

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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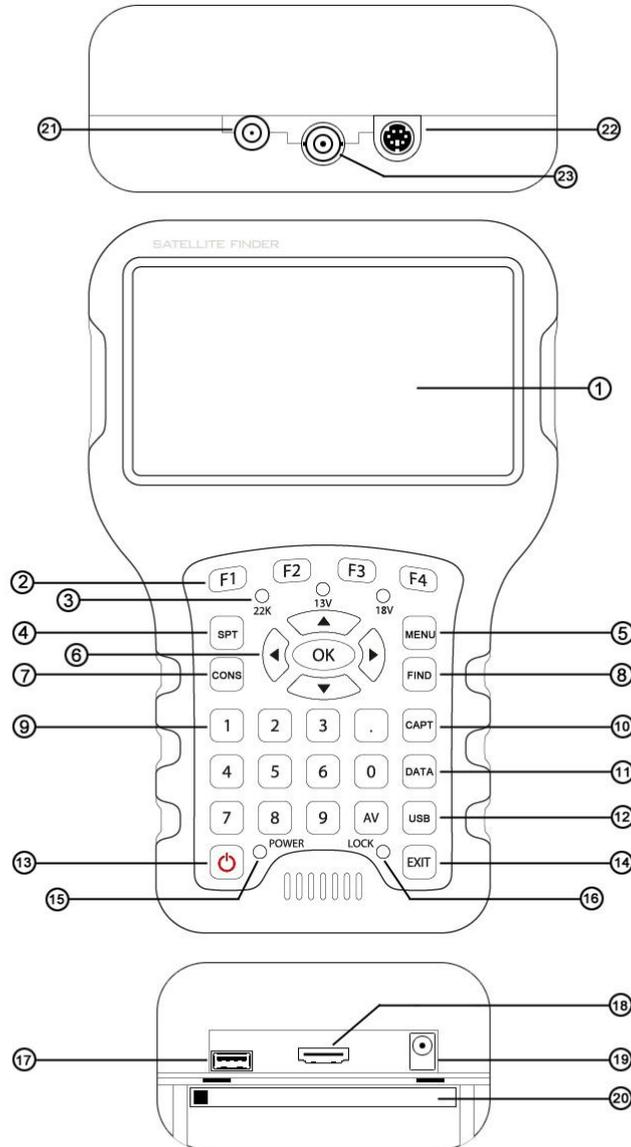
DESCRIPTION

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

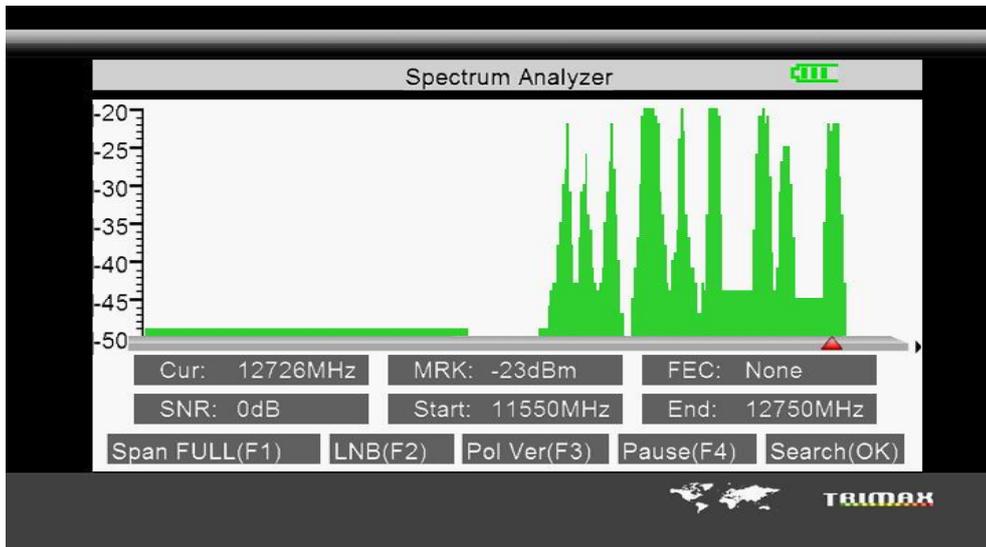
Press and hold [POWER] for 2 seconds to turn on the satellite meter, and then enter “Main Menu”.



