

AD INSTRUMENTS

DTVLINK-5

USER MANUAL



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.

I.	REFERENCE.....	6
1.1	GENERAL FEATURES.....	6
II.	PRODUCT OVER VIEW	6
III.	CONNECTION WITH OTHER DEVICE	7
IV.	DETAILED OPERATION GUIDE	8
4.1	POWERING ON	8
4.2	SATELLITE.....	8
4.2.1	TP Search	8
4.2.2	Satellite IDE.	10
4.2.3	Packet Control	10
4.2.4	DiSEqC Search	10
4.2.5	Motor.....	11
4.2.6	Spectrum	11
4.3	TERRESTRIAL	12
4.3.1	TP Search	12
4.3.2	TP IDE.	13
4.3.3	Packet Control	13
4.3.4	Spectrum	14
4.4	CATV	14
4.4.1	TP Search	15
4.4.2	TP IDE.	15
4.4.3	Packet Control	16
4.4.4	Spectrum	16
4.5	WATCH TV	17
4.6	SETTINGS	17
4.6.1	System Settings.....	18
4.6.2	OSD Setup.....	18
4.6.3	Times	19

4.6.4	<i>Factory Default</i>	19
4.6.5	<i>Color Settings</i>	19
4.6.6	<i>Screen Settings</i>	20
4.6.7	<i>System info</i>	20
4.7	EXPANSION	20
4.7.1	<i>USB</i>	20
4.7.2	<i>IP Setting</i>	21
4.7.4	<i>FTP Download</i>	22
4.7.5	<i>PING</i>	22
4.8	BASIC OPERATION	22
4.8.1	<i>PVR</i>	22
4.8.2	<i>TP PVR</i>	23
4.8.3	<i>Auto Timeshift</i>	23
4.8.4	<i>Find</i>	24
4.8.5	<i>Scan</i>	24
V.	ADDITIONAL INFORMATION	26
5.1	TECHNICAL SPECIFICATION	26

I. Reference

1.1 General Features

DVB-S2 Compliant (MPEG-4), DVB-T2 Compliant, DVB-C2Compliant

MPEG1, 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

Constellation

II. Product Over view

HEVC DVB-S2+T2/C 5 inch combo meter



-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.

-22K light: Indicate the 22K.

- **AV IN:** Use this product as a television.

- **FIND:** Enter the menu of measurement signal and you can measure the signal about transponder quickly.

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

-EXIT: Exit from the present menu and back to the previous menu.

- **MENU:** Enter the main menu.

-Arrow key and OK: Press the Arrow key to select the right item then press OK key to confirm.

- **Function:** Made of 4 keys, F1 - F4.

- **NUMERIC KEY (0~9):** Enter a TV/radio channel number or menu option number.
- **HDMI Port:** Use HDMI line connect to TV.
- **USB Port:** One USB Host Port.
- **ON/OFF:** Turn the product on/off.
- **DC 12V:** Connect to the power adaptor.
- **Tuner:** Connect to the satellite antenna cable signal or the Terrestrial or Cable signal.
- **LAN:** Connect to the internet using an Ethernet cable.
- **AV/DC OUT:** Use AV line connect to TV or connect to other equipment as a television.

III. Connection with Other Device

The following chapter shows you the connections among product, ANT and other equipment, please read this first if you are not sure about the connection, and it will guide you to the correct connection.

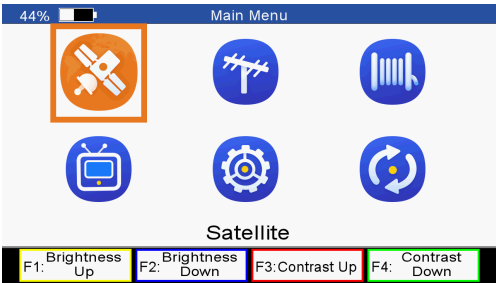
You can connect one receiver directly to the ANT IN.

IV. Detailed operation Guide

You should installation the receiver when powering on your product for the first time after purchase.

4.1 Powering On

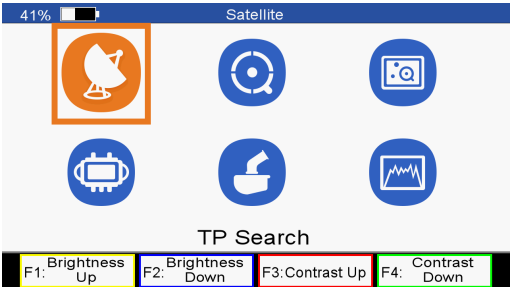
- a) Connect the power cord of the product to a wall outlet.
- b) Power on by setting ON/OFF to on.



