit menu

EXIT: Exit current menu or current operation

0~9 NUMBER KEYS: Input numeric values. Please refer to help bar of each menu for other functions

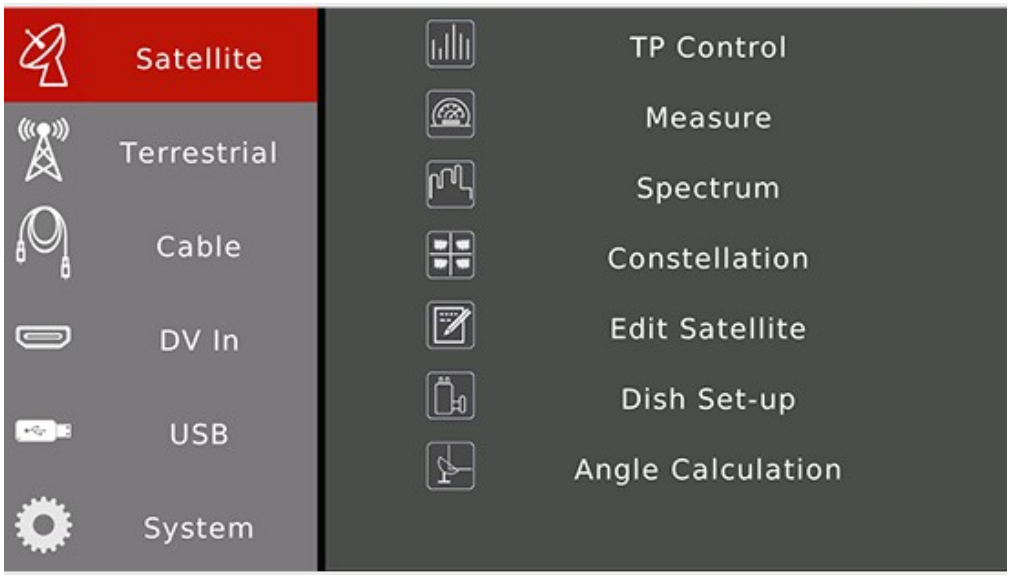
▲/▼: Zapping channels or navigation in the menu

◄/►: Decrease or increase the volume or navigation in the menu

OK: Enter channel list menu in video playing screen; in other menu, press to confirm your selection or operation

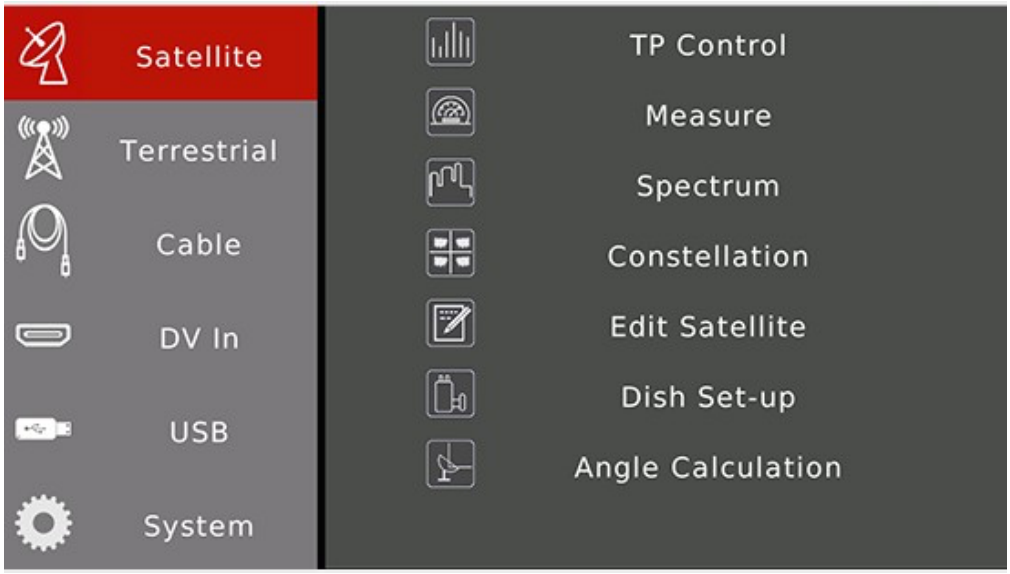
2. BASIC FUNCTIONS

Turn on the power switch and then the device will enter to Main Menu**.** Press [EXIT] to enter video playing menu. **P**ress OK to enter submenu to analyzer or set parameters. Press [▲/▼/◀/▶] to navigation.



Items	Instructions
Satellite	Functions for satellite. Press [OK]/ ▶ to enter right function items. Press [EXIT]/ ◀ to exit back to left.
Terrestrial	Functions for terrestrial. Press [OK]/ ▶ to enter right function items. Press [EXIT]/ ◀ to exit back to left.
Cable	Functions for cable. Press [OK]/ ▶ to enter right function items. Press [EXIT]/ ◀ to exit back to left.
DV In	DV input function. Press [OK] to enable digital video input by DV IN port. Press [EXIT] to back.
USB	USB for software updating
System	The meter system settings

2.1 Satellite



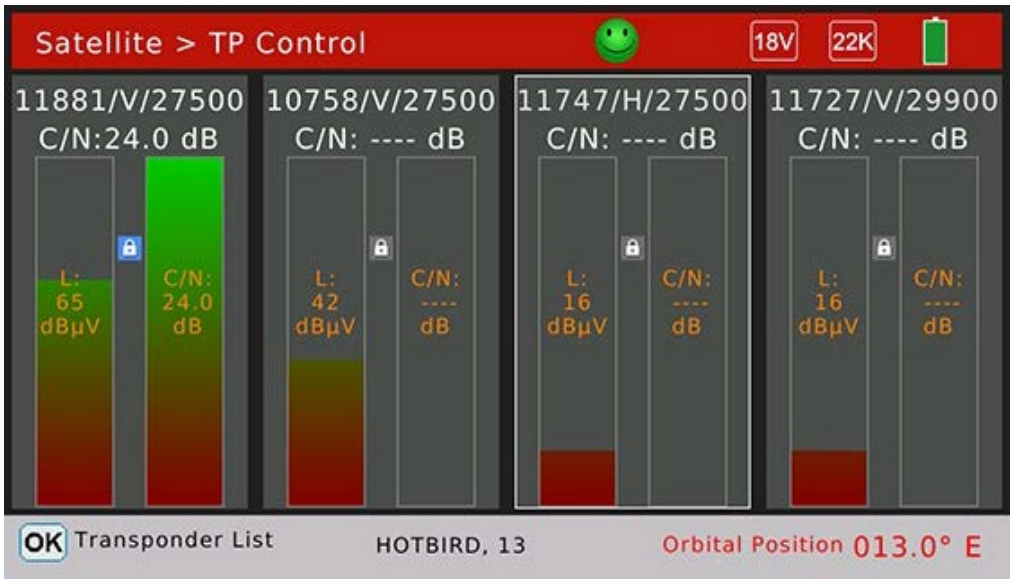
The functions for satellite digital signal. Press [▲ / ▼] to navigation. Press [OK] to enter sub-menu.

Items	Instructions
TP Control	Show 4 transponders signal status on one screen.
Measure	Show many testing results of input signal. Such as strength, quality, CNR, BER...
Spectrum	Show the spectrum chart of input satellite signal
Constellation	Show the constellation chart of input satellite signal
Edit Satellite	Edit the saved satellites parameters, such as edit, add and delete
Dish Set-up	Set dish parameters for satellites. Such as LNB type, DiSEqC, motor type...
Angle Calculation	Calculate the antenna elevation and azimuth according to the local position. And also the meter can simulate aligning progress of antenna.

2.1.1 Satellite > TP Control

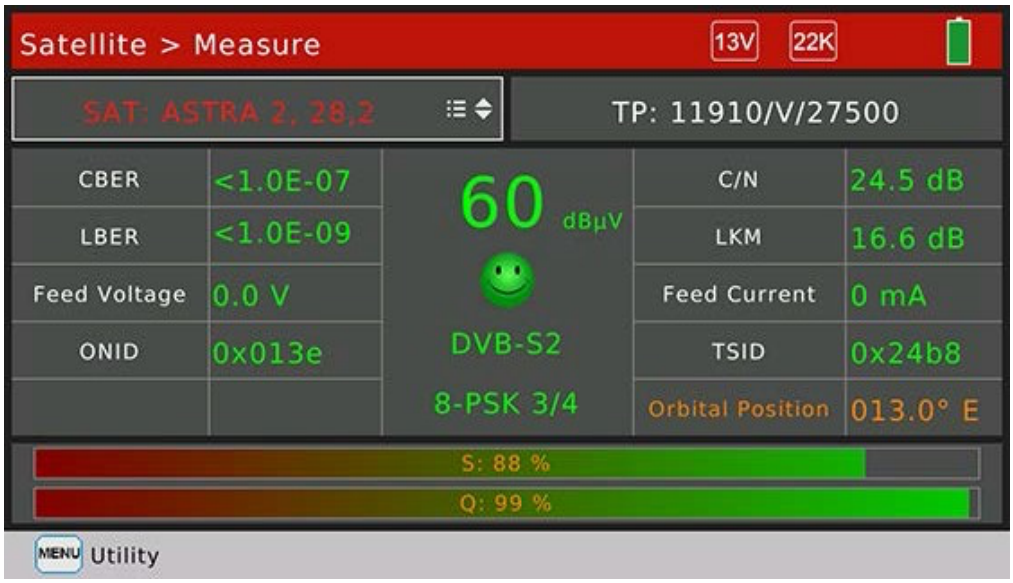
The menu show 4 transponders testing results on one screen. And also show the satellite orbital position from real signal if it is available in the in transponder stream. The face icon set to smile one if the real orbit in the transponder stream is same to the current selected satellite in the meter.

