

# **USER'S MANUAL**

## **DIGITAL SATELLITE METER / SPECTRUM ANALYZER**

### **TM-6600 series**

*Please read this manual carefully before using your meter.*

*The technical specifications and operating guides included in this manual are subject to changes without notice.*

*Please charge the battery before using your meter for the first time. (Recommend as 5 hours)*

*In case of any inquires after a period of usage, please contact the manufacturer.*

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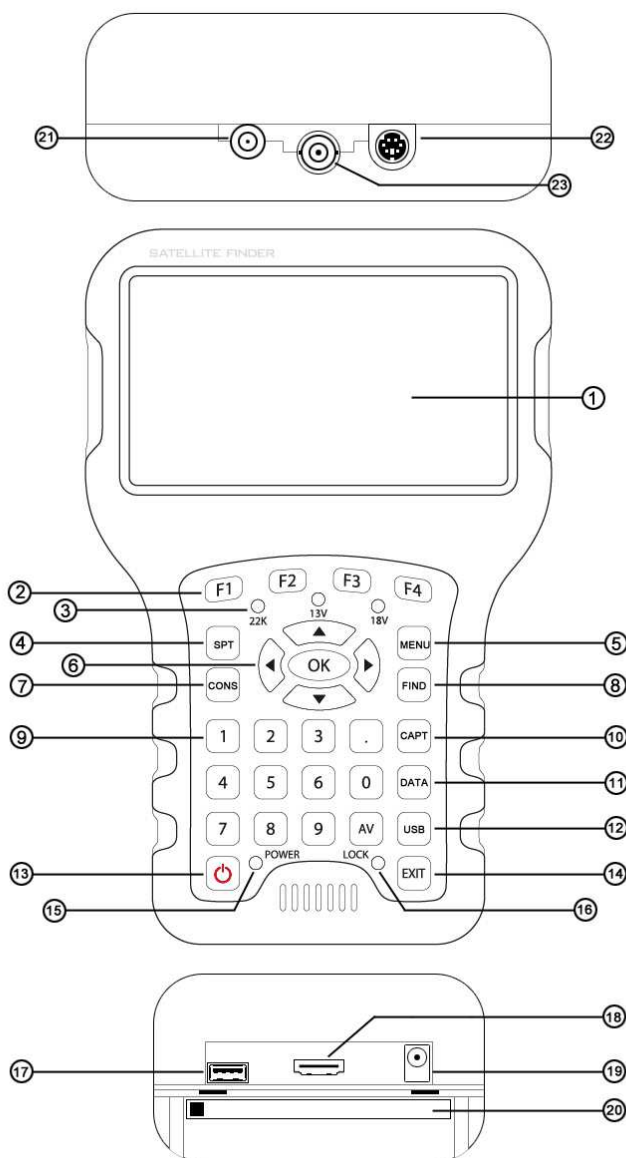
## DESCRIPTION

### Introduction

This meter is simple and convenient for setting and aligning a satellite dish. Using the parameters of satellite, you can set and align a satellite dish quickly, easily and accurately.

TM-6600 & 6800 HD series can be used for satellite spectrum line scanning, and gain the field strength data.

### Panel



**1. LCD Screen:** Show menus and programs .

**2. F1:** Turn LCD screen on/off. (under the channel play OSD)

Turn keyboard backlight on/off .(under the MAIN MENU )

**F2:** Turn the sound on/off. (under the channel play OSD)

Turn ASI channel on/off . (under the MAIN MENU )

**F3:** Show information about the current program. (under the channel play OSD)

Turn min-fan on/off . (under the MAIN MENU)

**F4:** Switch between program and broadcasting. (under the channel play OSD)

**3. 22K/13V/18V light:** Indicate the 22K/13V/18V.

**4. SPT:** Enter the “Spectrum Analyzer” directly.

5. **MENU:** Enter or exit main menu.
6. **OK:** Enter “CHANNEL LIST-ALL SATELLITES” list menu.
  - ▲/▼ : Change channels or operation in the menu.
  - ◀/▶ : Decrease or increase the volume
7. **CONS:** Enter “Constellation Analyzer” menu directly.
8. **FIND:** Go to the easy satellite find menu, can set and align a satellite dish quickly.
9. **0-9 NUMBER KEYS:** Numeric values to select the channel directly
10. **CAPT:** when a USB device inserted, and press this key in spectrum or constellation diagram menu, the system will capture the screenshot in JPG format and save to USB storage device.
11. **DATA:** Enter the Data storage menu, to browser saved Horoscope char.
12. **USB:** Enter USB menu, can select Record, Playback, Browser, S/W Update or Parameter Update.
13. **⏻** Turn the meter on/off, press and hold for 2 seconds to power on the meter.
14. **EXIT:** Exit from the present menu and move to the previous menu
15. **Power Light:** Indicate the power status
  - Normally
    - Red: the meter is power on.
    - Dim: the meter is power off.
  - Charge
    - Green: the battery is being charged.
    - Red: the battery is full.
16. **Lock Light:** Indicate whether it locks signal.
17. **USB:** Connect to PC for upgrade, recording and storing photos.
18. **HDMI:** Connect to TV for displaying on the TV screen.
19. **Charging:** Connect with the charger cord for charging the equipment.
20. **CI Card Slot:** Insert CI smart card.
21. **LNB INPUT:** Satellite signal input port, connects directly to satellite antenna using coaxial cable.
22. **S-Video:** Connect to TV for displaying
23. **ASI Output:** output data to modulator server for recording channel.

### Turn on the equipment

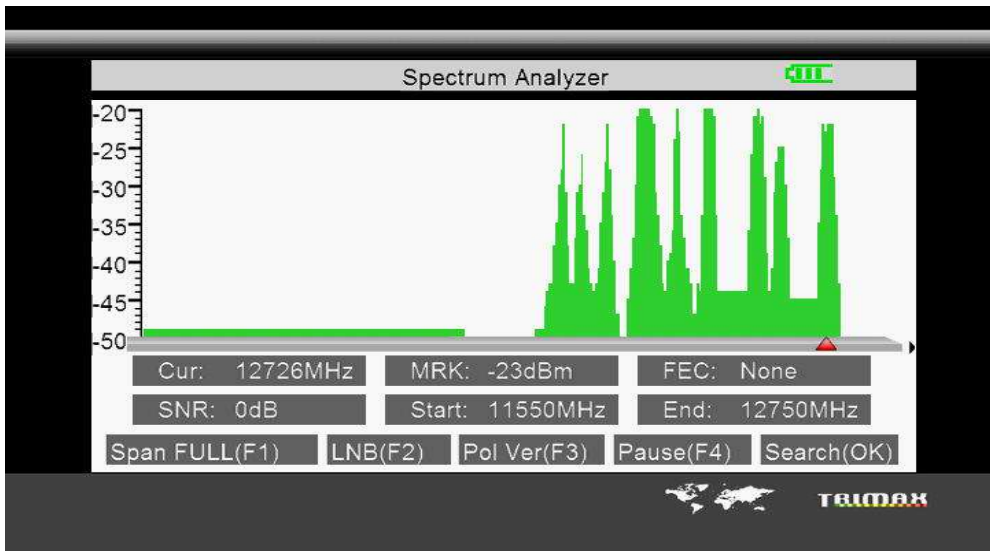
Press and hold [POWER] for 2 seconds to turn on the satellite meter, and then enter “Main Menu”.