4.2 Satellite

Main Menu-> satellite

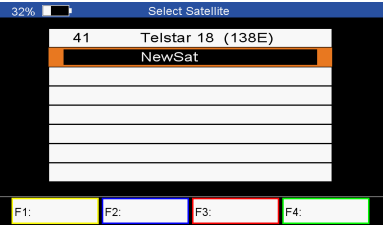
Press **OK** button to enter the satellite menu



4.2.1 TP Search

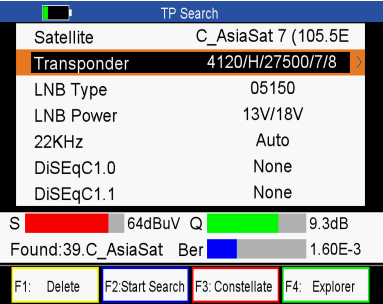
Main Menu-> satellite->TP Search

Highlight the **TP Search** and press the **OK** button to enter **Select Satellite**. In this menu, you can execute **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, 22 KHz,

DiSeqC1.0, DiSeqC1.1.

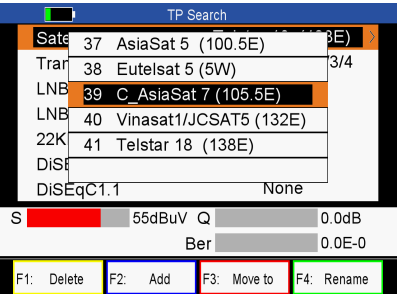


-Delete: If you highlight the Satellite, press **F1** button to delete satellite. If you highlight the Transponder, press **F1** button to delete transponder.

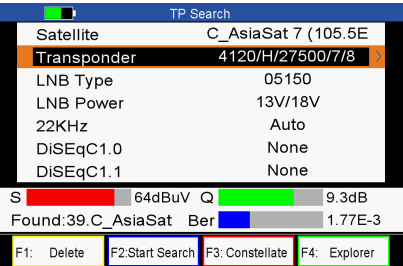
-Start Search: After configure the antenna setting, press the **F2** button to TP search.

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

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



-Satellite: 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.



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.

4.2.2 Satellite IDE.

Main Menu-> satellite->Satellite IDE.

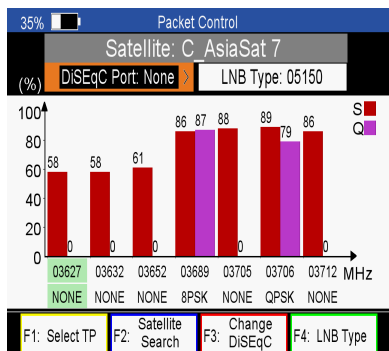
If you don't know the signal information of some usual sat, in this menu, please wait a moment, it will find the satellite identify.

4.2.3 Packet Control

Main Menu-> Satellite -> Packet Control

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

Note: The satellite showed in this menu is what you selected in the menu of select satellite.



- **Select TP:** Highlight the transponder and press **F1** button to enter TP list, and select what you want, then highlighted transponder will become you selected, and display the strength and quality.

- **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.

4.2.4 DiSEqC Search

Main Menu-> Satellite -> DiSEqC Search

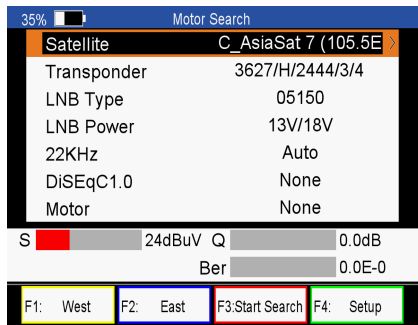
If you connect to the DiSEqC 1.0 or DiSEqC 1.1, it will search the satellite which it is connected, then you can press

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,

4.2.5 Motor

Main Menu-> Satellite -> Motor

Highlight the **Motor** and press **ok** button to enter the **motor search**. In this menu, you also can execute 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.

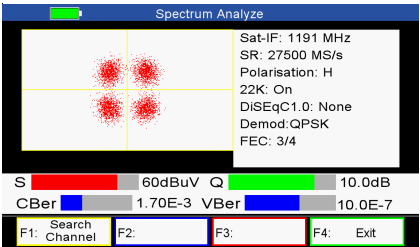
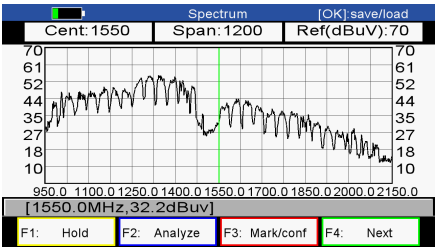
4.2.6 Spectrum

Main Menu-> Satellite -> Spectrum

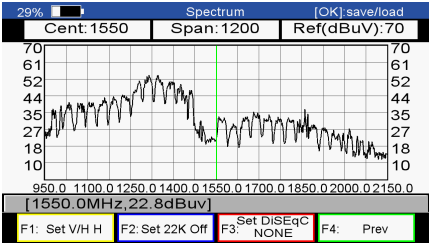
In this menu, you can know the strength of all transponders.