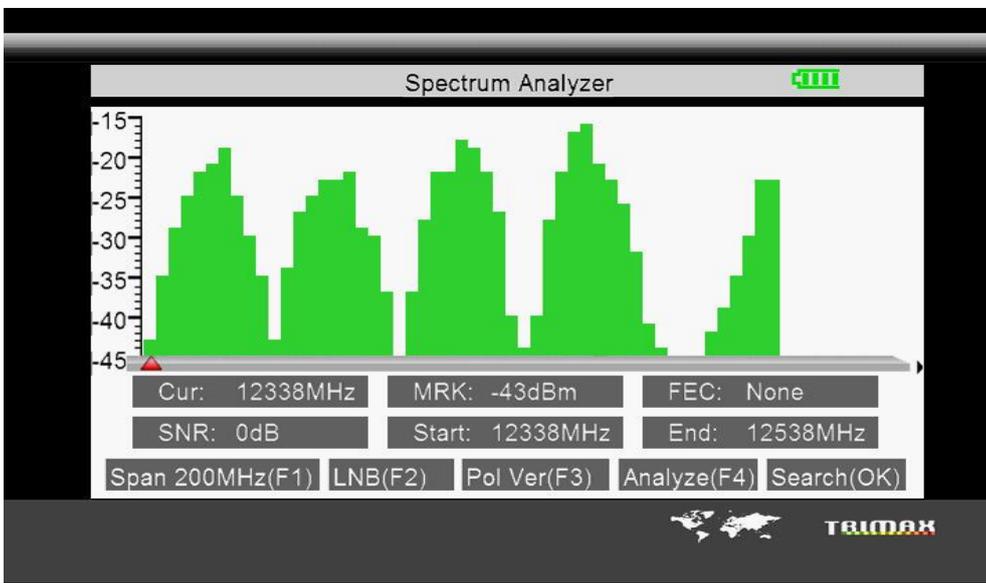
BASIC FUNCTIONS

Spectrum Analyzer

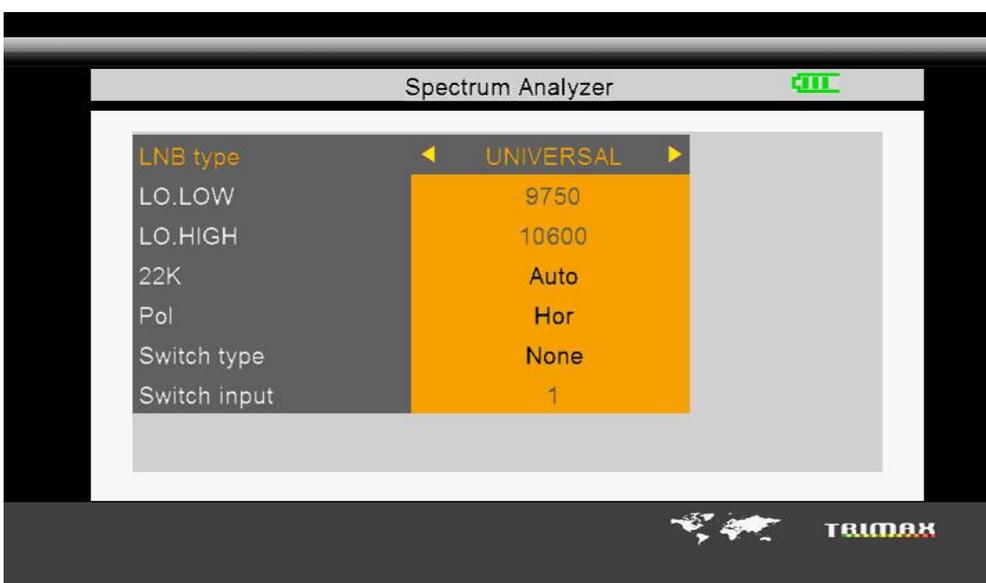
1. Press the [MENU] to display the main menu.
2. Use [▲/▼] to move cursor.
3. Press [OK] on <Spectrum> option, the following window will appear.
(Or enter this menu directly through pressing [SPT])



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.