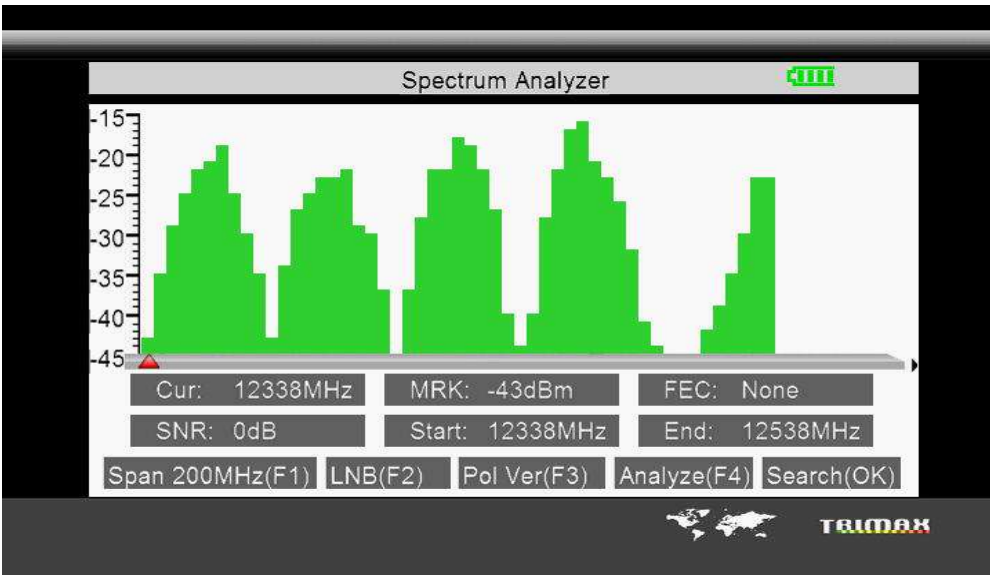
## BASIC FUNCTIONS

### Spectrum Analyzer

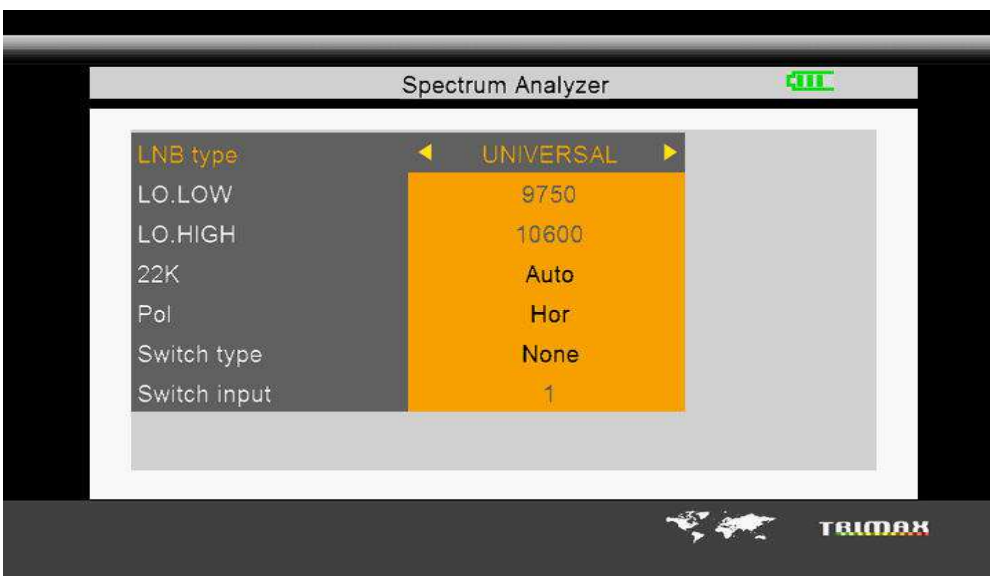
1. Press the [MENU] to display the main menu.
  2. Use [▲/▼] to move cursor.
  3. Press [OK] on <Spectrum> option, the following window will appear.
- (Or enter this menu directly through pressing [SPT])



4. Press [F1] to switch SPAN of spectrum abscissa, FULL as Default, and from 200MHz ~ 32MHz. The smaller span will show clearer signal status of frequencies. As shown in below:



5. Press [F2] can enter LNB interface to setting the system parameter. After setting complete, press [OK] to return to Spectrum menu. As shown in below:



LNB Type: Use [◀/▶] button to choose LNB Type among UNIVERSAL/5150/9750/10750/Customized  
 Low L.O.F: Use digital button to input the Low L.O.F once the LNB Type is customized.

High L.O.F: Use digital button to input the High L.O.F once the LNB Type is customized.

