

Manual smartmeter S40

Preface

Please read this manual carefully before using your Digital Sat meter for the first time.

This operating manual will help you in the

- Appropriate,
- Safe
- Favorable

The technical specifications and operating methods included in this manual are subject to changes without notice. In case of any inquiries after a period of usage, please contact the manufacturer.

Safety Precaution

Please read the safety instructions carefully before operating the device.

Please follow all warnings and instructions on the equipment and in the operating manual.

Safety of persons

Ensure that nobody can be hurt by falling tools or parts of the satellite antenna during the adjustment and installation of the antenna.

For own security, use a rope on sloping roofs.

Attention for adapter

The device should only be operated with the supplied AC adapter at the mains. Do not open the meter or the included AC adapter.

There is danger of life through electric shock! Wrong usage of the ports can lead to the destruction of the measuring device.

Proceed carefully with the measuring device:

- Avoid low temperatures (below 0 °C) or to high humidity.
- The TFT display can be damaged by mechanical impacts.
- Avoid excessive input voltages. Please refer to the technical data

Do not operate with the device:

- If it has visible damage,
- If there are loose parts in the device,
- If the device was located outdoors or in damp rooms a extended period of time.

Main Supply:

Before operating, please check the units operating voltage is 90~240V AC 50/60Hz.

Overload:

Do not overload a wall outlet, extension cord or adapter, neither use damaged power cord or touch it with wet hand as this may result in electric shock.

 **Liquid:**

The receiver shall not be exposed to dripping or splashing water, and that no objects filled with liquids, such as base, shall be placed on the apparatus.

 **Ventilation:**

Keep the slots on top of the receiver uncover to allow sufficient airflow to the unit. Do not put the receiver on soft furnishings or carpets. Do not expose there receiver to direct light or do not place it near a heater or in humid conditions. Do not stack other electronic equipments on top of the receiver.

 **Cleaning:**

Plug out the receiver from the wall outlet before cleaning. Clean the receiver by a soft cloth or mild solution of washing-up liquid (no solvents).

 **Location:**

Put the receiver indoor in order to avoid lightening, raining or sunlight.

 **Uncover:**

Do not remove the cover, to reduce the risk of electric shock. Contact qualified and licensed service personnel to repair the receiver, or contact your dealer.

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I. Reference

1.1 General Features

DVB-S/S2 Compliant, DVB-T/T2 Compliant, DVB-C.

MPEG-1, MPEG-2 MP@ML, H.264, VC1, DV, MPEG-4, H.265 (1080p@60fps)

1.2 Brilliant on Screen Graphic

User Friendly OSD Menu with Full Function

Storing 8000 Channels

USB 2.0 Host Controller

Software Upgrade via USB

Satellite Identify

DiSEqC Search

Spectrum

Packet Control

Constellate

II. Product Overview

DVB-S2+T2/C HEVC



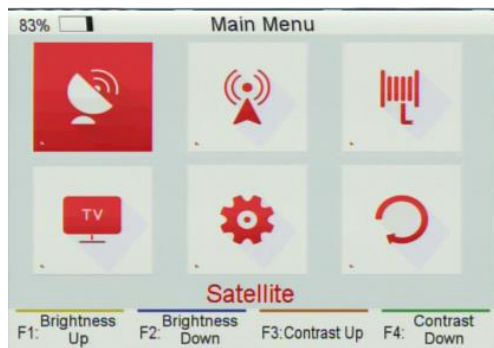
- **Screenshot:** Screenshots of every menu.
- **LCD Screen:** Shows Menus and Programs clearly.
- **Power light :** Indicates the power status
Red: the product is power on..
Green: the product is charging.
- **LOCK light:** This light will be on when signal is locked
- **13V/18V light :** Indicate the 13V/18V
- **FIND:** Enter the menu of measurement signal, you can measure the signal about transponder quickly.
- **SCAN:** In the S2 model, it is blind scan
- **MENU:** Enter the main menu.
- **Function:** Made of 4 keys, F1 - F4.
- **EXIT:** Exit from the present menu and back to the previous menu.
- **Arrow key and OK:** Press the Arrow key to select the right item then press OK key to confirm.
- **NUMERIC KEY (0-9):** Enter a TV/radio channel number or menu option number.
- **USB Port:** One USB Host Port.

- **ON/OFF:** Switch the Meter power on/off.
- **DC 15V:** Connect to the power adaptor.
- **Tuner:** Connect to the satellite antenna cable signal or the Terrestrial or Cable signal.
- **AV in/Out DC OUT:** Use AV line connect to TV or connect to other equipment as a television.
- **SYSTEM:** Quick entry into the spectrum.