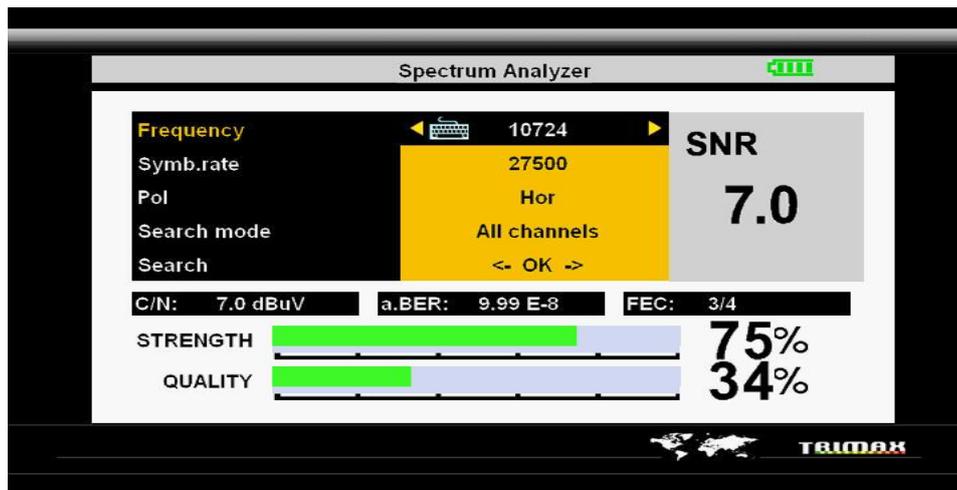
22K: Choose ON/OFF/Auto

Polarization control: Vertical/Horizontal

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

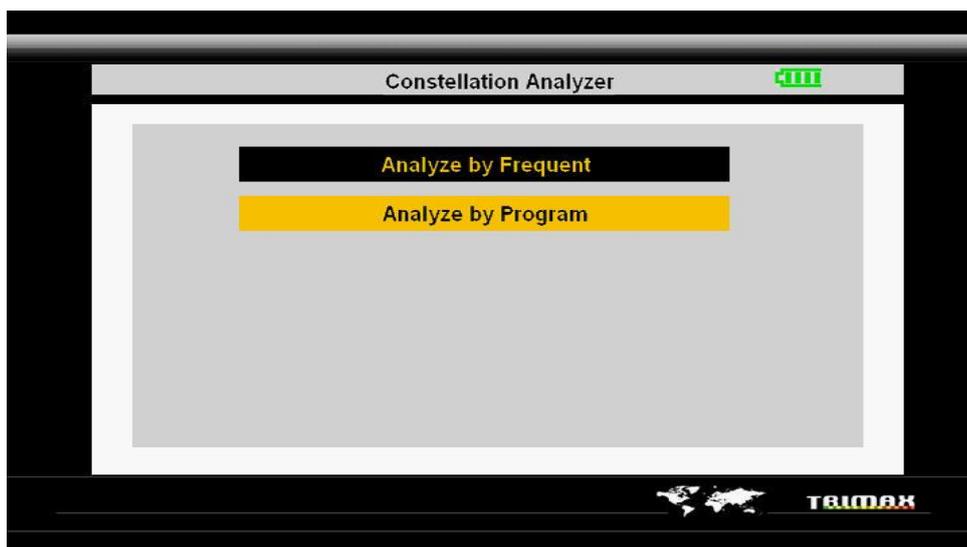
Switch Input: Choose 1/2/3/4 input

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])



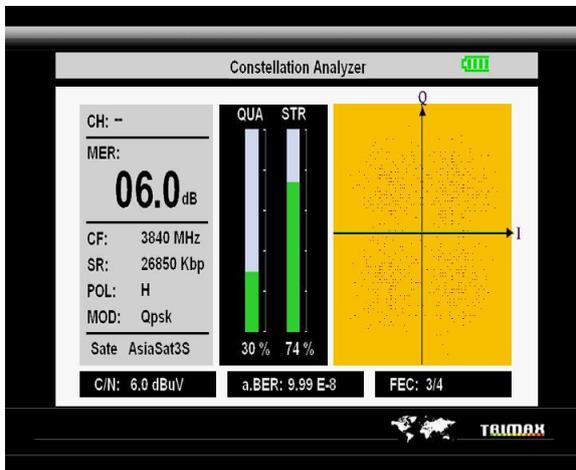
3. Select Analyzer by Frequent to enter Constellation Setting menu, as shown in below:



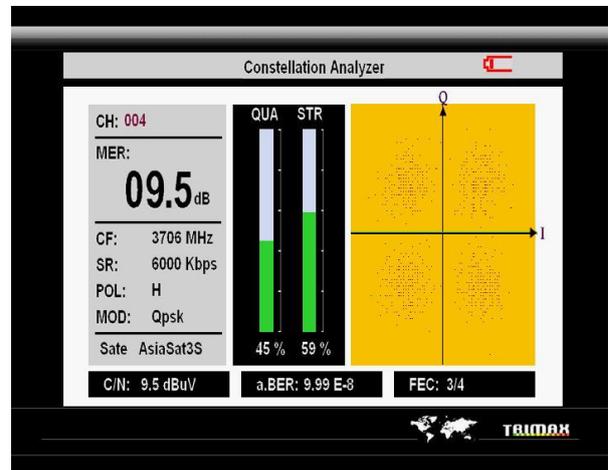
Satellite: Press [◀/▶] to select satellites, or press [OK] to enter Satellite list.

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.

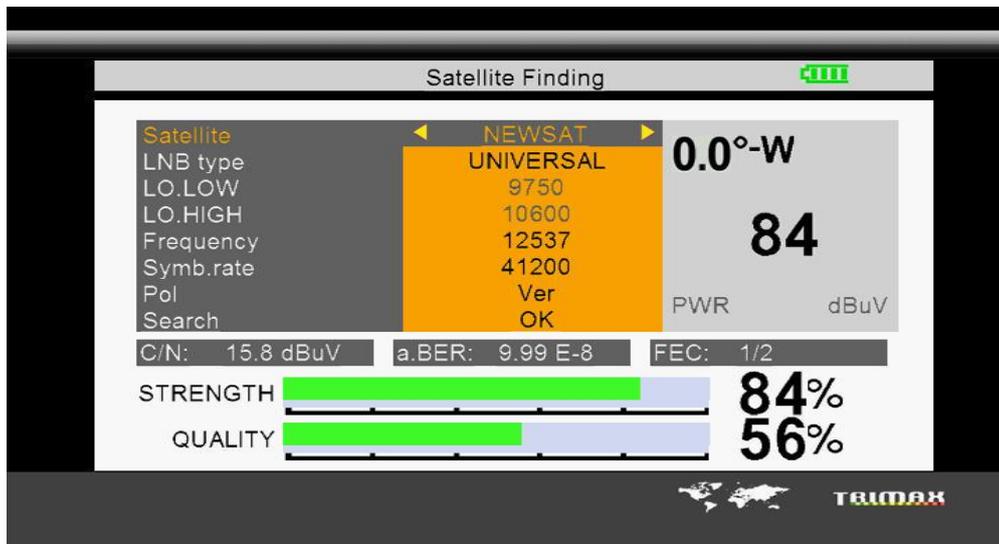
4. Select Analyzer by Program to enter Constellation Setting menu, as shown in above:

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.