Press to pop-up transponders list to change the current transponder



2.1.2 Satellite >Measure

The menu shows many testing results of input signal. Press [▲ / ▼] to switch items and press [◀ / ▶] to change curser focus between satellite and transponder.



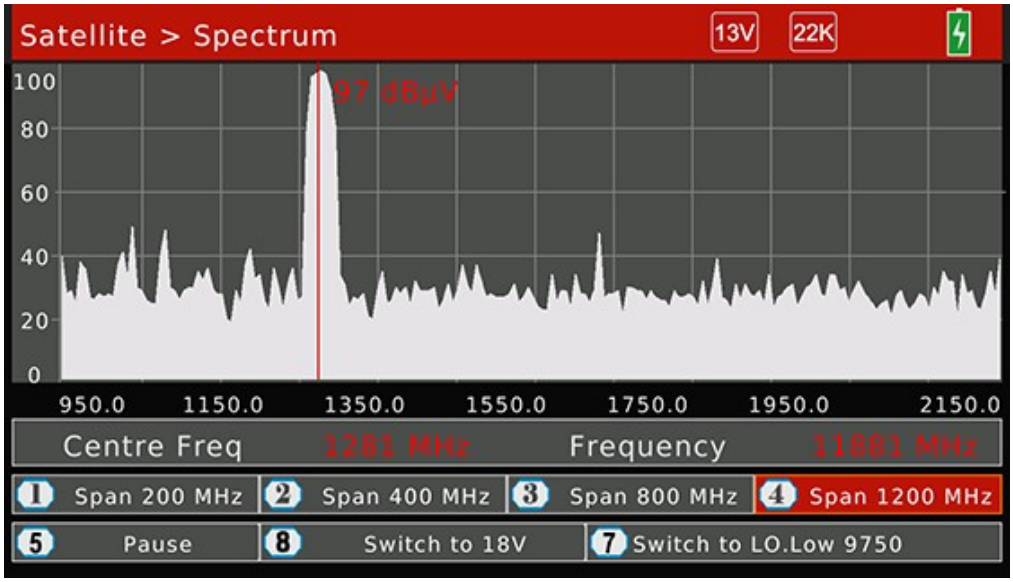
Items	Instructions
13V	The LNB power supply status of LNB. The values are 13V, 18V and off
22K	The 22K status of LNB. The values are 22K and off
SAT:	Show and choose the satellite. Press [▲ / ▼] to change, or press [OK] to enter satellite list
TP:	Show and choose the transponder. Press [▲ / ▼] to change, or press [OK] to enter transponder list. Press numeric button to enter edit pop-up window.
CBER	The testing result of CBER
C/N	The C/N ratio of signal
LBER	The testing result of LBER
LKM	The testing result of LKM
Feed Voltage	The feed voltage of LNB

Feed Current	The feed current of LNB
ONID	The original network identification from transponder stream
TSID	The transponder stream identification from transponder stream
60 dBμV	The power level of input signal of current transponder
Face Icon	It sets to green smile one if the signal is locked, or set to red sad one
DVB-S2	The satellite system of input signal
8-PSK 3/4	The demodulation mode and FEC value of input signal
Orbit Position	The satellite orbit value from transponder stream
S:	The signal strength in percent
Q:	The signal quality in percent

Press [MENU] to pop-up window to search channels on single transponder or all transponders mode. Press [OK] to enter channel search menu. The meter will enter to channel play menu if the search progress is finished.

2.1.3 Spectrum Analyzer

The menu display the spectrum chart of input signal.



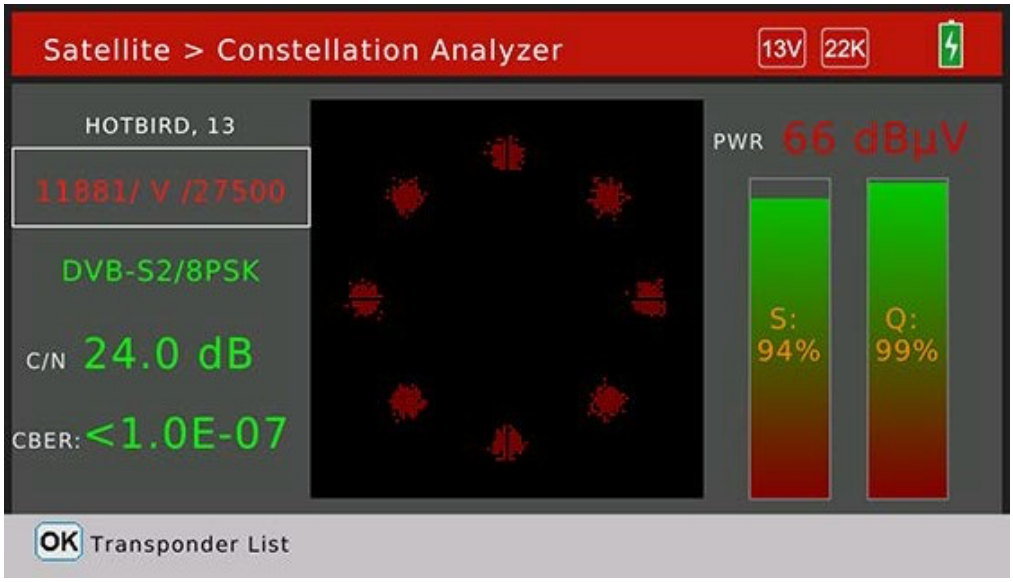
	Instructions
Button 1	Press [1] to set the frequency range to 200MHz around current set frequency
Button 2	Press [2] to set the frequency range to 400MHz around current set frequency
Button 3	Press [3] to set the frequency range to 800MHz around current set frequency
Button 4	Press [4] to set the frequency range to 1200MHz around current set frequency
Button 5	Press [5] to switch between Analyze and Pause status
Button 7	Press [7] to switch between LO Low and LO High if the LNB type is double values
Button 8	Switch LNB voltage output between 13V and 18V

Press [OK] to check the current frequency is be locked or not on blind mode. The real frequency , symbol rate and also the satellite orbit if the value is available in the transponder stream.

2.1.4 Satellite > Constellation

The menu shows the constellation chart of input signal if the current transponder is locked. And also the C/N ratio, power level, CBER, DVB system and demodulation mode.

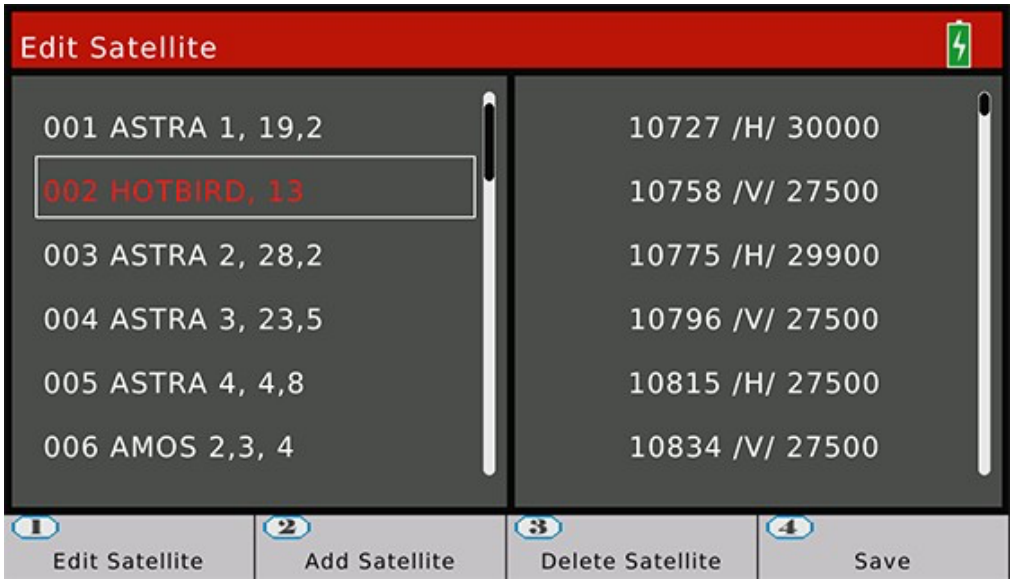
Press [▲/▼/◀/▶] to change current transponder. Press [OK] to pop-up transponders list to help to select easily.