III. Detailed Operation Guide

3.1 Powering On

Power on by switch ON/OFF button.



Note: In this menu, you can press F1/F2 button to set brightness and press F3/F4 button to set contrast.

3.2 Satellite

Main Menu-> Satellite

Press **OK** button to enter the satellite menu.



3.2.1 TP Search

Main Menu-> Satellite->TP Search

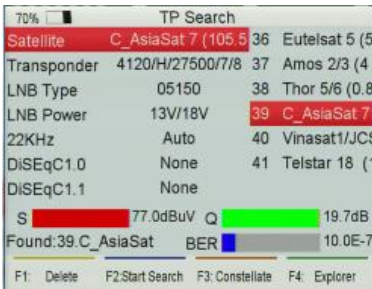


Highlight the **TP Search** and press the **OK** button to enter

Select Satellite. In this menu, you can Select, Add, Delete, Rename, and Move to satellite.

Select satellite and press the **ok** button to enter **TP Search**. This menu allows you to configure the antenna setting parameters.

You can select satellite, transponder, LNB TYPE,LNB Power,22KHz,DiSEqC1.0,DiSEqC1.1.]



- **Delete:** If you highlight the Satellite, press **F1** button to delete satellite. If you highlight the Transponder, press **F1** button to delete transponder.

- **Start Search:** After configure the antenna setting, press the **F2** button to TP search.

- **Constellate:** Press the **F3** button to display constellation.

- **Explorer:** Press the **F4** button to explorer the signal information.

Satellite	C_AsiaSat 7 (105.5) 36	Eutelsat 5 (4
Transponder	4120/H/27500/7/8 37	Amos 2/3 (4
LNB Type	05150 38	Thor 5/6 (D.8
LNB Power	13V/18V 39	C_AsiaSat 7
22KHz	Auto 40	Vinasat1/JC
DiSEqC1.0	None 41	Telstar 18 (
DiSEqC1.1	None	
S	77.1dBuV	Q 20.8dB
Found:	39.C_AsiaSat	BER 10.0E-7
F1: Delete F2: Add F3: Move to F4: Rename		

Satellite: Press the ◀/▶ to select satellite or press the **ok** button to enter satellite list, then select satellite.

When you highlight the satellite and press **ok** button, you also can execute Delete, Add, and Move to and Rename satellite.

Satellite	C_AsiaSat 7 (105.5) 36	4082/H/3185
Transponder	4120/H/27500/7/8 37	4087/H/3178
LNB Type	05150 38	4094/H/5800
LNB Power	13V/18V 39	4100/V/2972
22KHz	Auto 40	4120/H/2750
DiSEqC1.0	None 41	4140/V/2750
DiSEqC1.1	None 42	4146/H/5317
S	77.2dBuV	Q 20.3dB
Found:	39.C_AsiaSat	BER 10.0E-7
F1: Delete F2: Start Search F3: Constellate F4: Explorer		

- **Transponder:** Press the ◀/▶ to select transponder or press the **ok** button to enter transponder list, then select transponder. When you highlight the transponder and press **ok** button, you also can execute Delete, Add, Delete, and Edit transponder and Edit PID.

Note: If you change the satellite, the transponder will be changed automatically.

3.2.2 Satellite IDE.

Main Menu-> Satellite->Satellite IDE.

If you don't know the signal information of some usual sat, in this menu, please wait a moment, it will find the satellite identify.

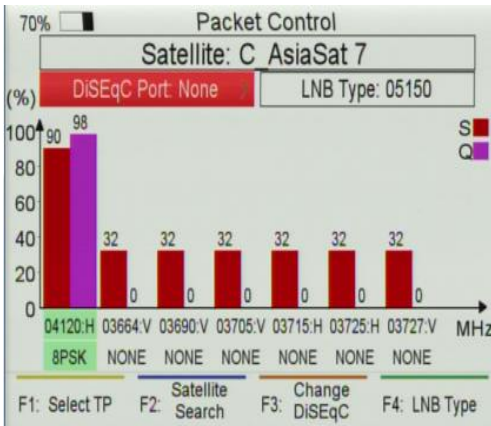
3.2.3 Packet Control

Main Menu-> Satellite -> Packet Control

In this menu, the TP will be displayed round. And you can know the strength and quality of each transponder.

Note:

- The satellite showed in this menu is what you select in TP Search menu.
- The transponders are found by auto scan.
- When you are saving the TP, please don't exit this menu. Otherwise, it will be stopped.