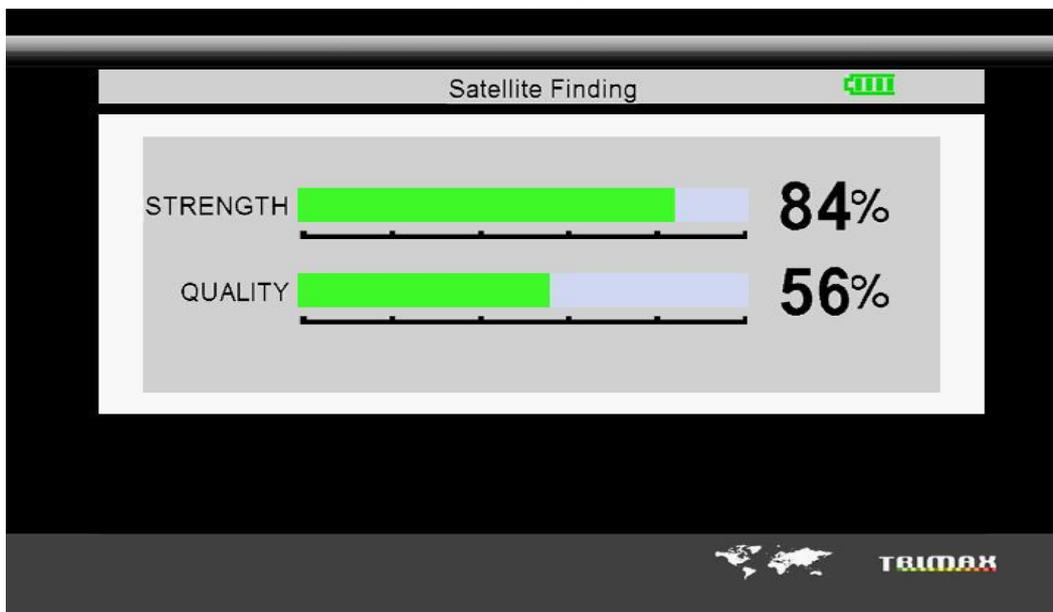
Symb.rate: Set its parameters, can input numerically.

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:

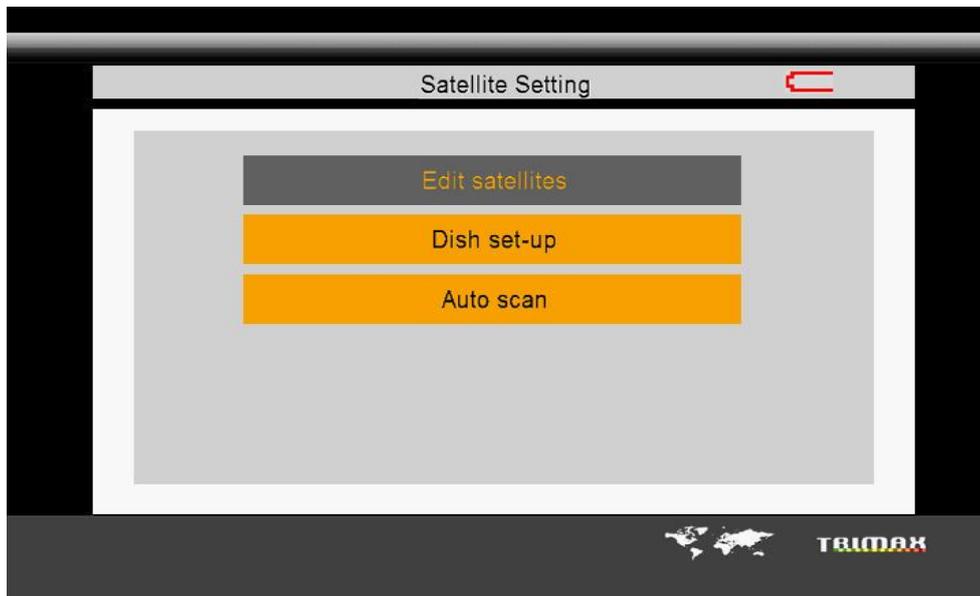


Satellite Setting

1. Edit Satellite

1. Press the [MENU] to display main menu

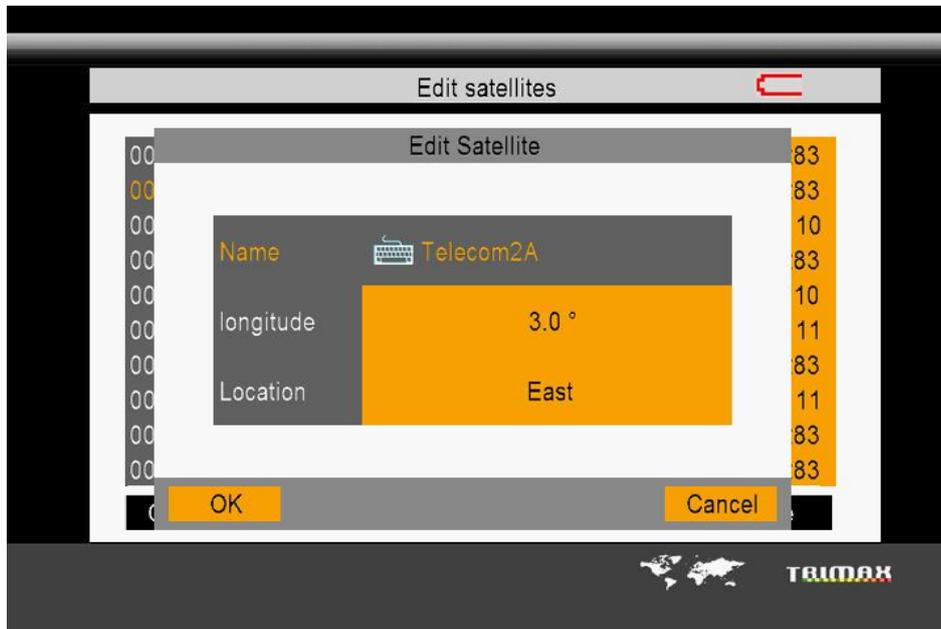
2. Use [▲/▼] to move cursor, press [OK] on <Setting> option, the following window will appear.