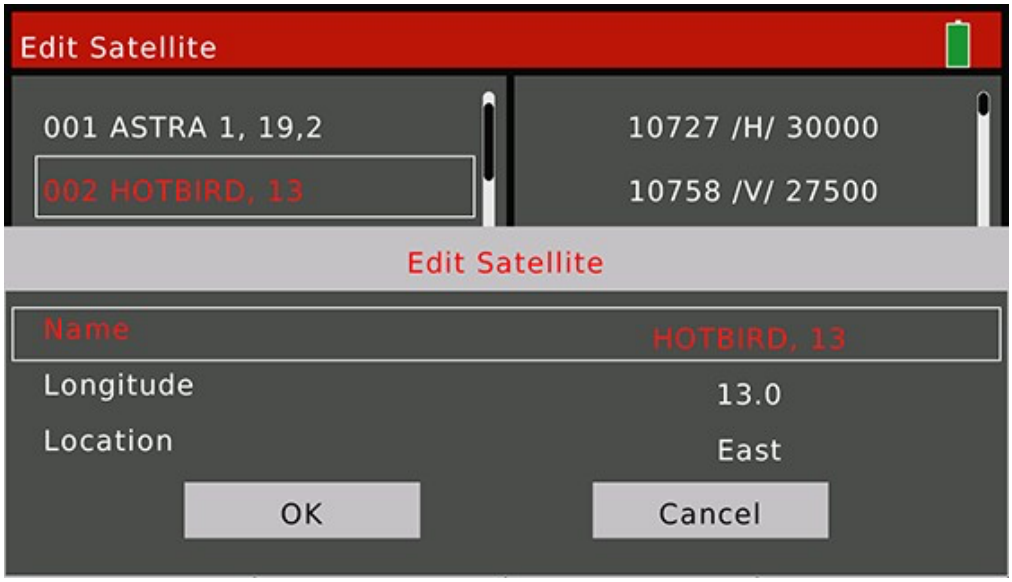
2.1.5 Satellite > Edit Satellite

The menu can edit, add and delete satellites and also transponders of satellite. Press [◀/▶] to focus satellites list or transponders list of selected satellite.

Edit satellites (when satellite item is selected)

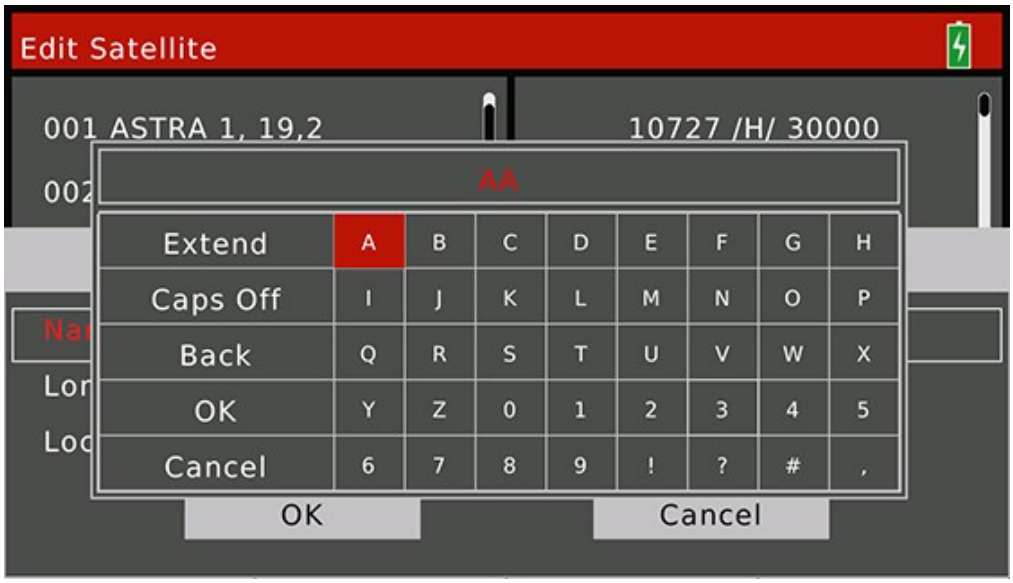


	Instructions
[OK]/[1]	Press to show edit dialog to edit satellite name, orbit and position
[2]	Press this button to add new satellite Step1: Set the satellite name, longitude and location Step2: Set the antenna parameters for the satellite
[3]	Press this button to delete current selected satellite. A dialog will display on screen, user
	can confirm or cancel the delete operation
[4]	Press this button to save all the modifications



Edit Satellite

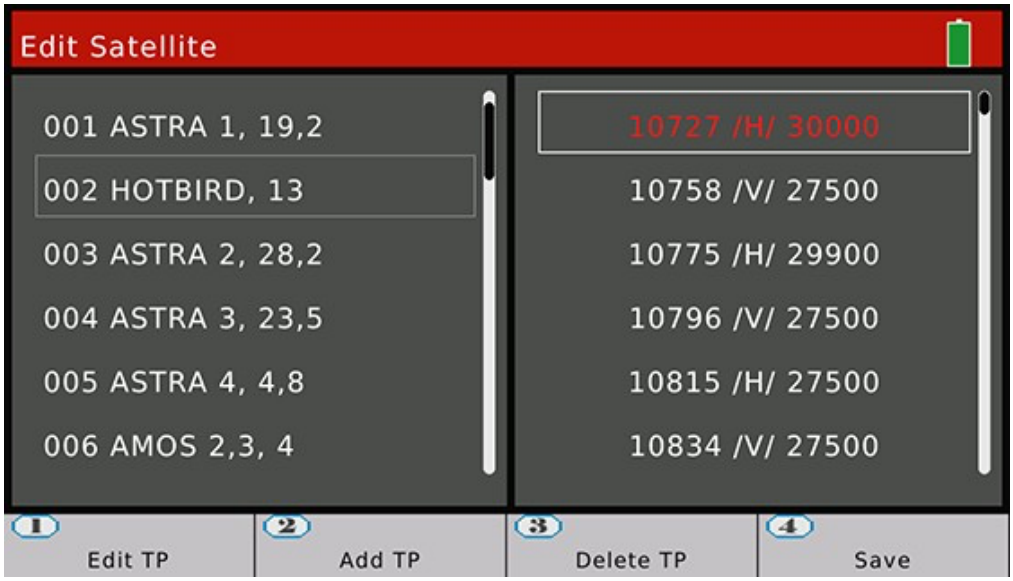
Delete satellite confirm dialog



Edit satellite name dialog

Edit transponder (when transponder list is selected)

User can edit, add and delete transponder in this menu.



2.1.6 Satellite > Dish Set-up

All the parameters of dish will be set on this menu. Such as LNB type, LNB power, motor type...

Press [▲/▼/◀/▶] to navigation.

	Instructions
Satellite	Show and choose satellites. Press [◀/▶] to select satellite, or press [OK] to enter Satellite list.
LNB Type	Set LNB Type, press [◀/▶] button to switch between values. Default set to UNIVERSAL
LO.LOW	Show the low local oscillator value. Use digital button to input the LO.LOW once the LNB Type is customized
LO.HIGH	Show the low local oscillator value. Use digital button to input the LO.HIGH once the LNB Type is customized
22KHz	Set 22K status. Press [◀/▶] button to switch between ON/OFF/Auto. Default set to Auto
LNB Power	Set the antenna power. Press [◀/▶] button to switch between Auto/13V/18V/OFF. Default set to Auto
Switch Type	Set DiSEqC type. Press [◀/▶] button to switch between None/DiSEqC1.0/ DiSEqC1.1/SCR_PORT_A/SCR_PORT_B/SCD2_PORT_A/SCD2_PORT_B/SCD2_PORT_C/SCD2_PORT_D. Default set to None
Switch Input	Set DiSEqC1.0 or DiSEqC1.1's input port. Or set user band for SCR and SCD2. Default set to None
Centre Freq	Set user band frequency for SCR and SCD2
Motor	Set antenna motor type. Press [◀/▶] button to switch between Fixed / DiSEqC1.2/USALS. Default set to Fixed

Press [MENU] button to enter auto DiSEqC function dialog. The meter will find out the connected port of DiSEqC 1.0 automatically. The switch type will set to DiSEqC 1.0 if the connected port is found.

DiSEqC 1.2:

On this menu, user can set the antenna to right position by DiSEqC 1.2 command if the antenna supported DiSEqC 1.2 function.

According to the signal strength and quality in percent, the meter can get the best signal by sending command to adjust antenna to right position.