- **Select TP:** Press **F1** button to lock the first TP again.
- **Satellite Search:** Press **F2** button to satellite search.
- **Change DiSEqC:** Press **F3** button to select DiSEqC Port.
- **LNB Type:** Press **F4** button to change LNB Type.

3.2.4 DiSEqC Search

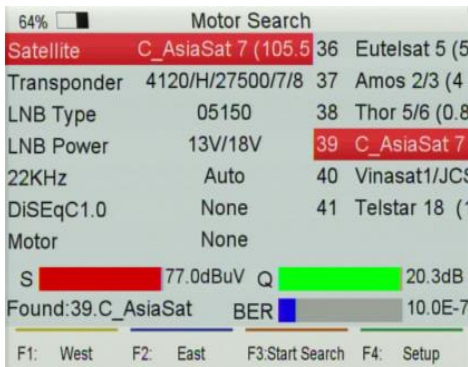
Main Menu-> Satellite -> DiSEqC Search

If you connect to the DiSEqC 1.0 or DiSEqC 1.1, it will search the satellite which it is connected, then you can press **F1** button to the port which you searched .You also can press the **F2** button to change DiSEqC type, press **F4** button to change LNB Type,

3.2.5 Motor

Main Menu-> Satellite -> Motor

Highlight the **Motor** and press **ok** button to enter the **motor search**. In this menu, you also can Delete, Add, and Move to and Rename satellite and Delete, Add, Delete, and Edit transponder and Edit PID.]



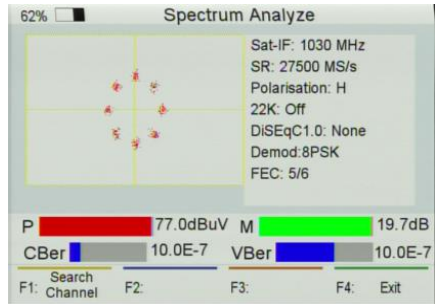
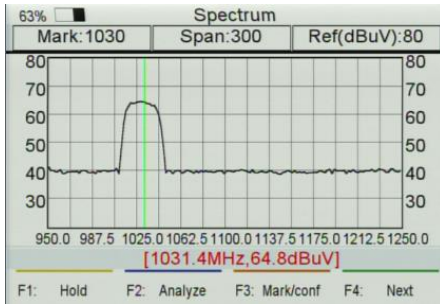
- **West/East:** Press **F1** button to turn Motor to west and press **F2** button to turn Motor to east.
- **Start Search:** After configure the antenna setting, press the **F3** button to TP search.
- **Setup:** If you set the motor mode to USALS, you need press **F4** button to set the longitude and latitude.
- **Motor mode:** Highlight the Motor and press the **◀/▶** button to select DiSEqC1.2 or USALS.
- Note:** After enter setup menu, you should turn your machine until it is show the compass.

3.2.6 Spectrum

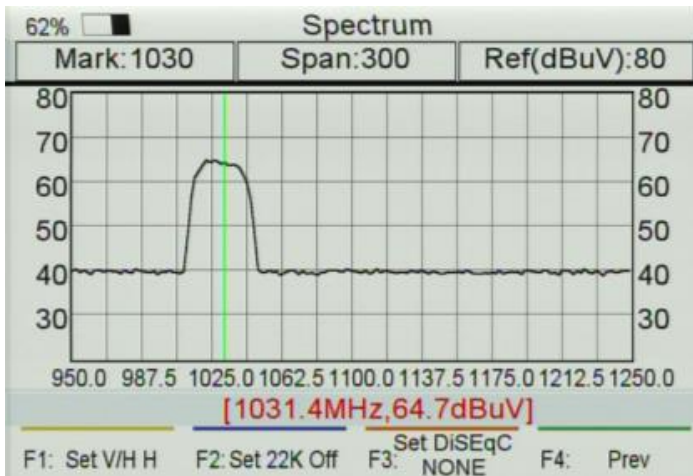
Main Menu-> Satellite -> Spectrum

In this menu, you can know the strength of all transponders.

Press the **F1** button to keep the spectrum, and press the **F2** button to analyze spectrum, and press the **F3** button to mark spectrum, and press **F4** button to next page.



In the next page, you can press the **F1** button to change Polarization control Hor / Ver, press **F2** button to switch 22KHz signal on or off, and Press the **F3** button to switch DiSEqC, and press **F4** button to previous page.