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.



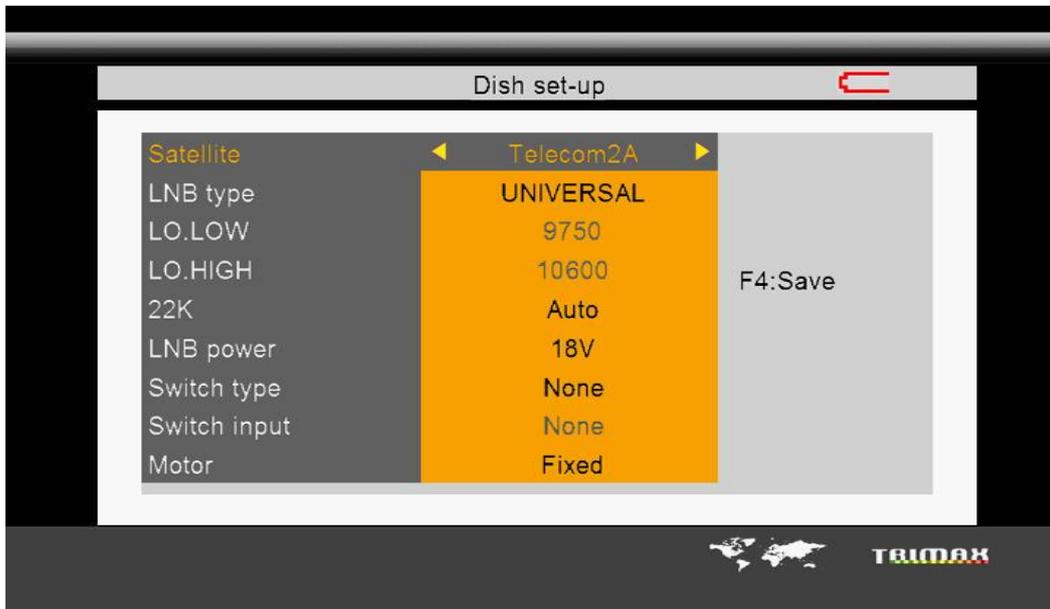
5. Use [▶] to move to TP list, and press [OK], you can modify Frequency, Polarity and Symbol rate.



- 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.

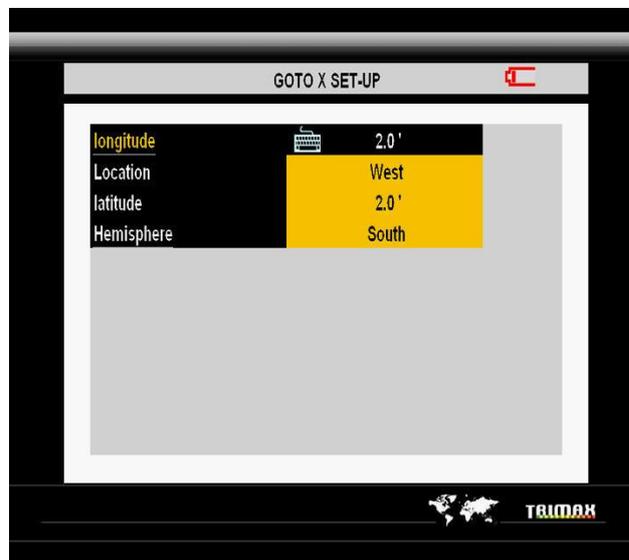
High L.O.F: Use digital button to input the High L.O.F once the LNB Type is customized.

22K: Choose AUTO/ON/OFF.

Switch Type: Choose NONE/DiSEqC1.0

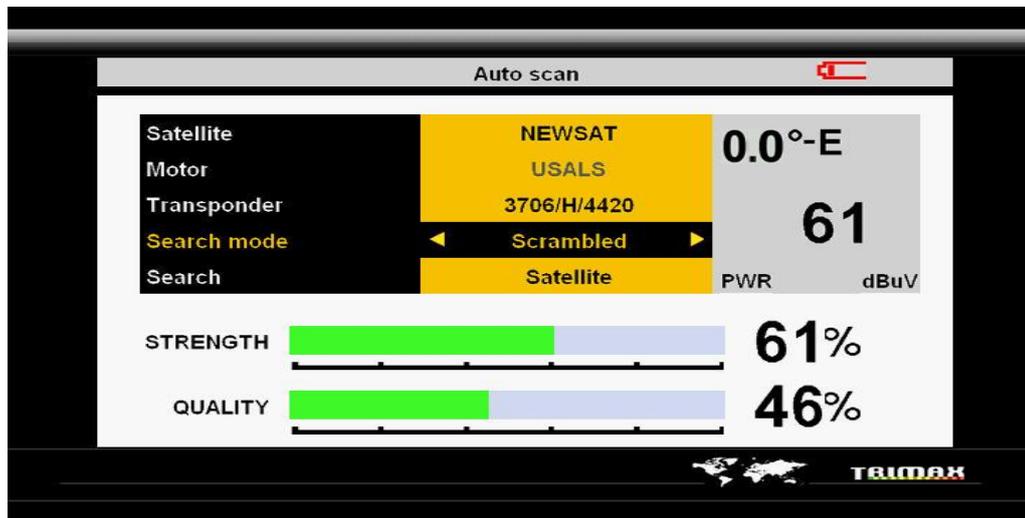
Switch Input: Choose 1/2/3/4 input.