	Instructions
Satellite	Show the current selected satellite.
Transponder	Show and choose the current transponder of the satellite. Press [◂ / ▸] to switch between transponders.
Move	Press [◂ / ▸] to send command to move antenna to East or West by step mode. Press [◂ / ▸] and hold on to send command to move antenna to East or West by continual mode. Press [EXIT] to send pause command to exit moving progress.
Centre position	Press [OK] to send command to move antenna to centre position
Set limit	Press [◂ / ▸] button to send command to set limitation to move to East or West
Save	Press [OK] to send saving command to save current antenna position for satellite

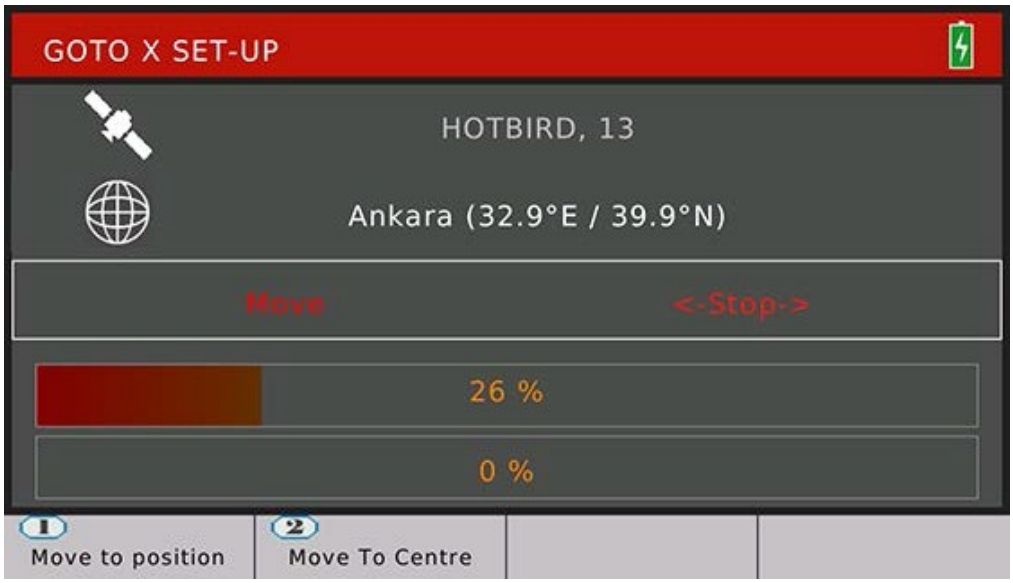
USALS:

On this menu, user can set the antenna to right position by USALS command if the antenna supported USALS function.

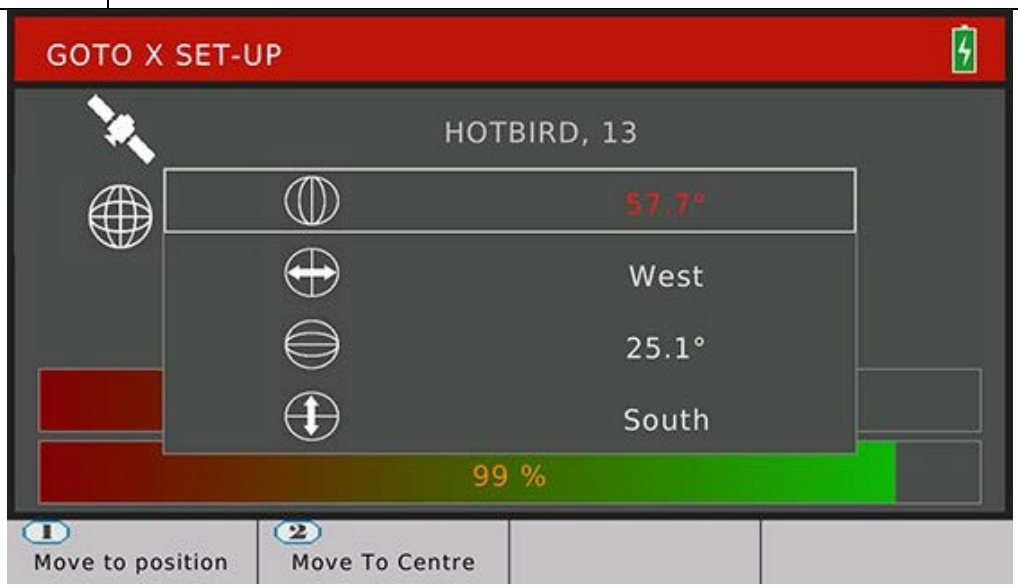
User can select the local city in the saved cities list. The local longitude and latitude will be set as saved in the meter once the city sets. Or user can press [OK] to edit the local longitude and latitude manually if the city sets to customized.

Press [1] to send command to move antenna to the right position.

Press [2] to send command to move antenna to centre position.



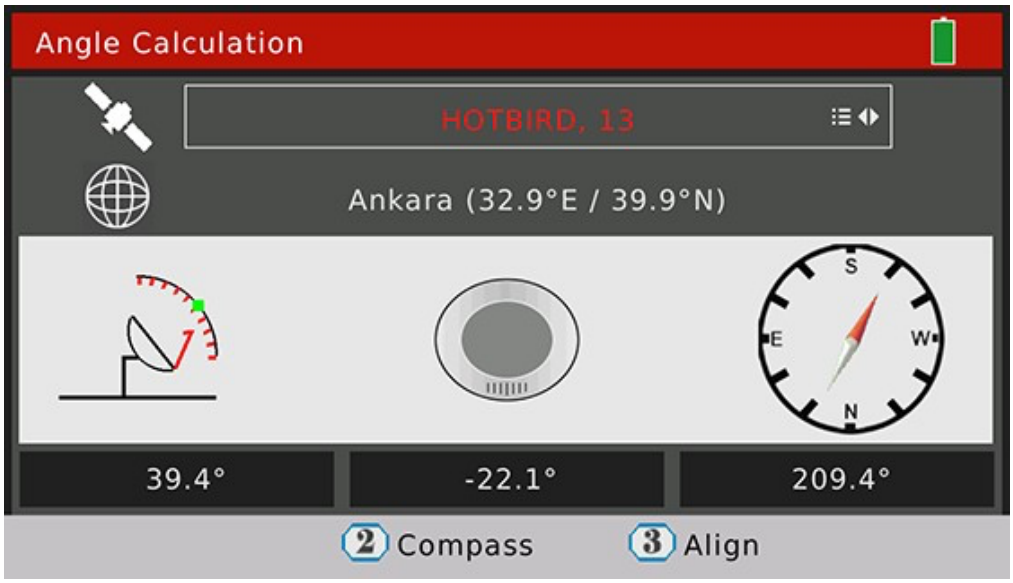
	Instructions
HOTBIRD,13	Show the current selected satellite.
Ankara	The default cities list. The local longitude and latitude will be set once the city is selected.
Move	Press [◂ / ▸] to send command to move antenna to East or West by step mode. Press [◂ / ▸] and hold on to send command to move antenna to East or West by continual mode. Press [EXIT] to send pause command to exit moving progress.