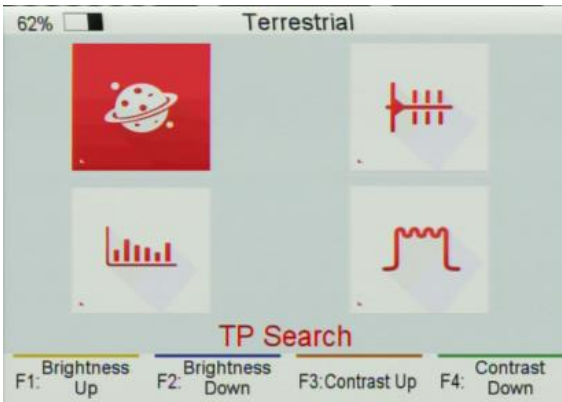


3.3 Terrestrial

Main Menu-> Terrestrial

Press **OK** button to enter the *Terrestrial* menu.

Note: In this menu, you can press **F1/F2** button to set brightness and press **F3/F4** button to set contrast.



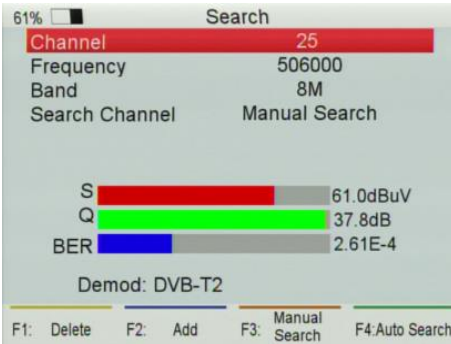
3.3.1 TP Search

Main Menu-> Terrestrial ->TP Search

In this menu, you can Delete, Add, Search Channels.]

- **TP**: Highlight the TP, press the ◀/▶ button to switch TP or press the ok button to enter TP list, then select TP.

In the TP list, you can press the ◀/▶ button to switch TP one by one, and press ▲/▼ button to Page up/down TP list. You also can enter **channel number** to select TP.



- **Band**: Press the ◀/▶ button to change band to 6M/7M/8M.

- **Search Channel**: Press the ◀/▶ button to change search type, you can select manual search, auto search.

- **Delete**: Highlight the TP and select the TP, then press **F1** button to delete TP

- **Add**: Press **F2** button to add TP.

- **Manual Search**: Press **F1** button to search

channels from the selected TP. You will be asked to confirm whether only search FTA channels or not, if you select "Yes", you will only search FTA channels. You also will be asked to confirm whether **network search** or not, if you select "Yes", it will go to search automatically and save the found channels when the search is completed.

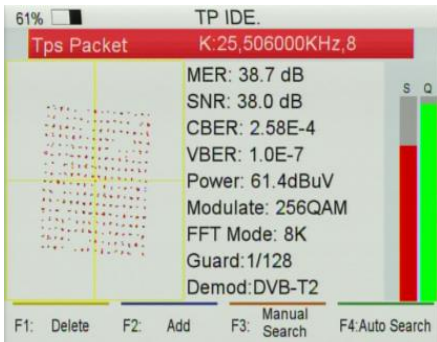
- **Auto Search**: Press **F4** button to search channels of all TP. You will be asked to confirm whether **network search** or not, if you select "Yes", it will go to search automatically and save the found channels when the search is completed.

3.3.2 TP IDE.

Main Menu-> Terrestrial ->TP IDE.

In this menu, you can know the exact information about the transponder which you selected. You also can execute

Delete and Add transponder, Manual Search and Auto Search.

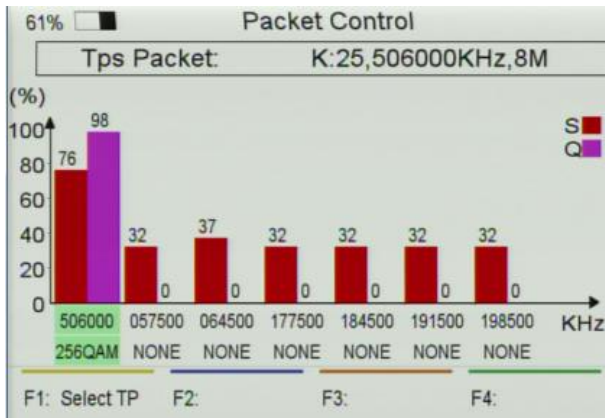


- **MER:** Modulation error rate.
- **SNR:** It will show the carrier to noise ratio of the transponder which you selected.
- **CBER:** Forward error correction.
- **VBER:** Afterward error correction.
- **Modulate:** Modulation efficiency.
- **FFT Mode:** Fast Fourier Transform.