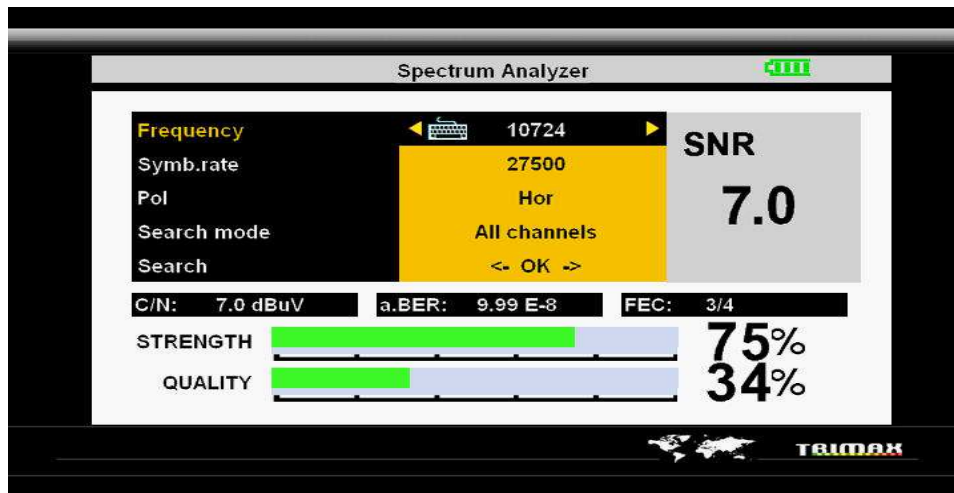
22K: Choose ON/OFF/Auto

Polarization control: Vertical/Horizontal

Switch Type: Choose NONE/DiSEqC1.0/ DiSEqC1.1

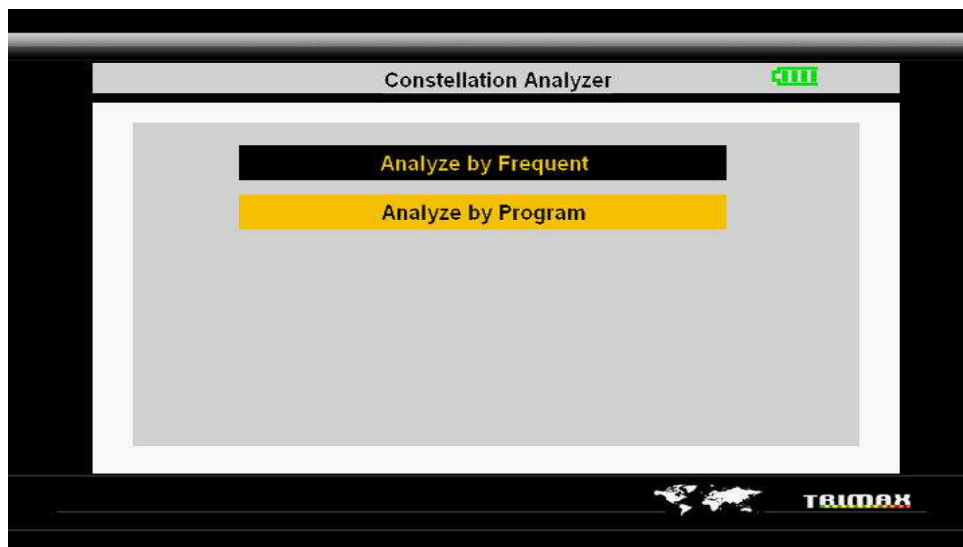
Switch Input: Choose 1/2/3/4 input

6. Press [F3] to switch between Horizontal and Vertical polarity.
7. Press [F4] to pause current status.
8. Press [▲/▼] to move vertical coordinate's position, and browse the level of Hi-Lo lines.
9. Press [◀/▶] to move Red cursor to select frequency, when a frequency with signal detected, the LOCK LED will light up and will be sound alarm.
10. Press [OK] when a frequency of Abscissa is selected, system will enter Frequency searching menu, press [OK] when Search selected to start frequency searching.



### Constellation Analyzer

1. Press the [MENU] to display main menu.
2. Use [▲/▼] to move cursor, press [OK] on <Constellation> option, the following window will appear. (Or enter this menu directly through pressing [CONS])



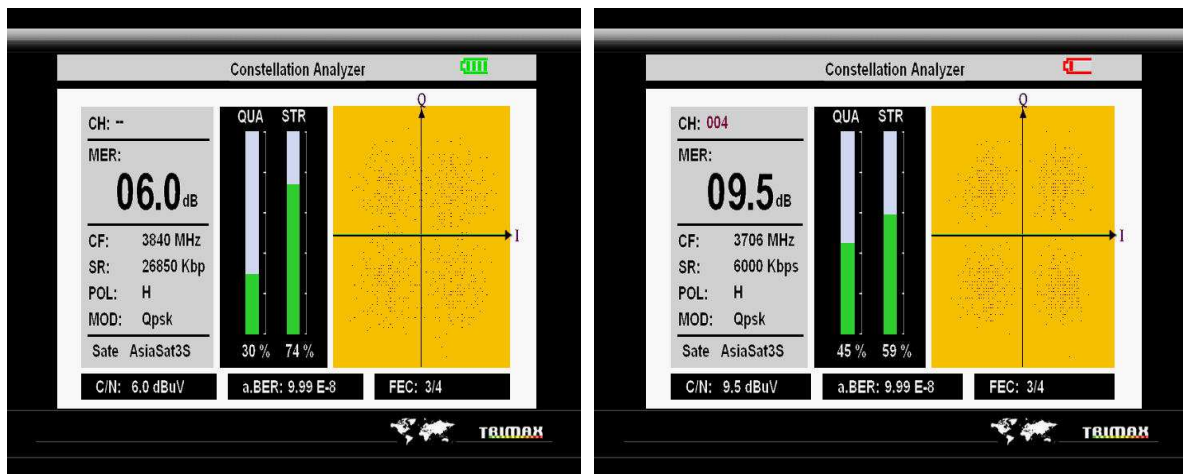
3. Select Analyzer by Frequent to enter Constellation Setting menu, as shown in below:



Satellite: Press [◀/▶] to select satellites, or press [OK] to enter Satellite list.

Frequent: Press [◀/▶] to select the existed TP frequency, the Symbol Rate and Pol option will be changed correspondingly. When a frequency with signal is detected, the LOCK LED will light up and will be sound alarm.

Search: Press [OK] to enter Constellation Analyzer interface, as shown in below:



By Frequent

By Program

- Under Constellation Analyzer interface (by Frequent), press [F4] will save current page to Store Data View.
- Under Constellation Analyzer interface (by Frequent), press [◀/▶] to switch between other Frequency of selected satellite.
- Under Constellation Analyzer interface (by Program), press [◀/▶] to switch between all the searched channels.
- Press [CAPT] to save the screenshot of current interface to USB storage device.

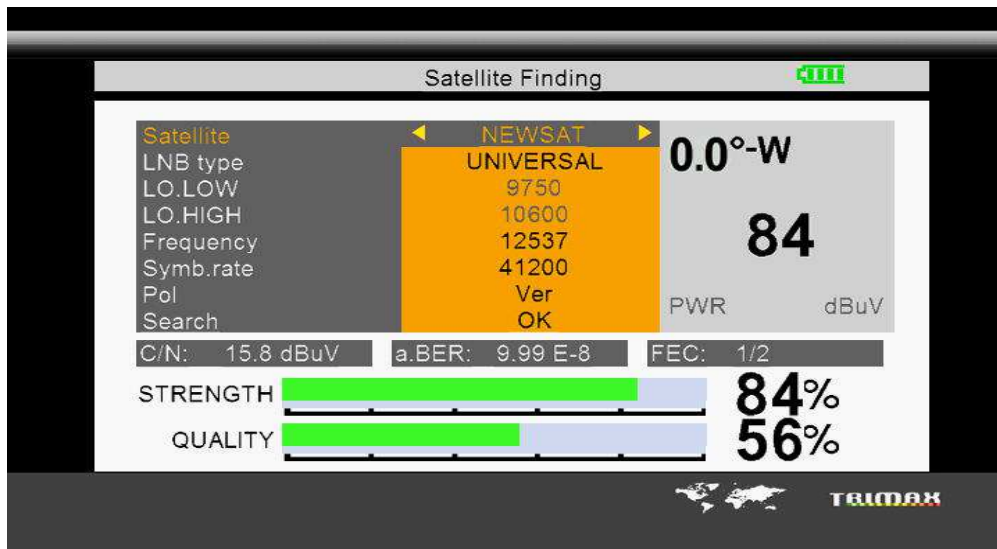
4. Select Analyzer by Program to enter Constellation Setting menu, as shown in above:

### Satellite Data Saving

After data analysis completed in Constellation Analyzer, press [F4] to save result page to Store Data View.