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.

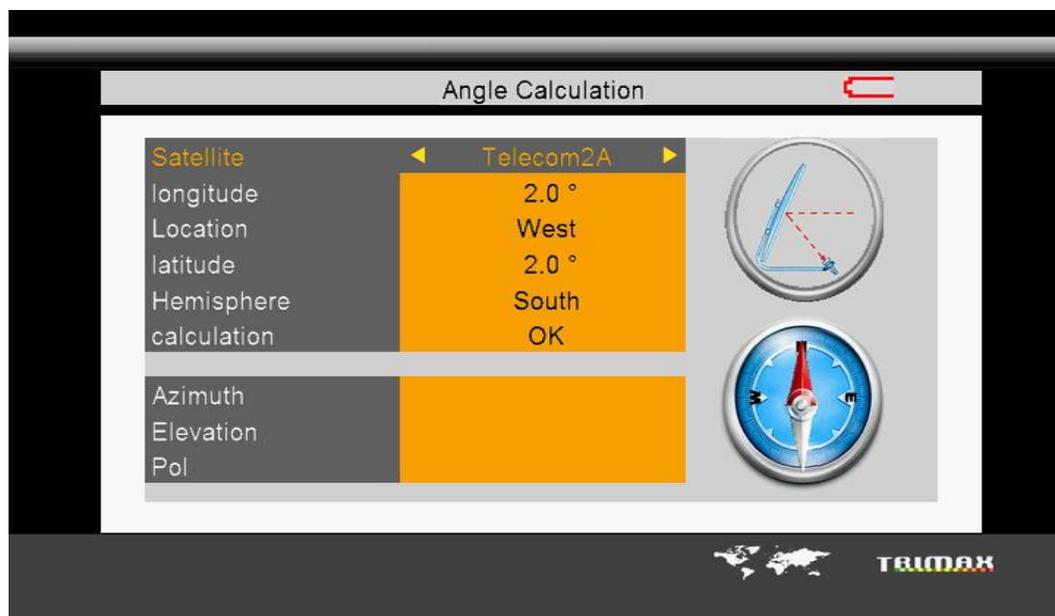
Search mode: Select the channel mode which you want to search, All channels / Scrambled / FTA.

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.

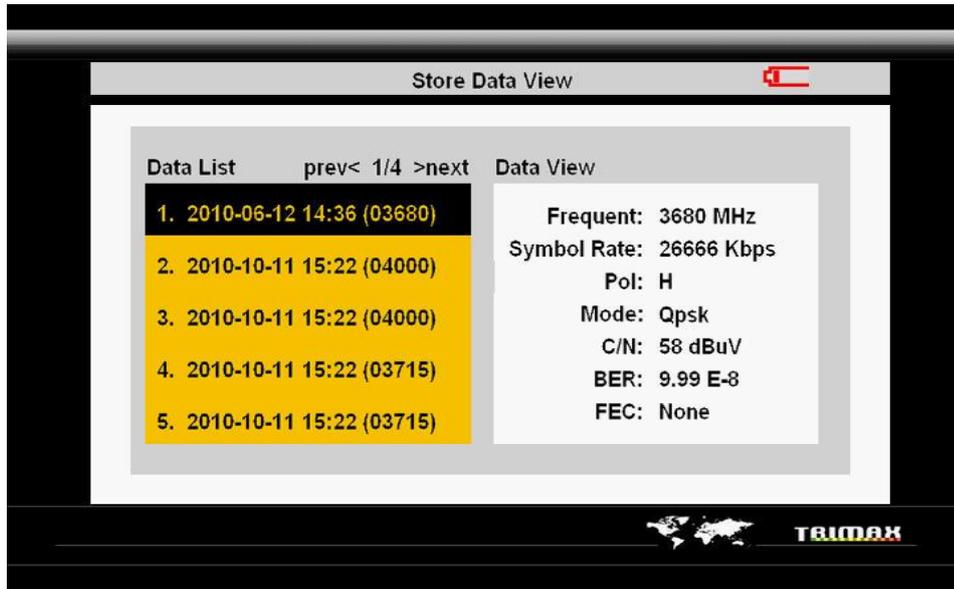
Antenna azimuth: Show the azimuth of the chosen satellite.

Antenna elevation: Show the elevation of the chosen satellite.