3.3.3 Packet Control

Main Menu-> Terrestrial ->Packet Control

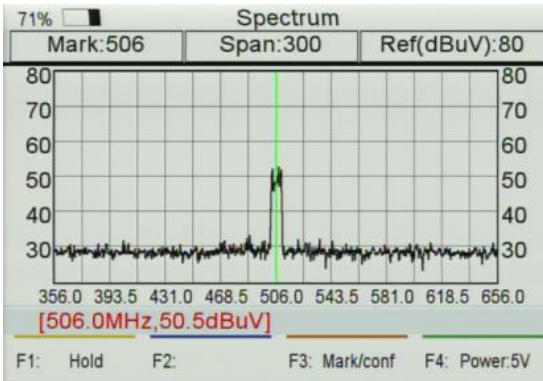
In this menu, you can know the strength and quality of each transponder. And the transponders are found by auto scan.



3.3.4 Spectrum

Main Menu-> Terrestrial ->Spectrum

In this menu, you can know the strength of all transponders.



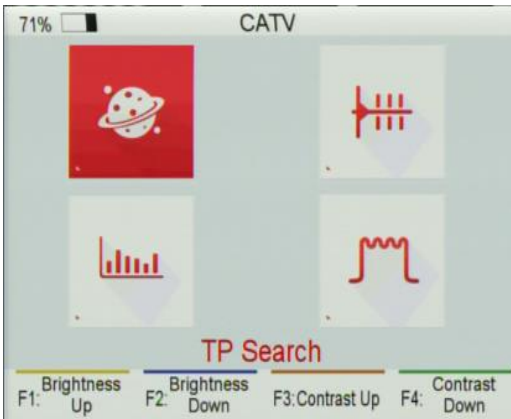
- **Span:** Modulation efficiency.
- **◀/▶:** Press **F1/F2** button to change the transponder
- **▲/▼:** Change the range of the Y-axis.
- **Span:** Press the **F3** button to set transponder of span.
- **Save Spectrum:** Insert USB, press **F4** button to save the picture of spectrum.
-

3.4 Cable

Main Menu-> Cable

Press **OK** button to enter the *Cable* menu.

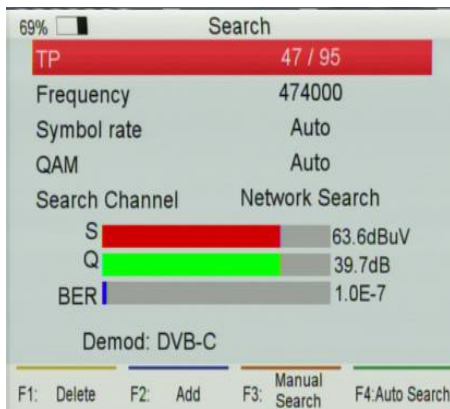
Note: In this menu, you can press **F1/F2** button to set brightness and press **F3/F4** button to set contrast.



3.4.1 TP Search

Main Menu-> Cable ->TP Search

In this menu, you can Delete, Add, Search Channels.



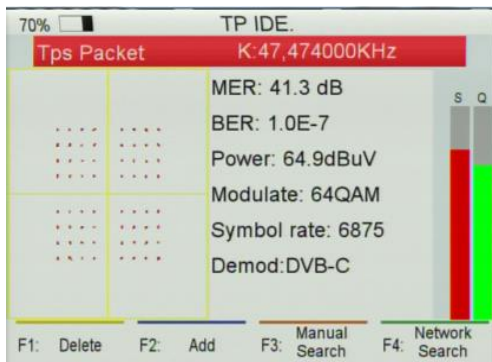
- **TP:** Highlight the TP, press the ◀/▶ button to switch TP or press the ok button to enter TP list, then select TP. In the TP list, you can press the ◀/▶ button to switch TP one by one, and press ▲/▼ button to Page up/down TP list. You also can enter **channel number** to select TP.
- **Search Channel:** Press the ◀/▶ button to change search type, you can select manual search, network search, auto search, blind search.
- **Delete:** Highlight the TP and select the TP, then press **F1** button to delete TP

- **Add:** Press **F2** button to add TP.
- **Manual Search:** Press **F1** button to search channels from the selected TP.
- **Auto Search:** Press **F4** button to search channels of all TP.

3.4.2 TP IDE.

Main Menu-> Cable ->TP IDE.