### Satellite Finding

1. Press the [FIND] to display the signal finding menu.



2. Set the parameter.

Satellite: Press [◀/▶] to select satellites, or press [OK] to enter Satellite list.

LNB Type: Press [◀/▶] to select LNB type

Low L.O.F: Use digital button to input the Low L.O.F once the LNB Type is customized

High L.O.F: Use digital button to input the High L.O.F once the LNB Type is customized.

Frequency: Use [◀/▶] to select the TP frequency you want.

Symb.rate: Set its parameters, can input numerically.

POL: Select between vertical and horizontal.

- When signal finding: you can see the bar meter of the LEVEL and QUALITY, and the numerical of C/N ,FEC, a.BER (after BER) at the same time the LOCK light will come on and the speaker will notify.
- Adjust the dish slightly to get the strongest signal.

Search: Go to <SERACH> and press [OK] to scan channels.

If you want to see the detailed signal level and quality, just press F4, following window will show:



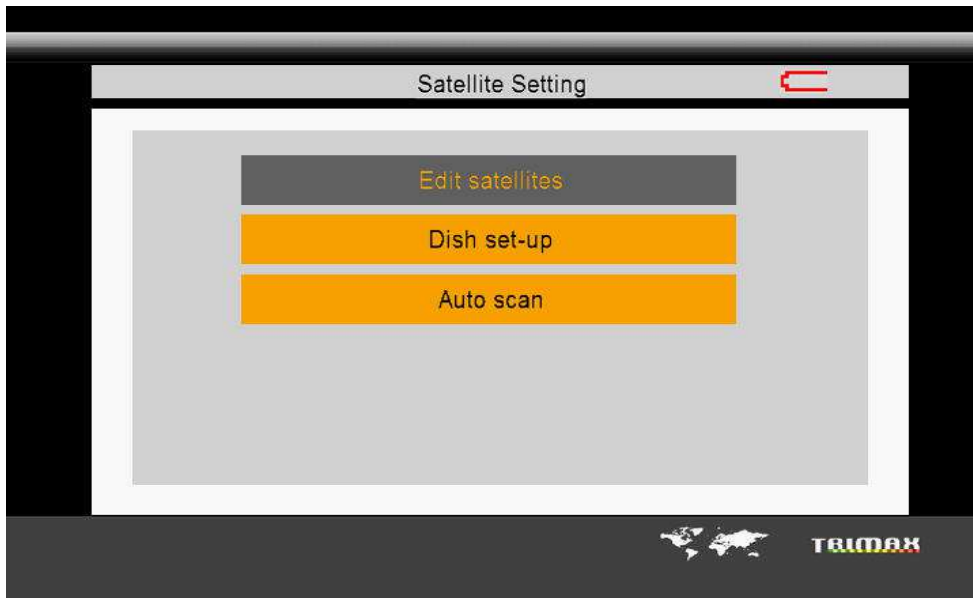
## Satellite Setting

### 1. Edit Satellite

1. Press the [MENU] to display main menu

2. Use [▲/▼] to move cursor, press [OK] on <Setting> option, the following window will appear.

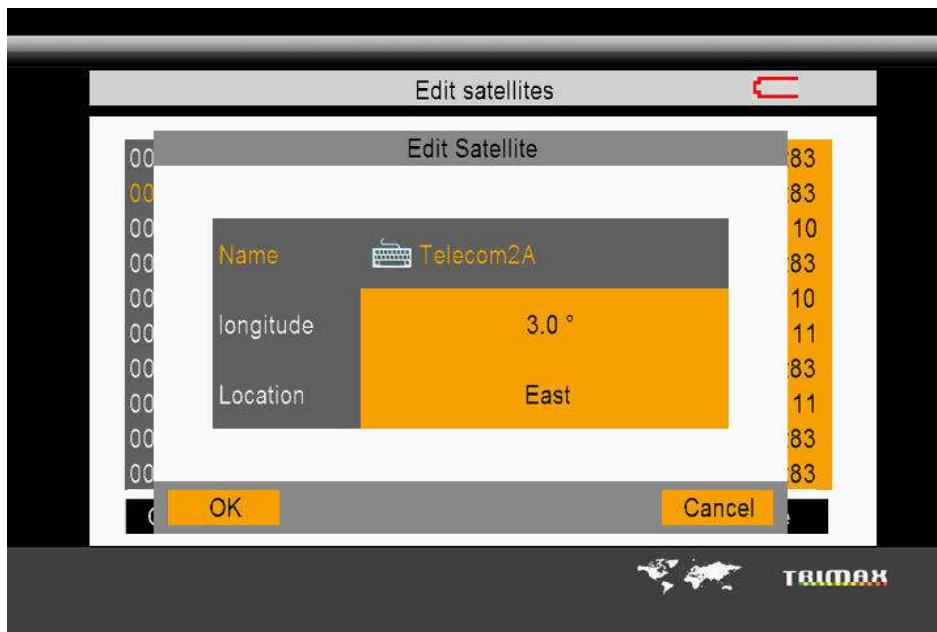




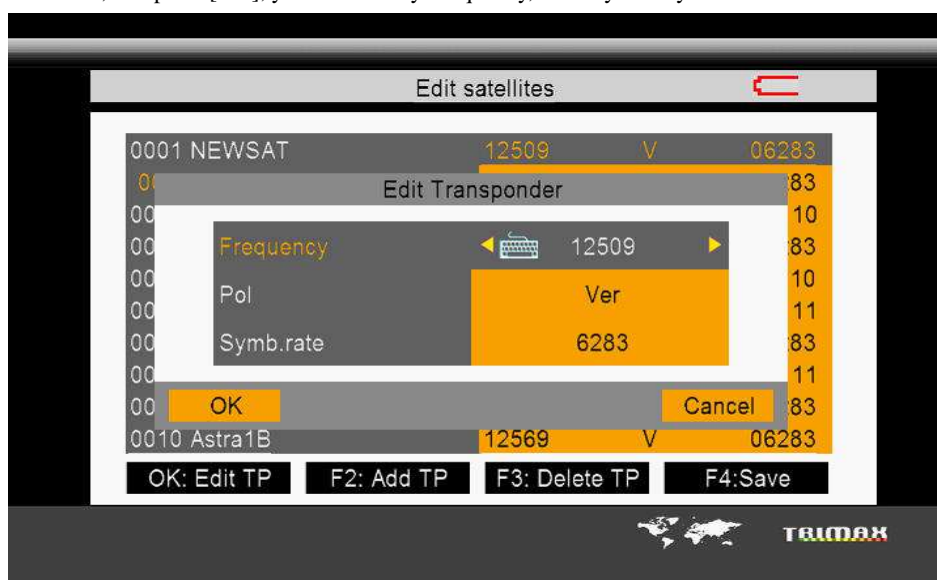
3. Press [OK] on <EDIT SATELLITE> option, the following window will appear.



4. Press [▲/▼] to move highlight, and press [OK] on selected satellite to show the Name, Longitude and Location information.