Edit local longitude and latitude

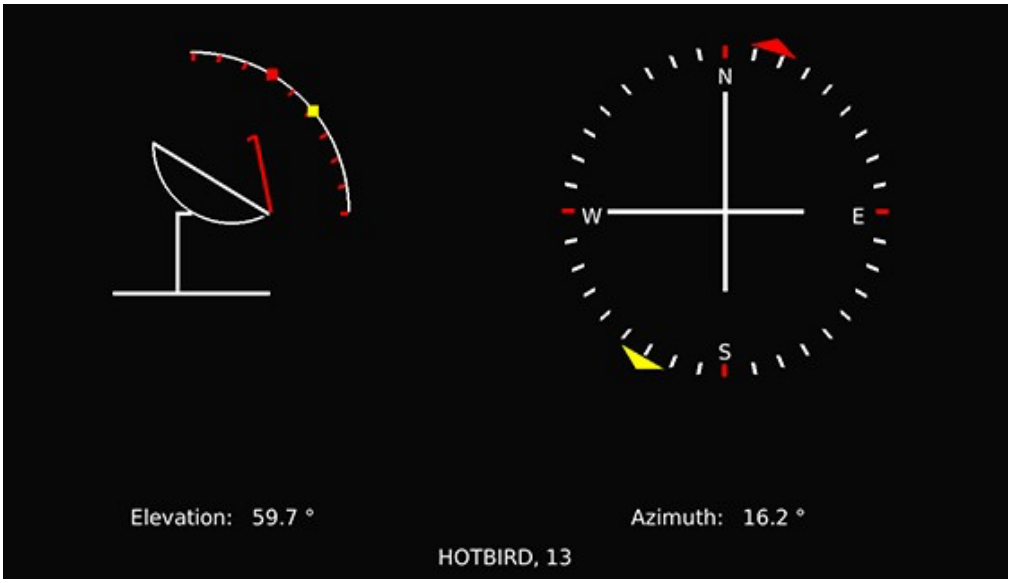
2.1.7 Satellite > Angle Calculation

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

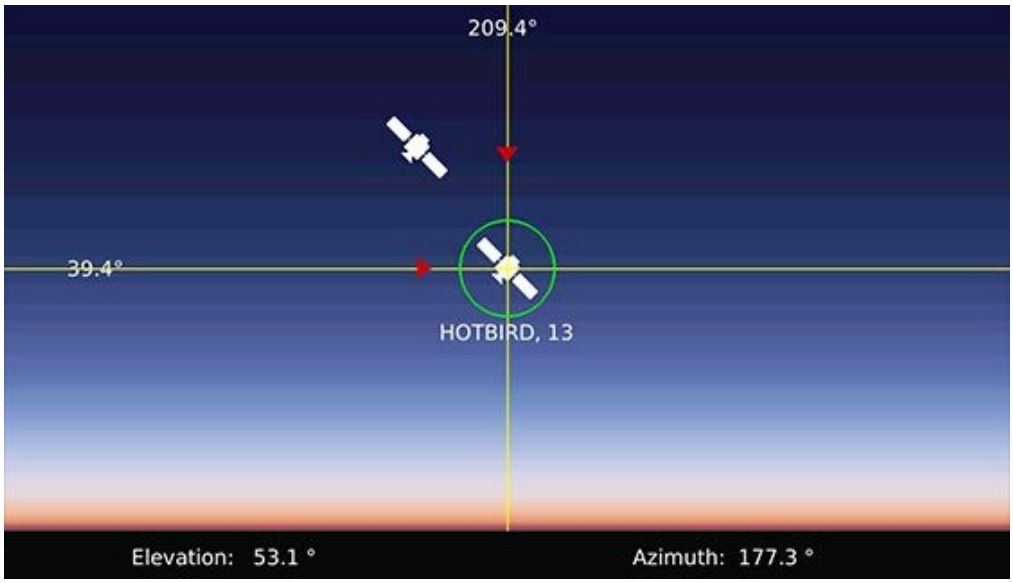


	Instructions
HOTBIRD,13	The current selected satellite. Press [◂ / ▸] to switch satellites. Press [OK] to enter the satellite list to select
Ankara	The default cities list. The local longitude and latitude will be set once the city is selected. Or user can press [OK] to edit the local longitude and latitude manually if the city sets to customized.
39.4	The elevation of antenna to align to the current satellite
209.4	The azimuth of antenna to align to the current satellite
-22.1	The polarization of antenna

Press [2] to enter compass menu. The menu try to simulate the align progress of antenna to find out the best elevation and azimuth by moving the direction and angle of meter.

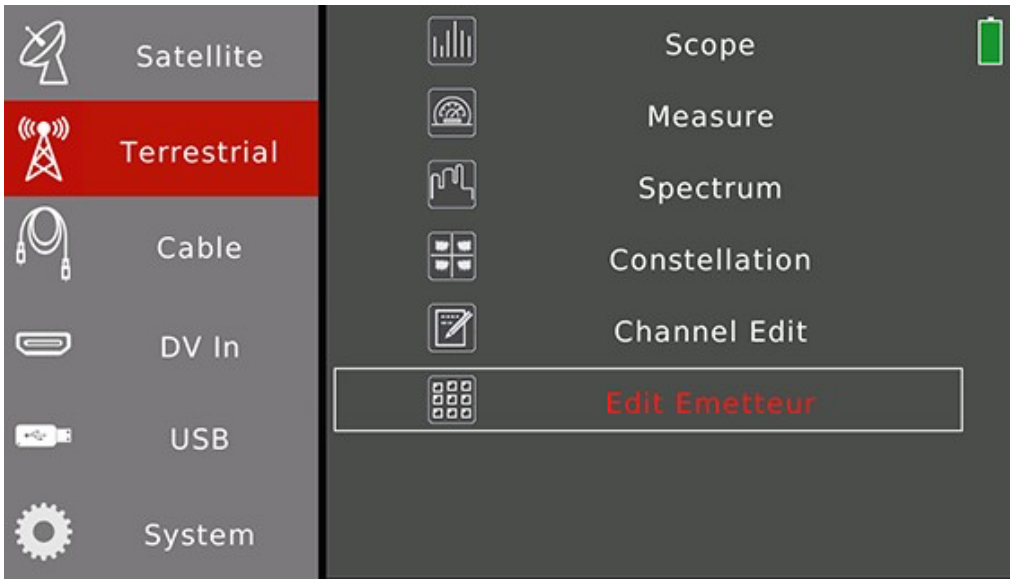


Press [3] to enter align menu. The menu try to lead user to find out the right elevation and azimuth of antenna by moving the direction and angle of meter.



2.2Terrestrial

This menu for DVB-T/T2 functions. Please see below screenshot

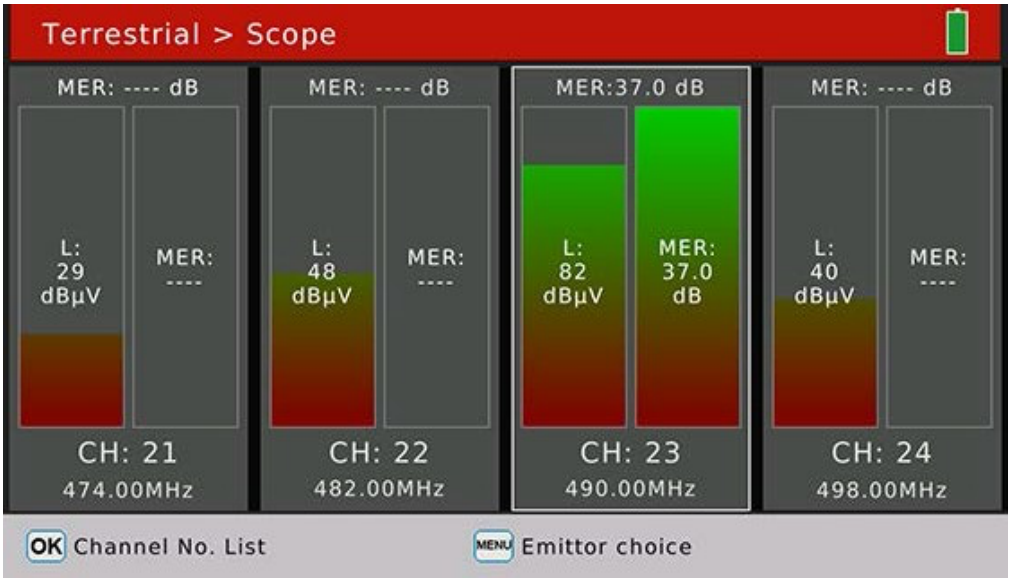


Press [▲ / ▼] to navigation and press [OK] to enter into sub-menus.

	Instructions
Scope	The menu shows four channels` signal testing results on one screen
Measure	The menu shows many testing results for selected channel
Spectrum	The menu shows spectrum chart of input signal
Constellation	The menu shows constellation chart of selected channel once it is locked
Channel Edit	User can edit channel`s parameter on this menu, such as frequency, system type and bandwidth
Edit Emetteur	Select correct channels that can available of testing field on this menu.

2.2.1Terrestrial > Scope

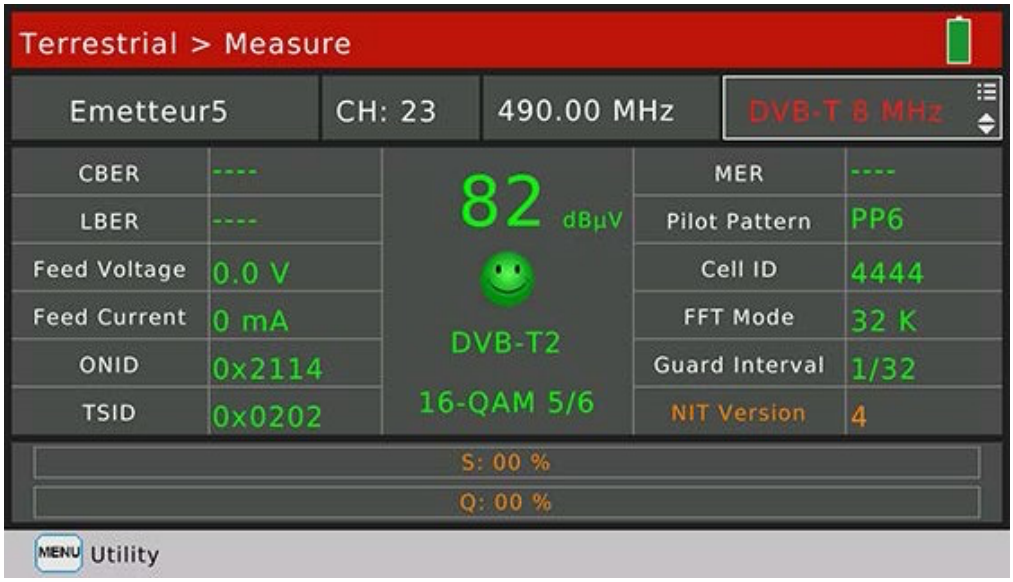
The menu shows four channels` signal testing results on one screen. The meter will check channels one by one automatically.



Press [OK] to pop-up channels list to help to select channel to replace the current focused one.
Press [MENU] to pop-up emittor list to help to switch emittors easily.