Antenna Polarity: Show the polarity angel of the chosen satellite

Store Data View Menu

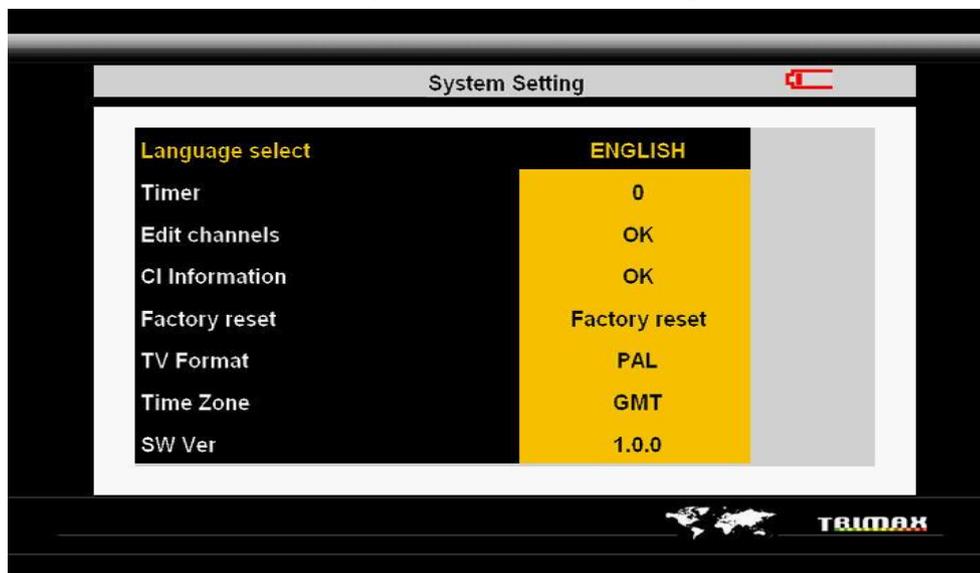
1. Press the [MENU] to display main menu.
2. Use [▲/▼] to move cursor, press [OK] on <Store> option, the following window will appear.
(Or enter this menu directly through pressing [DATE])



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.

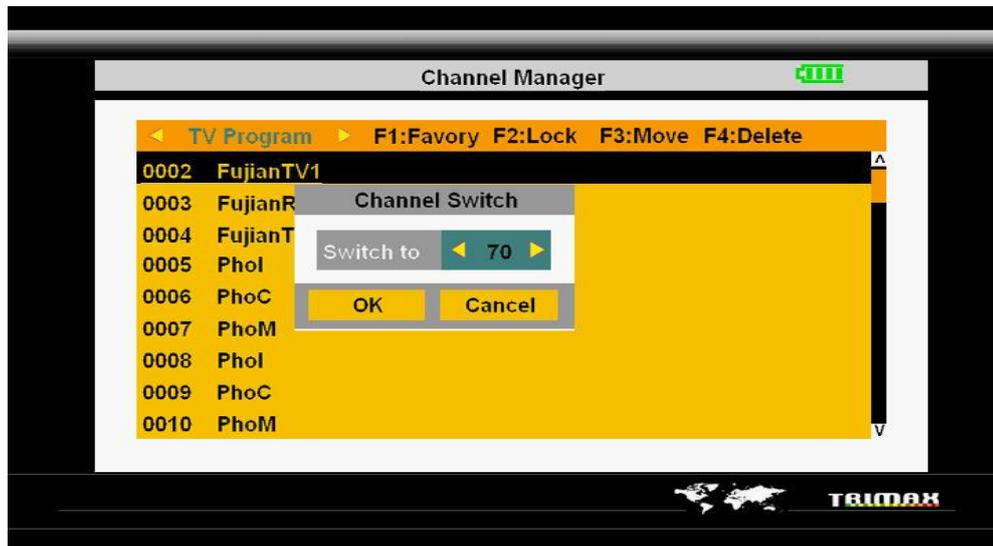


1. Channel Manager

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] top 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.



- Use [◀/▶] to switch any channel number you want. (From number 1 to the last channel number of current list)
- Input the number directly to the channel number you want. (From number 1 to the last channel number of current list)
- 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.

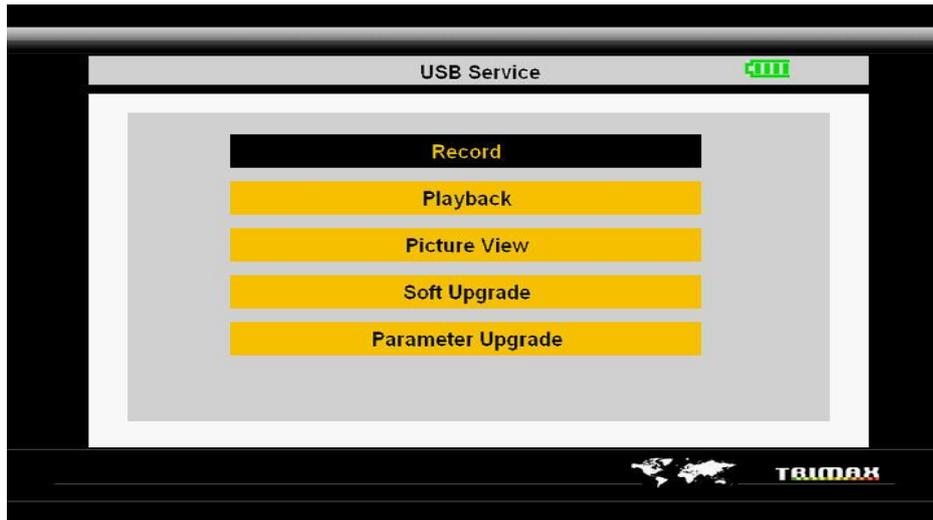
SW Ver: Software version number, it allows you to know if there is any new version software to use.