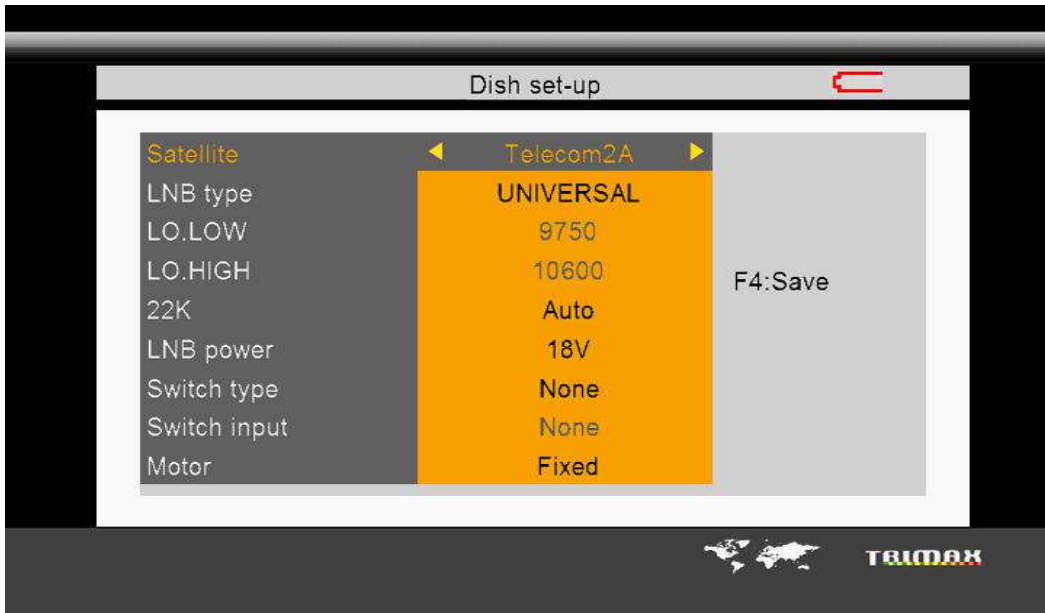
5. Use [▶] to move to TP list, and press [OK], you can modify Frequency, Polarity and Symbol rate.



- Press [F2] in Satellite list to add new satellite and one frequency for new added satellite.
- Press [F2] in TP list to add a new TP to selected satellite.
- Press [F3] to delete selected satellite in Satellite List and relevant frequencies.
- Press [F3] to delete selected TP in TP list and all relevant frequency.
- Press [F4] to save all changes.

## 2. Dish Set-up

1. Press [OK] on <DISH SET-UP> option, the following window will appear.



2. Use [▲/▼] to move cursor.

3. Use [◀/▶] to select the item you want.

LNB Type: Use [◀/▶] to choose LNB Type between UNIVERSAL/5150/9750/10750/customized.

Low L.O.F: Use digital button to input the Low L.O.F once the LNB Type is customized.

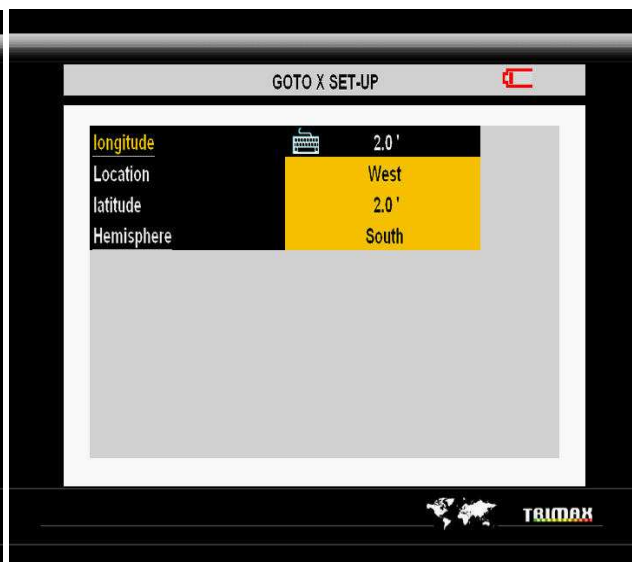
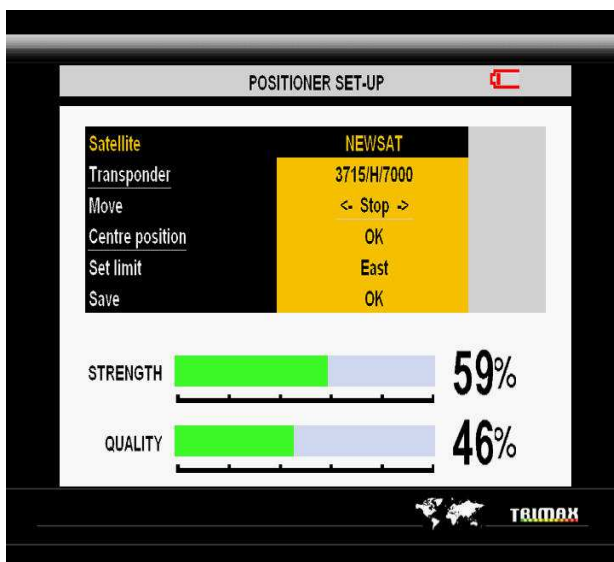
High L.O.F: Use digital button to input the High L.O.F once the LNB Type is customized.

22K: Choose AUTO/ON/OFF.

Switch Type: Choose NONE/DiSEqC1.0

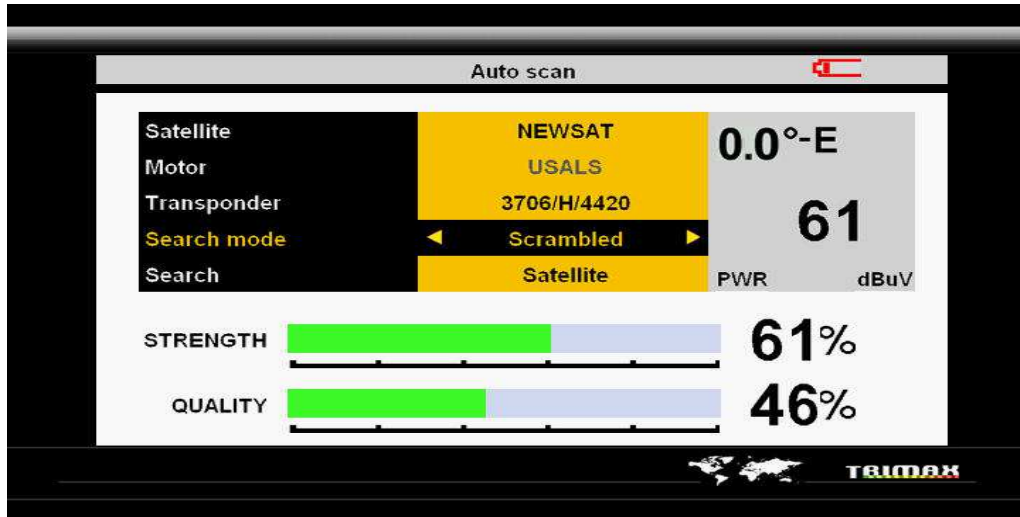
Switch Input: Choose 1/2/3/4 input.