2.2.2 Terrestrial>Measure

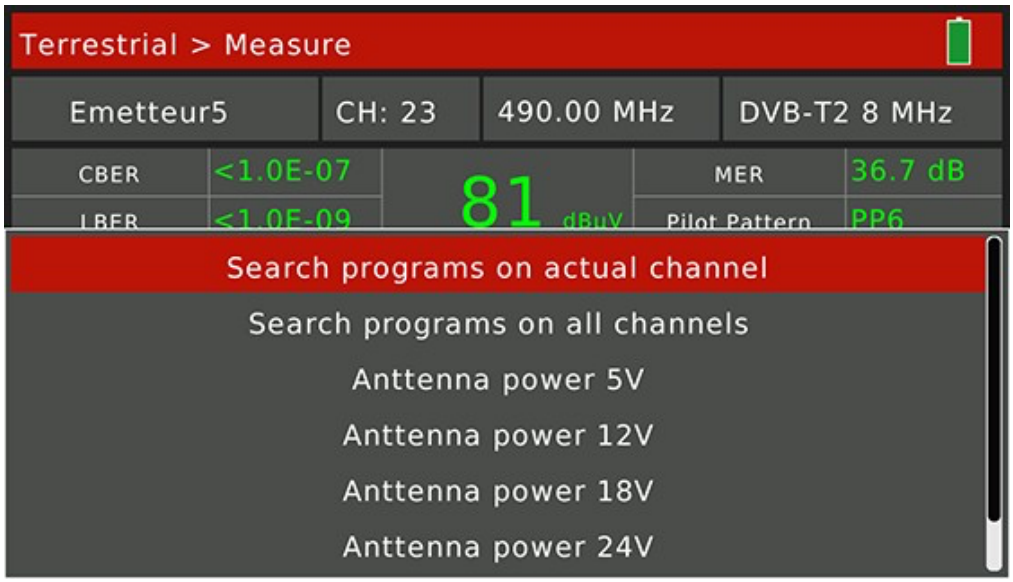
The menu shows many testing results for selected channel. Please see below screenshot for detail.



	Instructions
Emetteur5	The testing field name. Press [▲/▼] to switch values and press [OK] to pop-up list to help to select easily.
CH:	The channel name Press [▲/▼] to switch values and press [OK] to pop-up list to help to select easily.
490.00 MHz	The frequency of channel
DVB-T 8 MHz	The terrestrial system and bandwidth. Press [▲/▼] to switch values and press [OK] to

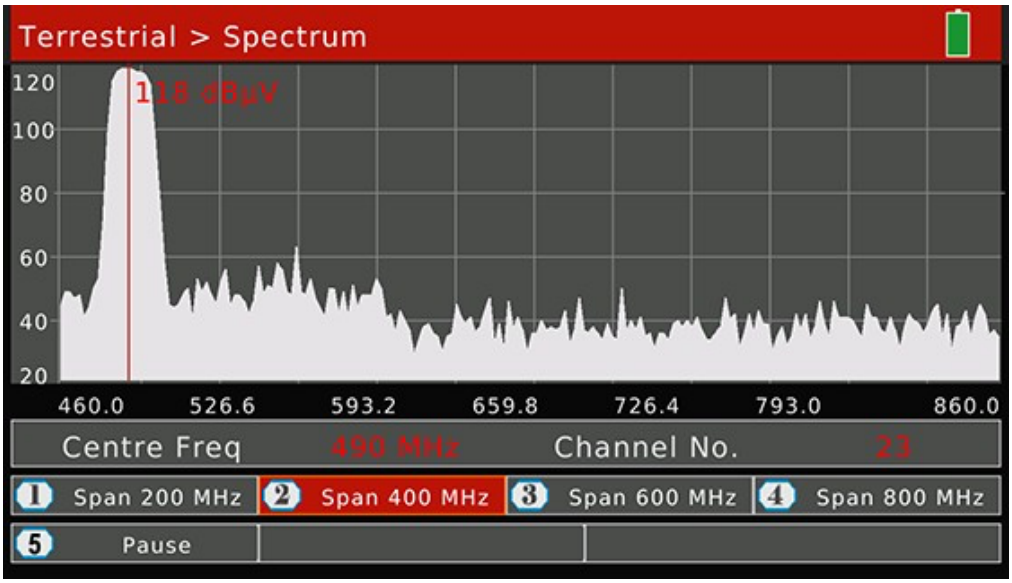
	pop-up list to help to select easily.
CBER	The CBER value of input signal
MER	The MER value of input signal
LBER/VBER	The LBER/VBER value of input signal.
Pilot Pattern	The pilot pattern value of input signal
Feed Voltage	The feed voltage value of antenna
Feed Current	The feed current value of antenna
Cell ID	The cell ID value of input signal
FFT Mode	The FFT mode of input signal
ONID	The original network identification of input transport stream
TSID	The transport stream identification
Guard Interval	The guard interval value of input signal
NIT Version	The version value of network identification table
82 dBuV	The power level of input signal
DVB-T2	The digital system of terrestrial of input signal
16-QAM 5/6	The modulation and FEC value of input signal
S:	The strength of signal in percent
Q:	The quality of signal in percent

Press [MENU] to pop-up window to help to search channels or set power supply to antenna.



2.2.3Terrestrial > Spectrum

The menu shows spectrum chart of input signal



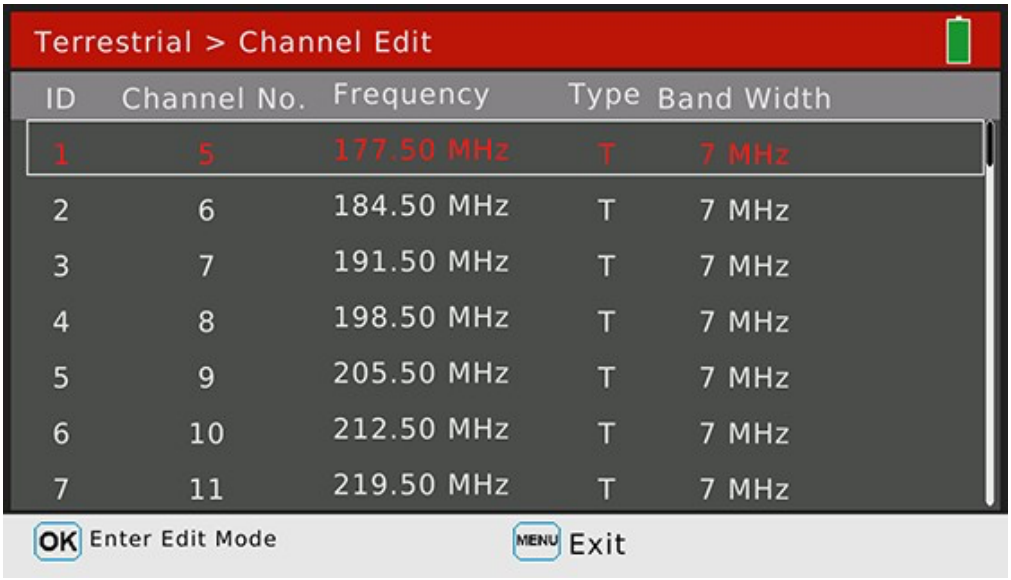
	Instructions
Centre Freq	The current frequency to show power level value
118 dBuV	The power level value of current frequency
Channel No.	The name of channel which frequency is close to current frequecny.
Button 1	Press [1] to set the frequency range to 200MHz around current set frequency
Button 2	Press [2] to set the frequency range to 400MHz around current set frequency
Button 3	Press [3] to set the frequency range to 600MHz around current set frequency
Button 4	Press [4] to set the frequency range to 800MHz around current set frequency
Button 5	Press [5] to switch between Analyze and Pause status
▲/▼	To set the power level range of spectrum chart
◀/▶	To set the current frequency

2.2.4 Terrestrial > Constellation

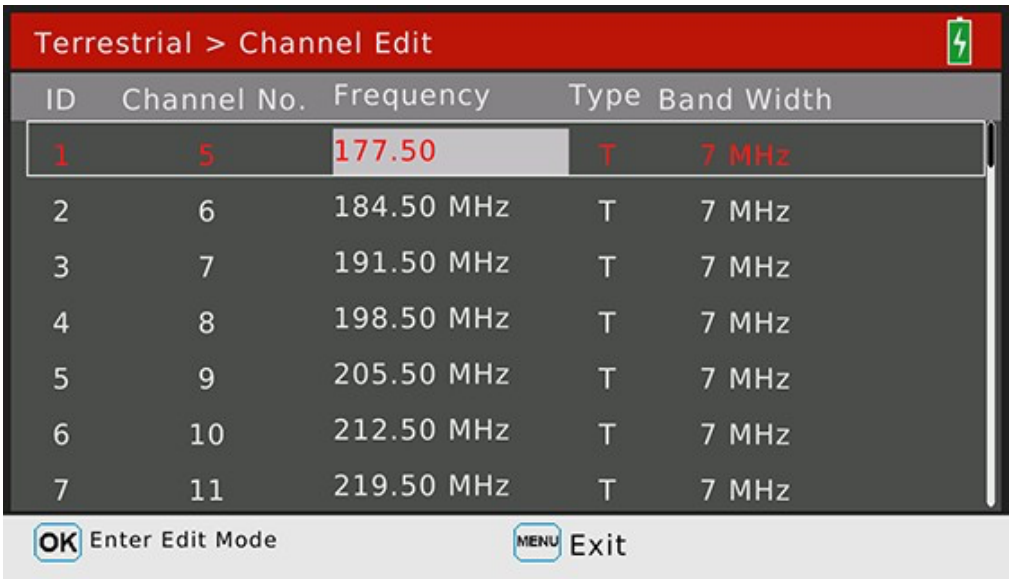
Please refer to 2.1.4.

2.2.5 Terrestrial>Channel Edit

User can edit channel parameters on this menu. All the channels for terrestrial will be listed on this menu. Press [▲/▼] to switch channels.