USB Service

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

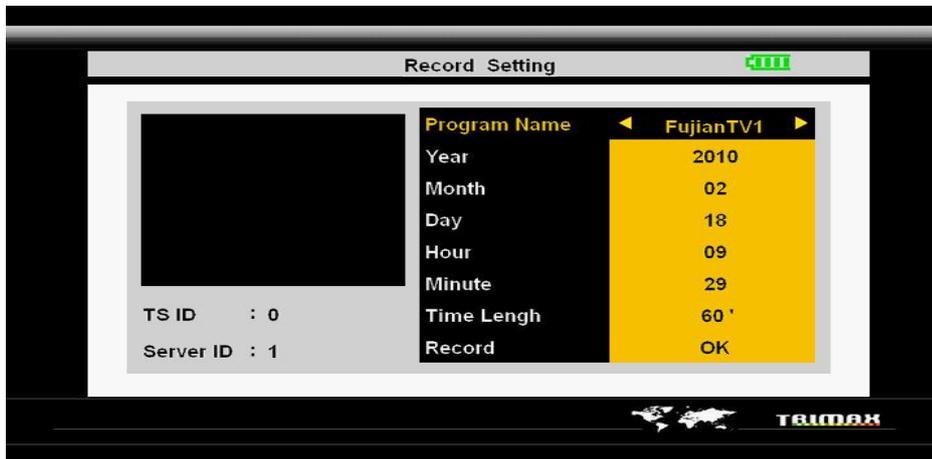
2. Use [▲/▼] to move cursor, press [OK] on <USB> option, the following window will appear.

(Or enter this menu directly through pressing [USB])



1. Record Setting

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



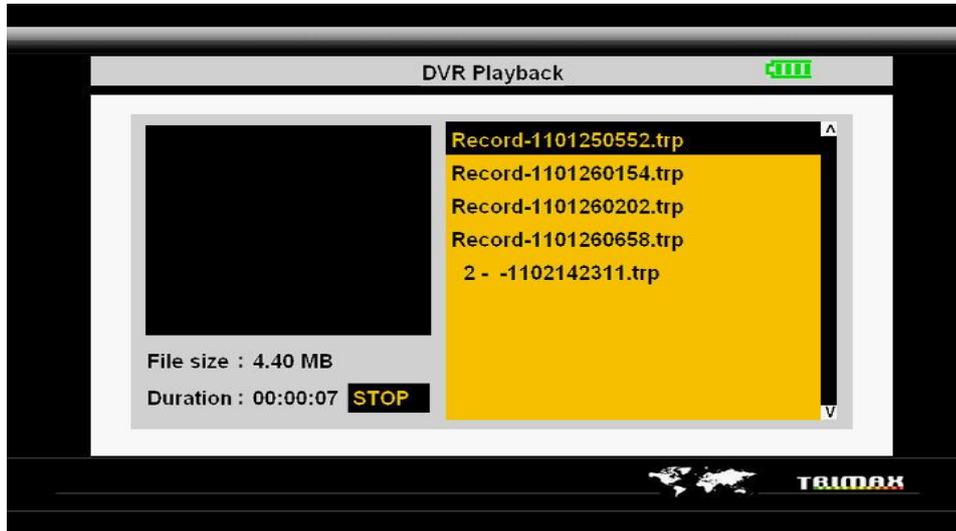
Program Name: Press [◀/▶] to select the channel you want to record.

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:



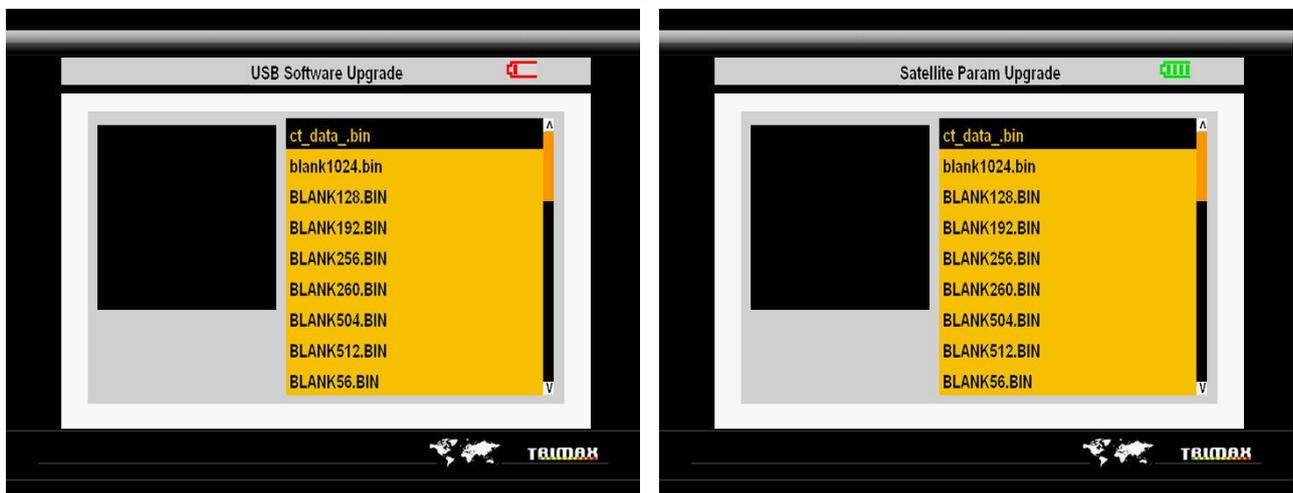
Press [▲/▼] to select the pictures you want to view, press [OK] to enter full screen viewing.

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