Motor: Press [◀/▶] to select between Fixed/DISEQC1.2/USALS options. When DISEQC1.2 or USALS selected, press [OK] to enter future setting. As shown in below:



### 3. Auto Scan

1. Press [OK] on <Auto scan> option, the following window will appear.



2. Use [▲/▼] to move cursor.

3. Use [◀/▶] to select the item you want.

Satellite: Select the satellite you want to find by [◀/▶] or press [OK] to enter the satellite list to select.

Motor: It is defaulted set for “DISH SET-UP” menu. It was not allowed to modify unless you enter “DISH SET-UP” menu.

Transponder: Select the transponder you want, the LOCK light turns on and the warning rings when it was switched to the TP which has signals.

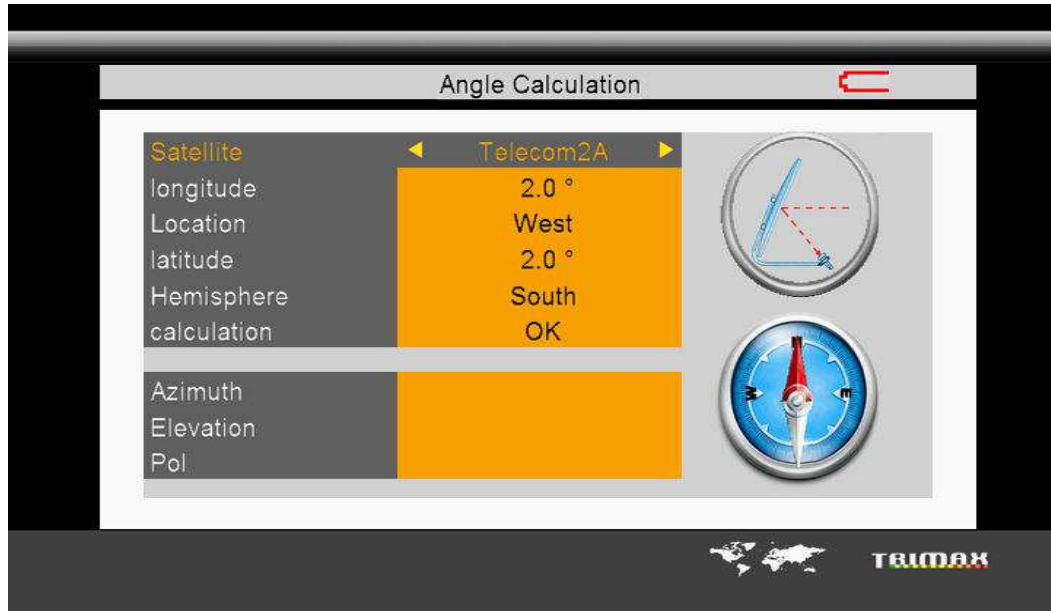
Search mode: Select the channel mode which you want to search, All channels / Scrambled / FTA.

Search: Select search scope, Satellite /Transponder.

### Angle Calculator

1. Press the [MENU] to display the main menu.

2. Use [▲/▼] to move cursor, press [OK] on <Angle> option, the following window will appear.



Satellite: Choose the satellite you want.

Your longitude: Input your local longitude.

Location: Input your local location.

Your Latitude: Input your local latitude.

Hemisphere: Input your local Hemisphere.

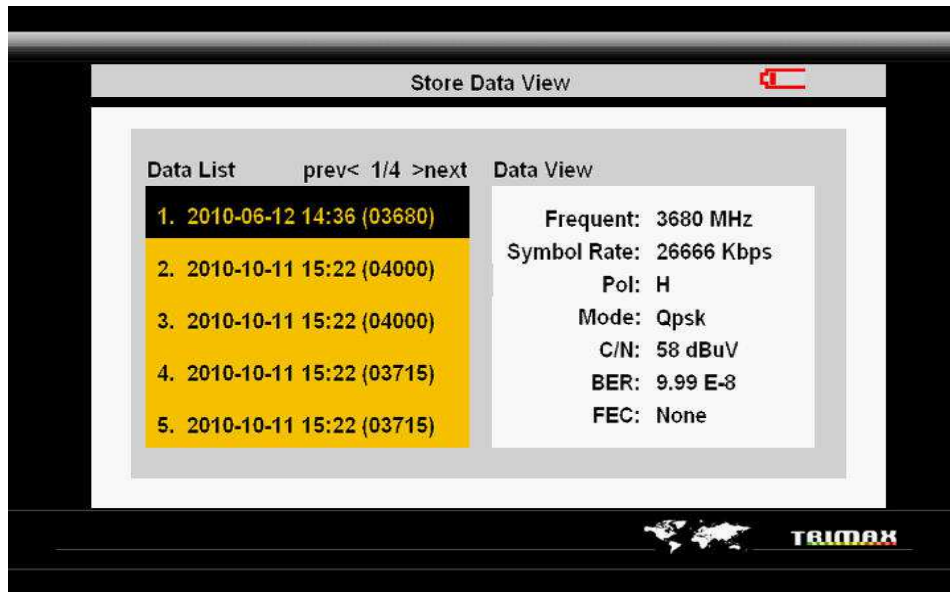
Antenna azimuth: Show the azimuth of the chosen satellite.

Antenna elevation: Show the elevation of the chosen satellite.

Antenna Polarity: Show the polarity angel of the chosen satellite

## Store Data View Menu

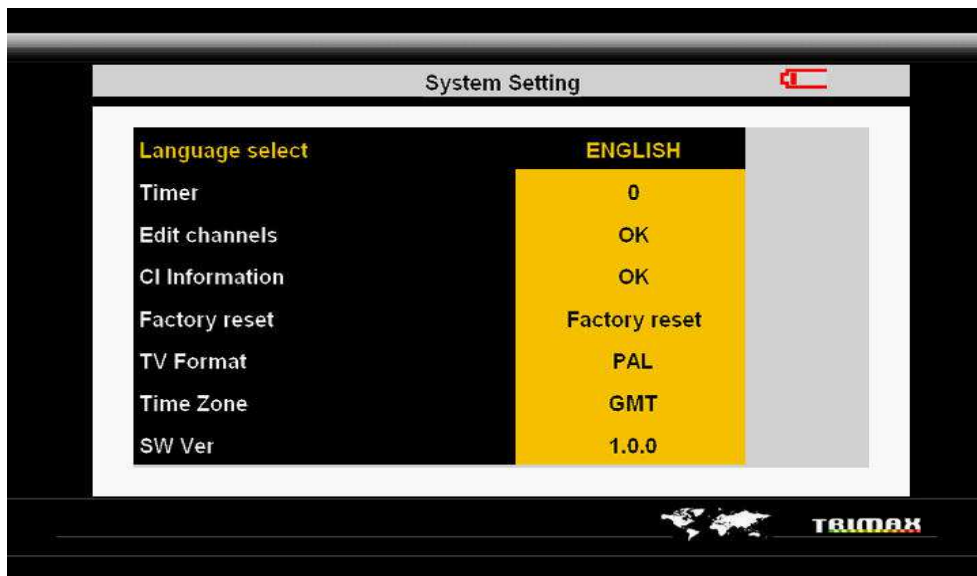
1. Press the [MENU] to display main menu.
2. Use [▲/▼] to move cursor, press [OK] on <Store> option, the following window will appear.  
(Or enter this menu directly through pressing [DATE])



3. Use [▲/▼] to select the figures you want to see.
4. Use [◀/▶] to turn pages for Data List.
5. Use [F1] to delete the selected records.
6. Press [OK] to enter the constellation analyzing interface for current records.