Press [OK] to enter the edit mode. And then press [◀/▶] to switch between frequency, type and bandwidth

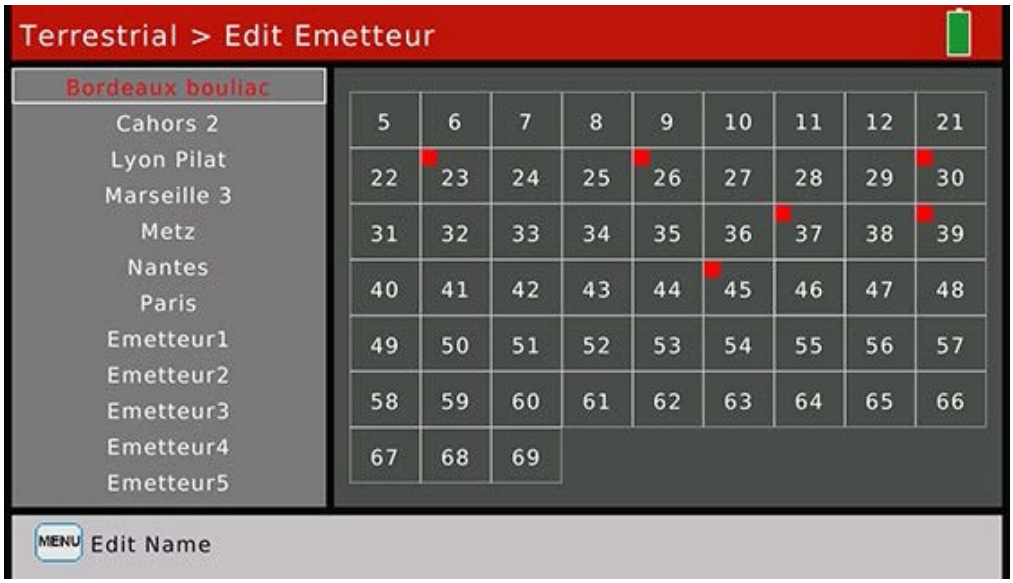


2.2.6Terrestrial > Edit Emetteur

Choose the available channels for each Emetteur on this menu. Press [▲/▼] or [▲/▼] to navigation and press [MENU] to edit the name of current emetteur.

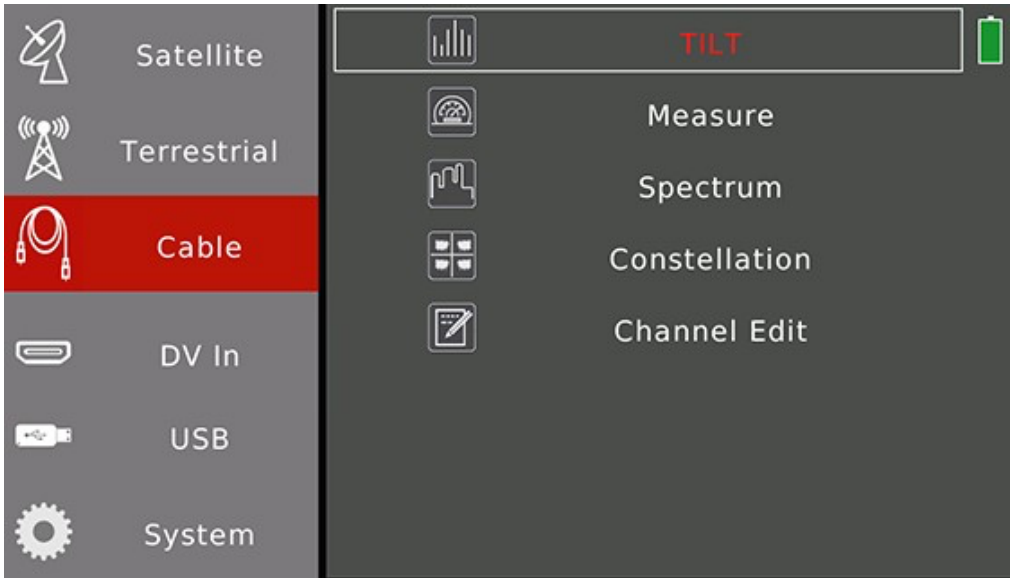
All the channels list on the right screen. The channels with red rectangle belong to current selected emetteur. Press

[OK] to add or delete from the emetteur.



2.3 Cable

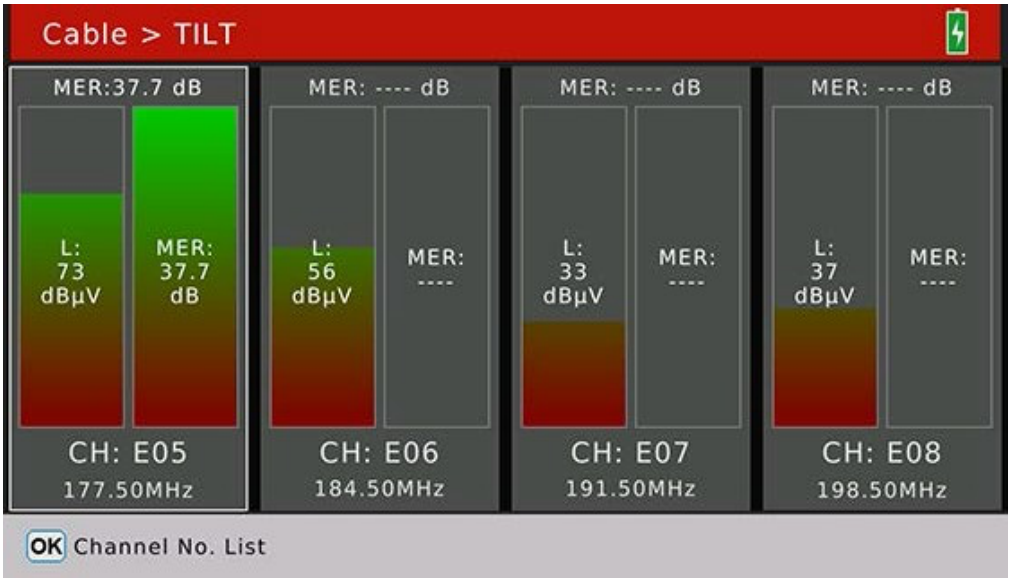
This menu for digital cable functions.



Items	Instructions
TILT	The menu shows four channels signal testing results on one screen
Measure	The menu shows many testing results of channels
Spectrum	The menu shows spectrum chart for cable signal
Constellation	The menu shows constellation chart for digital cable signal
Channel Edit	User can edit channel parameters on this menu. Such as frequency, digital cable system and symbol rate

2.3.1Cable > TILT

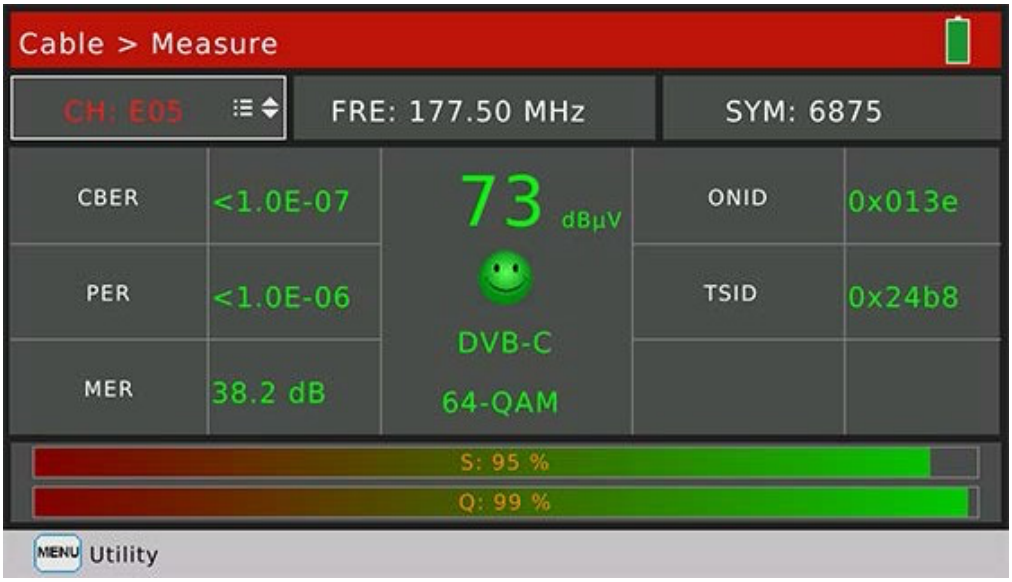
The menu shows four channels` signal testing results on one screen. The meter will check channels one by one automatically.



Press [OK] to pop-up channels list to help to select channel to replace the current focused one.

2.3.2 Cable>Measure

The menu shows testing results for digital cable signal. And also can search programs once the signal is locked.