In this menu, you can know the exact information about the transponder which you selected. You also can Delete and Add transponder, Manual Search and Network Search,]

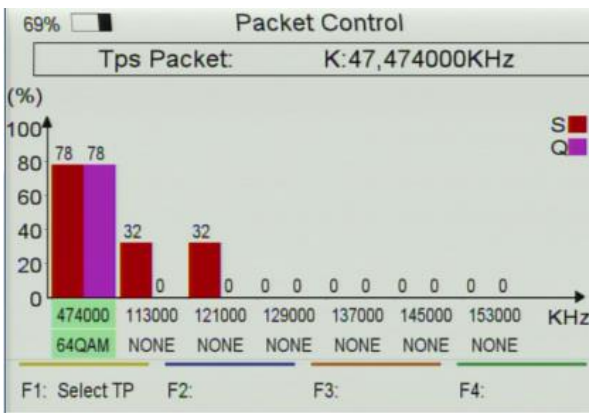


- **MER:** Modulation error rate.
- **BER:** Afterward error correction.
- **Power:** It will show you the strength of the transponder what you selected.
- **Modulate:** Modulation efficiency.

3.4.3 Packet Control

Main Menu-> Cable ->Packet Control

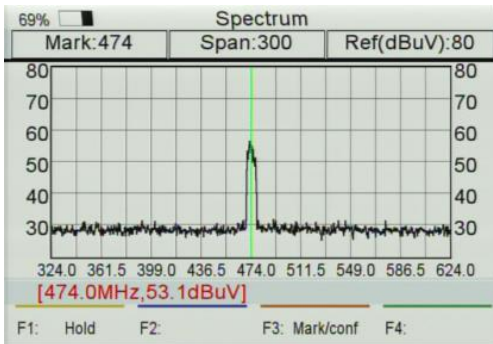
In this menu, you can know the strength and quality of each transponder.



3.4.4 Spectrum

Main Menu-> Cable ->Spectrum

In this menu, you can know the strength of all transponders.



- **Span:** Modulation efficiency.
-▲/▼: Change the range of the Y-axis.
- **Span:** Press the F3 button to set transponder of span.
- **Save Spectrum:** Insert USB, press OK button to save the picture of spectrum.

3.5 Watch TV



RADIO, and press **F3** button to switch channel type (FTA/CAS/HD), and press **F4** button to enter Channel Manger menu. In this menu, you can press **F1** button to delete channels, press **F2** button to move channels, and press **F4** button or press **EIXT** button to exit channel manage menu.

- **Full Screen:** Press **F3** button to watch TV by full screen.

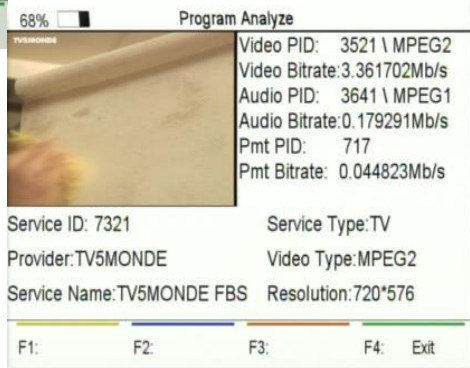
- **Program Analyze:** Press **F4** button to know more information about program.

Main Menu-> Watch TV

In this menu, you can watch TV and edit channels,|

- **Select satellite:** Press **F1** button to select Satellite or DVBT or DVBC.

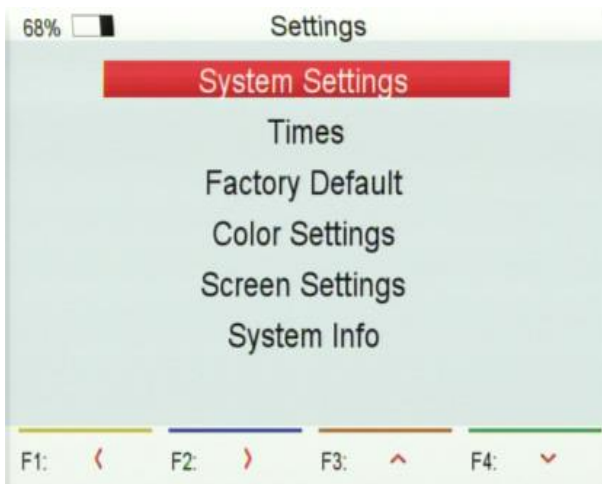
- **Channel:** Press **F2** button to enter **Channel menu**. In this menu, you can Press **F1** button to select DVB-S2, DVB-T2 or DVB-C, and press **F2** button to switch between TV and



3.6 Settings

Main Menu->Settings

In this menu, you can set System settings, Screen settings, and times. You also can do factory default, and view system information about instrument.



3.6.1 System Settings

Main Menu->Settings->System Settings

In this menu, you can set all system settings by press ◀/▶ button.]



- **Menu Language:** Set the menu language.