## System Setting

1. Press the [MENU] to display the main menu.
2. Use [▲/▼] to move cursor, press [OK] on <System> option, the following window will appear.

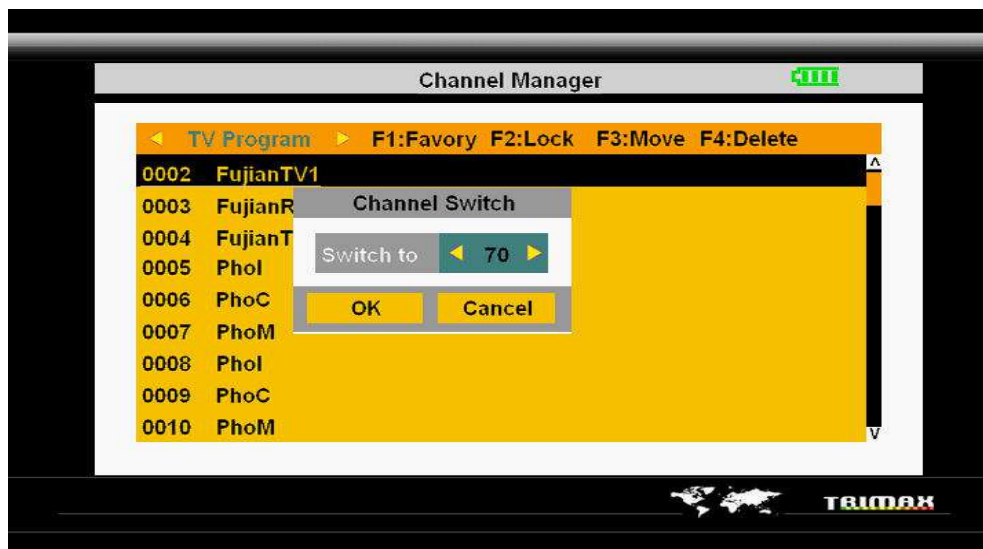


## 1. Channel Manager

1. Select "Edit channels", press [OK] to enter channel edit menu, see below pictures:



- Use [◀/▶] to select TV Program/Radio list.
- Use [▲/▼] to select the channels you want to edit.
- Press [F1] to set the favorite channels.
- Press [F2] to set the locking channels.
- Press [F3] to move the channels to the proper space and press again [F3] to save.
- Press [F4] to delete channels, mark it firstly and it will be totally deleted when exit.
- Press 5, you will see following picture, any number button to move the channels rapidly.



- a) Use [◀/▶] to switch any channel number you want. (From number 1 to the last channel number of current list)
- b) Input the number directly to the channel number you want. (From number 1 to the last channel number of current list)
- c) Use [▲/▼] to switch to 'OK' to make sure moving the channel, press [Cancel] to cancel it.

2. Press [EXIT] / [OK] / [MENU] to exit channel manager menu and go to full screen broadcasting status. The hint of confirming saving appears if the some channels were edited.

## 2. CI Card Information Management

CI Information: Press [OK] to “Common Interface” and view all the information.

## 3. Factory Default Setting

Factory reset: Press [OK], then the hint of if recover to “Factory Default” will appear. Press [OK] to eliminate all channels and keep factory default, select <Channel> option to cancel the defaulted system.

#### 4. Basic System Set (Language, time, A/V output, time zone)

Language select: language setting, only English available at present.

Timer: Select the satellite meter LCD shut off time through this setting; Use [◀/▶] to select shut off LCD screen time.

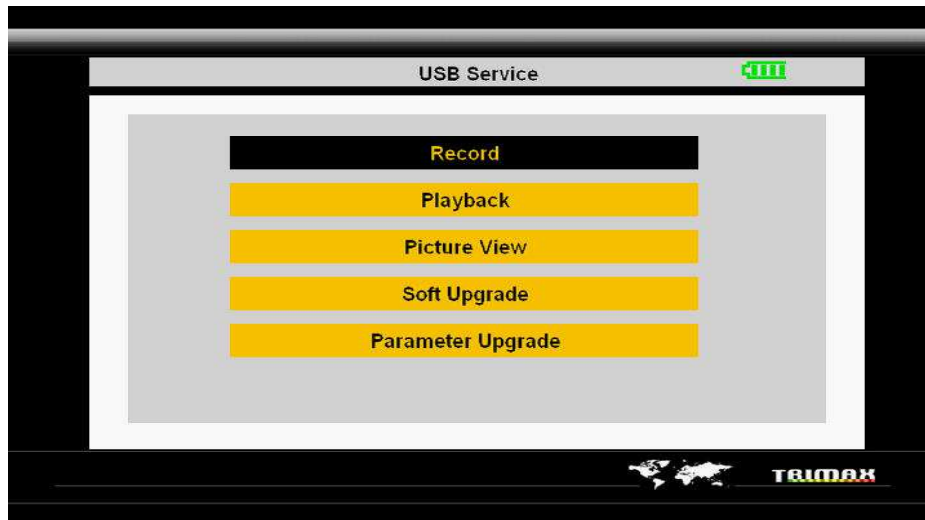
TV Format: VIDEO output, press [◀/▶] to switch Auto/PAL/NTSC output.

Time Zone: Time Zone setting, press [◀/▶] to select the time zone you want.

SW Ver: Software version number, it allows you to know if there is any new version software to use.