	Instructions
CH:	The channel name Press [▲/▼] to switch values and press [OK] to pop-up list to help to select easily.
FRE:	The frequency of channel
SYM:	The symbol rate of channel
CBER	The CBER value of input signal

PER	The PER value of input signal
MER	The MER value of input signal
ONID	The original network identification of input transport stream
TSID	The transport stream identification
73 dBuV	The power level of input signal
DVB-C	The digital system of cable of input signal
64-QAM	The modulation value of input signal
S:	The strength of signal in percent
Q:	The quality of signal in percent

2.3.3 Cable>Spectrum

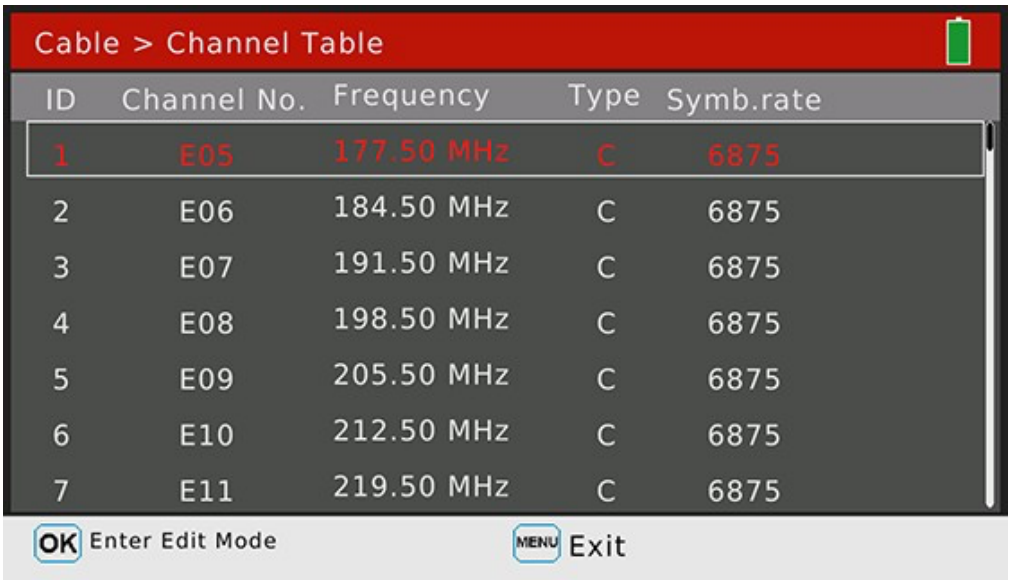
Please refer to 2.2.3

2.3.4 Cable>Constellation

Please refer to 2.1.4

2.3.5 Cable>Channel Edit

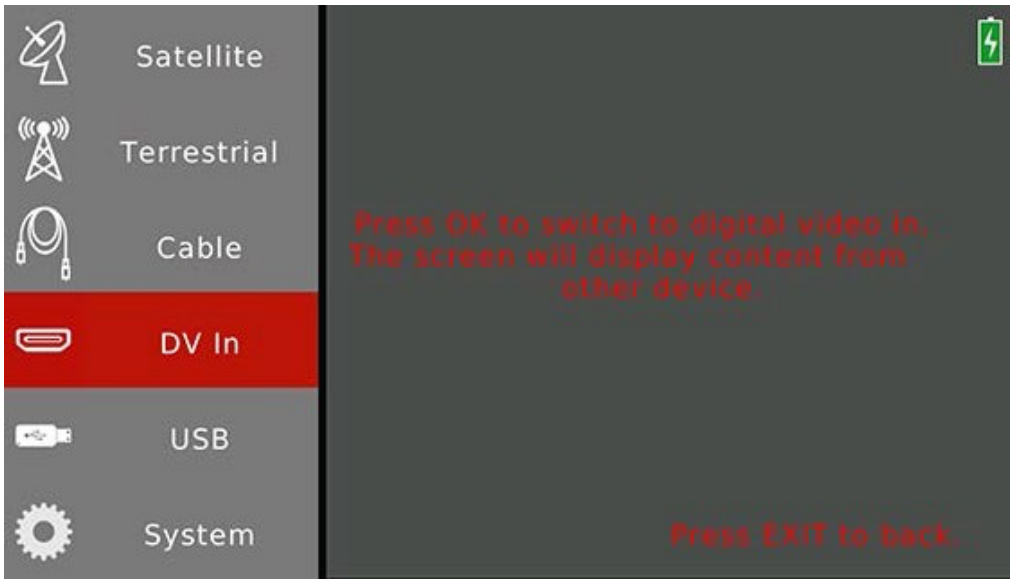
User can edit channel parameters on this menu. All the channels for terrestrial will be listed on this menu. Press [▲/▼] to switch channels.



Press [OK] to enter the edit mode. And then press [◄/►] to switch between frequency, type and bandwidth

2.4 DV IN

Press [OK] to switch to digital video input mode. The screen will display content which transports by digital video cable. All the functions for DVB signal are unavailable right now. Press [EXIT] to exit DV in mode and back to testing mode.



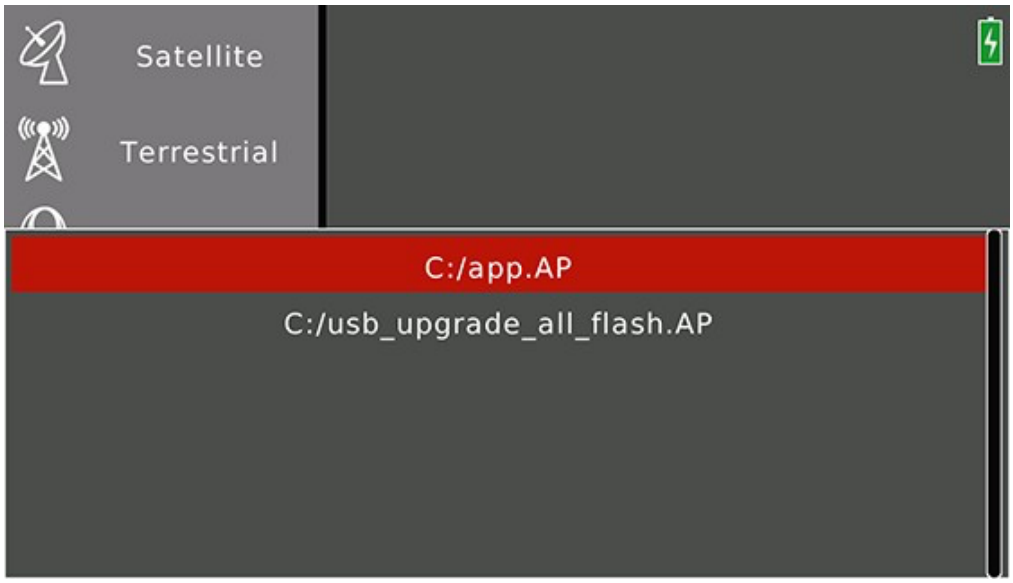
2.5 USB

This USB sub-menu only for updating software by USB sticker.

How to update software by USB sticker:

1. Copy the official release .AP file software to USB sticker
2. Plug-in USB sticker to the meter
3. Move the curse to USB item on Main Menu
4. Press [OK] to pop-up .AP file lists as below. Then press [OK] to confirm to update.
5. The meter will enter into updating mode and reboot automatically once the updating progress is finish.

Note: Please do not power off the meter during the whole updating progress.



2.6 System

The system setting menu for meter.

	Instructions
Language select	Set the OSD language. Press [◄ / ►] to switch between available languages. Default set to English
Factory reset	Press [OK] to pump factory reset confirm dialog. Press [OK] again to do reset or [Exit] to cancel. The meter will reset all the setting values to default if do a factory reset.
Time Zone	Set the local time zone. Press [◄ / ►] to switch options. Default set to GMT
Lock alarm	Press [◄ / ►] to set the lock alarm On or Off. Default set to On
Key tone	Press [◄ / ►] to set the key tone On or Off. Default set to On
Auto power off	The finder will power off according to your setting. Press [◄ / ►] to switch options. Default set to Off
Time	Press [OK] to set the current time manually
Software Version	Show the software version

2.7. Play Program Menu

All the searched and saved programs can play on this menu. User also can enjoy the digital video and audio. Press [EXIT] to exit information bar. Press [◄ / ►] to adjust volume and press [▲/▼] to zap programs.

Press [OK] to pop-up program list to show all saved programs.

On program channels menu, press [▲ / ▼] to switch programs and press [OK] to confirm to play the selected program.

Press [1] to switch between TV list and radio list.

Press [MENU] to pop-up keyboard to find out channels by setting letters.

2.8 Screenshot

The meter support screenshot function and save the BMP picture to USB sticker.

How to get a screenshot:

1. Plug-in USB sticker to the meter
2. Press [MENU] and [OK] button at the same time
3. The meter will show the name of screenshot on the screen
4. Wait a while to save file to USB sticker before plug-out
5. All the screenshot will be saved in the root of USB sticker

2.9 Debug information

The meter support export some debug information to USB sticker. The debug information will be saved as txt file.

How to get debug information

1. Plug-in USB sticker to the meter
2. Enter into Main Menu
3. Press [MENU] to pop-up a confirm dialog
4. Select YES to enter debug mode
5. Then, do your testing operation as usual
6. Enter into Main Menu and press [MENU] to exit debug mode and save debug information to USB sticker
7. Wait a while for saving data before plug-out USB sticker

NOTE: User need to enter into Main Menu and press [MENU] to exit debug mode manually, or the debug information can not save into USB sticker.