68% System Settings

Menu Language	English
Audio 1	English
Audio 2	English
PLSN Super Scan	Off
Power Out 12V	Off
DVBT Power	5V
Signal Audio	Off
Power Unit	dBuV

▼ 01/02 ▲

F1: ◀ F2: ▶ F3: ▲ F4: ▼

- **Audio 1:** Set the preferred audio language.

- **Audio 2:** Set the sub-prime audio language.

- **DVBT Power:** If you set it on, it will provide voltage for T tuner.

- **Signal Audio:** If you set "ON", in the TP Search menu when you highlight a transponder with signal, it will sound automatically. If you set "OFF", in the TP Search menu when you highlight a

transponder with signal, it will not sound.

- **Power Unit:** Change the power unit..

3.6.2 Times

Main Menu->Settings->Times

a) **Time Settings**

In this menu, you will set the time mode, time zone and summer time



b) **Sleep Timer**

You can set the time to make receiver sleep automatically.

3.6.3 Factory Default

Main Menu->Factory Default

In this menu, you can restore the product to the factory default.

- **ALL:** All data and settings will be deleted.
- **Channel List Only:** All channels data will be deleted.
- **Radio Channel Only:** All radio channels data will be deleted.
- **Scramble Channel Only:** All scramble channels data will be deleted.

3.6.4 Color Settings

Main Menu-> Settings-> Color Settings

You can set the Brightness/Contrast/Saturation in this menu.

3.6.5 Screen Settings

Main Menu-> Settings-> Screen Settings

In this menu, you can set up Sharpness/Brightness /Contrast/Saturation/LCD Backlight/LED Backlight.

3.6.6 System info

Main Menu-> Settings-> System Info

In this menu, you can get the information about the STB, such as Model ID, Hardware & Software version, Load version and Date. When you need service from the dealer you need to submit this information in order to get the correct and fast after sales service.

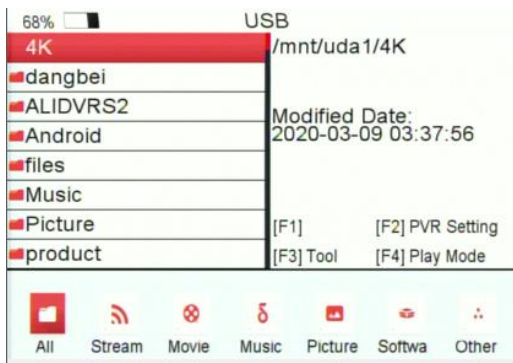
3.7 Expansion

Main Menu-> Expansion

3.7.1 USB

Main Menu-> Expansion -> USB

In this menu, you can press the ◀▶ button to select the category that you like to play. The media files are partitioned into all, Stream, Movie, Music, Picture, Software and other.



a) PVR Setting

- Press **F2** button to set Record partition/type/time, Time shift Buffer size and Time shift need save, play start POS.

b) Tool

- Press **F3** button to edit USB. You can Rename, Delete, Move to, Copy to files, create new folder, sort and Format disk.

c) Play Mode/Play list

- If you highlight All/Software/Other, the F4 will display play mode, else the F4 will play list.

d) Movie

- It supports *.3GP, *.AVI, *.DAT, *.DIVX, *.FLV, *.MKV, *.MOV, *.MP4, *.MPG, *.TS, *.VOB format movie files.

e) Music

- It supports *.mp3, *. Flac, *.mp2, *.wav, *.ogg format music files.

f) **Picture**

-It supports *.bmp, *.jpg,*.gif format photos.

g) **Software**

-Insert USB to your PC, copy the update file to the USB.

-Insert the USB to STB when it is starting up.

-In **main Menu>Expansion>USB**, find and select the upgrade file, then press **ok** button, it will upgrade the file.

-After upgrade, the STB will restart automatically. And after restart you can search channel and test it.

Note: During the process of upgrading the S/W, please don't power off.

3.8 Basic Operation

3.8.1 PVR

When you watch a program, you can press the **F4** button and select PVR item to begin recording.



- **Mute:** Mute audio.

- **Info:** You can press **F3** button to view information about recording.

- **Stop:** You can press **F4** button to stop recording.

Note: a) Before recording, you should insert USB to STB.

b) You can watch the other program from the same TP while recording.

3.8.2 TP PVR

When you watch a program, you can press the **F4** button and select TP PVR item to begin TP PVR. It allows record all program under the same TP. At the same time, you can only watch the program from the same TP.

3.8.3 Auto Timeshift

When you watch a program, you can press the **F4** button and select Auto Timeshift item to begin Timeshift.