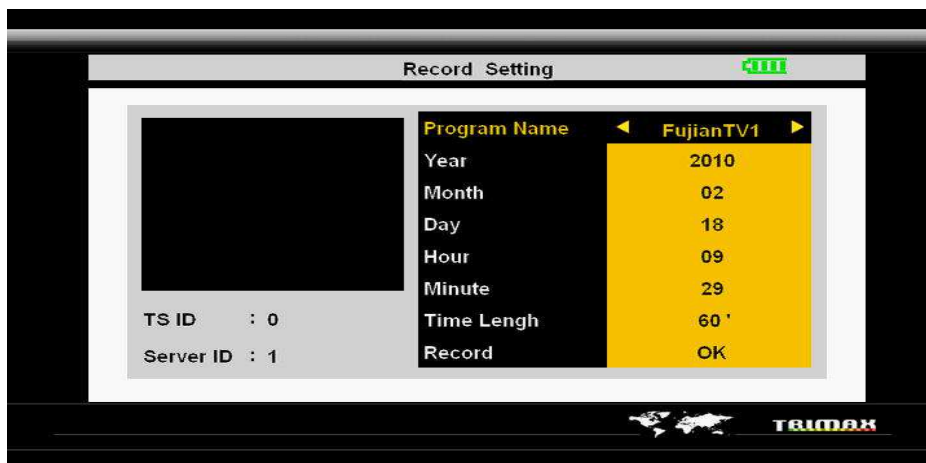
#### USB Service

1. Press the [MENU] to display the main menu.
2. Use [▲/▼] to move cursor, press [OK] on <USB> option, the following window will appear.  
(Or enter this menu directly through pressing [USB])



#### 1. Record Setting

Press [OK] under “Record” to enter record setting menu, as below pictures:



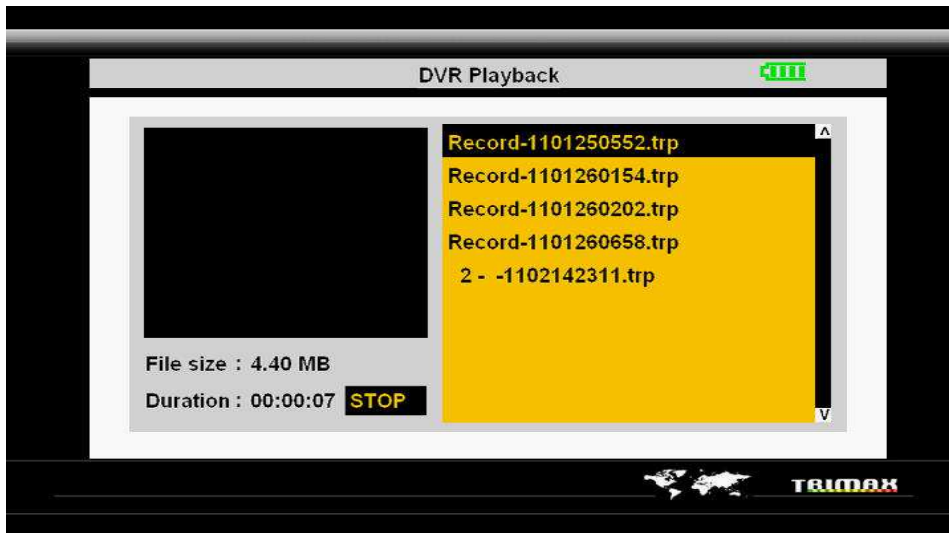
Program Name: Press [◀/▶] to select the channel you want to record.

Time Length: Press [◀/▶] to select the length of recording time. (It is ok to input numbers directly)

Record: Press [OK] to enter full screen and start recording or save the pre-recording set, it automatically turns to recording status when recording time is up.

#### 2. Playback

Press [OK] under “Playback” to enter the playback menus, as below pictures:



- Press [▲/▼] to select the recorded videos you want to play.
- Press [OK] to PLAY/STOP the selected videos in small screen.
- Press [◀/▶] to forward/backward the videos under <PLAY> status.
- Press [F4] to play in full screen.

### 3. Picture View

Press [OK] under “Picture View” to enter USB Picture View menu, as below pictures:



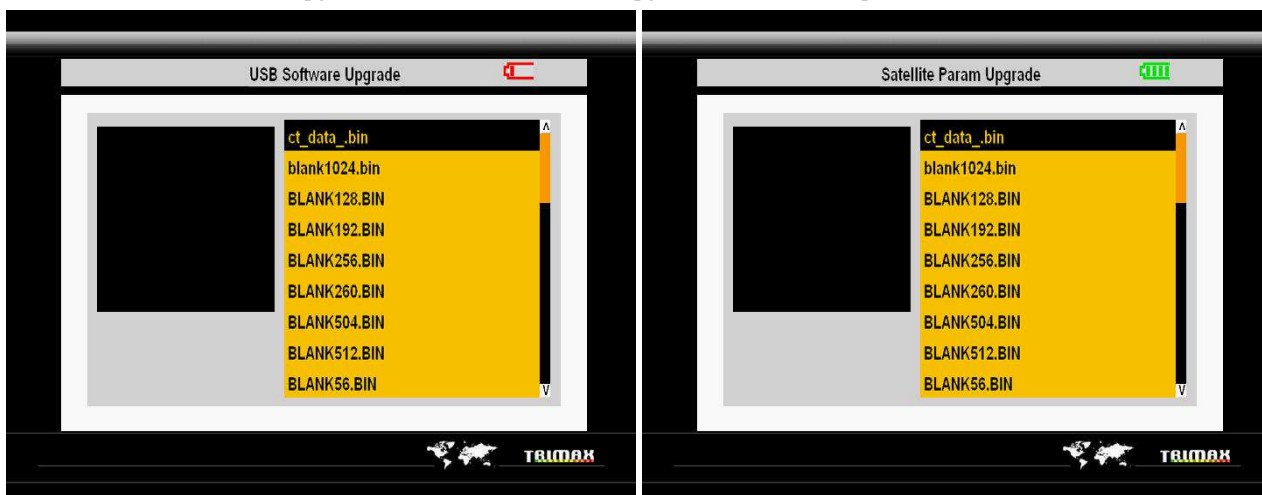
Press [▲/▼] to select the pictures you want to view, press [OK] to enter full screen viewing.

### 4. Soft Upgrade

Press [OK] under “Soft Upgrade” to enter the USB Software Upgrade menu, as below pictures:

### 5. Parameter Upgrade

Press [OK] under “Parameter Upgrade” to enter Satellite Param Upgrade menu, as below pictures:





Press [▲/▼] to select the files which can be upgraded and press [OK] to start upgrade. (P.S: Only upgrade higher version software.)

## Specifications

System capabilities	Fully DVB compliant	Yes
LNB/Tuner input	Connector	F type,male
	Frequency range	950MHz-2150MHz
	Signal lever	-90dBm~-0dBm
	LNB supply	13/18V,max400mA
	LNB switch control	22KHz
	DiSEqC	Ver 1.0
Demodulator	Front end	QPSK
	Symbol rate	2Mbps~45Mbps
	SCPC and MCPC Capable	Yes
	Spectral inversion	Auto conversion
System resource	Processor	32bit processor (200MHz)
	SDRAM	16Mbyte
	FLASH	2Mbyte
	EEPROM	8Kbyte
Video decoder	MPEG 2	Main Profile@Main Level
	Data Rate	up to 15M bits/s
	Resolution	720*576,720*480
	Video format	PAL/NTSC/SECAM
MPEG Audio	MPEG 1 layer 1&2	
	Type	Mono
	Sampling rates	32,44.1 and 48KHz
Serial data interface	Connector	USB type
Power supply	Li-oN Battery	1950 mA
	Supply voltage	12.6Volt
	charger	90-240V
Panel connectors	Digital tuner input	F type, male
Physical Specification	Size	9.5x15.5x4.5 (cm)
	Weight(Net)	0.5 Kg