Auto Timeshift allows you to pause a live broadcast and return to it later and continue where you left off.



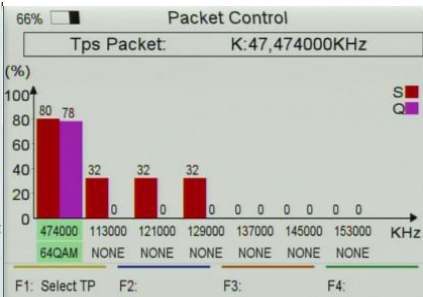
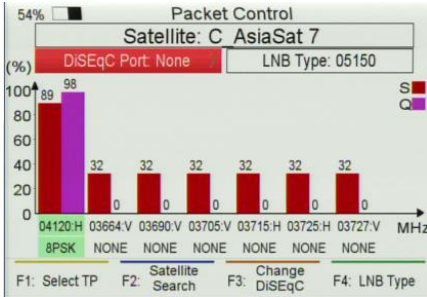
While

it is in timeshift mode, press the **F1** button to display the playing menu, press **F2** button to stop Timeshift.

In this menu you can press **F1** button to fast backward the program, press **F2** button to play or pause the program, press **F3** button to display recording information, and press **F4** button to stop playing recording.

3.8.4 Find

Press the **FIND** button to display the signal finding menu, jump to **Satellite/Terrestrial/Cable** identify menu, rest operation same as above.

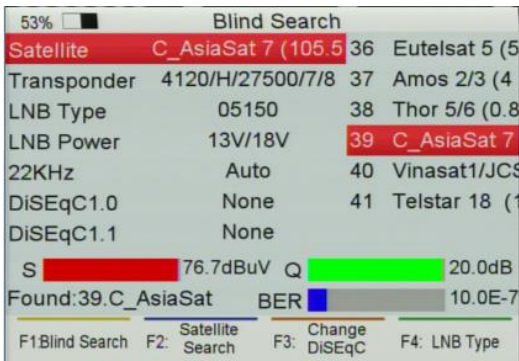


If you select Terrestrial or Cable, you can enter the TP, and press **F1** button to lock signal. Then you can view the information about this TP.

3.8.5 Scan

In the S2 model, it is blind scan and fast scan, in the T and C model, it is auto search.

➤ **Blind Search:** Press Scan button and select satellite, then You will be asked to confirm whether Fast Scan or not, if you select **"NO"**, it will enter blind search menu.

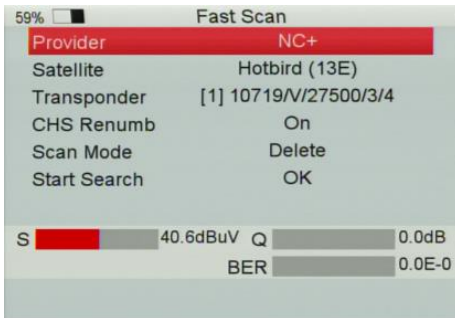


In this menu, you also can execute Delete, Add, and Move to and Rename satellite and Delete, Add, Delete, and Edit transponder and Edit PID.]

- **Blind Search:** You can Press **F1** button to get more transponders of this satellite.
- **Satellite Search:** Press **F2** button to search all transponders of this satellite.
- **Change DiSEqC:** Press **F3** button to change DiSEqC Port.

- **LNB Type:** Press **F4** button to change LNB Type.

➤ **Fast Scan:** Press Scan button and select satellite, then You will be asked to confirm whether Fast Scan or not, if you select "YES", it will enter fast scan menu.



- **Provider:** You can press the ◀/▶ button to select provide or press ok button to enter provider list, then select the provider.
- **Start Search:** Highlight the Start Search, and press OK button to search channels from the same provider what you selected.

IV. Additional Information

Satellite Tuner & Demodulator

Frequency Range	950MHz-2150MHz
Input Connector	Female
Signal level	-65dBm~+10dBm
LNB supply	13/18V,max400mA
LNB switch control	22KHz
DiSEqC	DiSEqC 1.0 /1.1 / 1.2
Symbol rate	2Mbps~65Mbps
Spectral inversion	Auto conversion

Terrestrial and cable Tuner & Demodulator

Frequency Range	50MHz to 1000MHz
Input Connector	IEC Female
RF Impedance	75Ωunbalanced
IF Band width	6M, 7M, 8M
Demodulation	COFDM
LNB supply	5/12V,max400mA
FFT Mode	Auto
Constellation	Auto
Guard Interval	Auto

Inner Coding Rate	Auto
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