Note: After insert USB, you can press OK button to save or load the data of spectrum. If you select saving the data, you can press OK button or exit button to close the save. Then you can find "spectrum_file_001.txt" in your USB. If you select Loading, you need to load the " spectrum_file_001.txt" in your USB, and then you can see the previously saved spectrum data.

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.



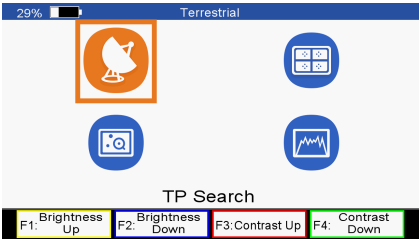
In the next page, you can press the **F1** button to change Polarization control Hor / Ver, press **F2** button to switch 22KHz signal on or off, and Press the **F3** button to switch DiSEqC , and press **F4** button to previous page .



4.3 Terrestrial

Main Menu-> Terrestrial

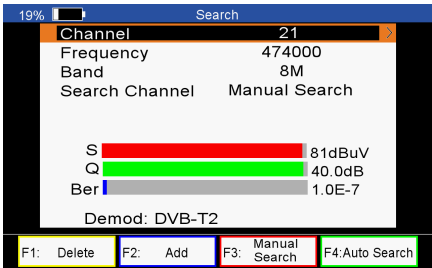
Press **OK** button to enter the *Terrestrial* menu.



4.3.1 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.

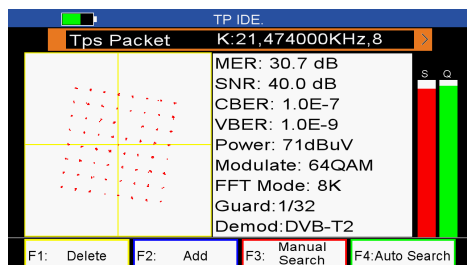
- **Band**: Press the ◀/▶ button to change band to 6M/7M/8M.

- **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.

4.3.2 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.



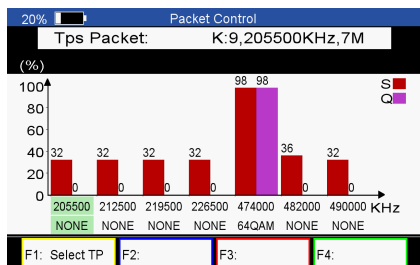
- **MER:** Modulation error rate.
- **SNR:** It will show the carrier to noise ratio of the transponder which you selected.
- **CBER:** Forward error correction.
- **VBER:** Afterward error correction.
- **Power:** It will show you the strength of the transponder what you selected.

- **Modulate:** Modulation efficiency.
- **FFT Mode:** Fast Fourier Transform

4.3.3 Packet Control

Main Menu-> Terrestrial ->Packet Control

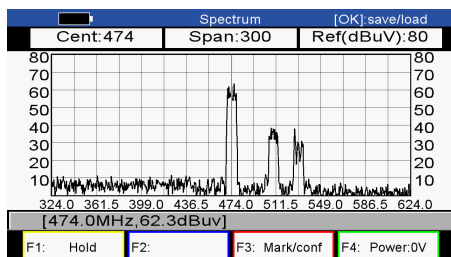
In this menu, you can know the strength and quality of each transponder.



4.3.4 Spectrum

Main Menu-> Terrestrial ->Spectrum

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



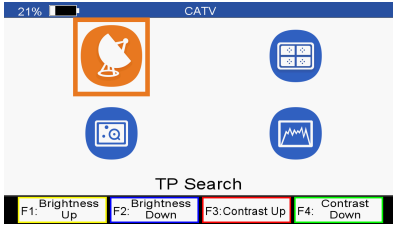
Note: After insert USB, you can press OK button to save or load the data of spectrum. If you select saving the data, you can press OK button or exit button to close the save. Then you can find "spectrum_file_001.txt" in your USB. If you select Loading, you need to load the "spectrum_file_001.txt" in your USB, and then you can see the previously saved spectrum data.

- **Hold:** Press the **F1** button to keep the spectrum.
- **◀/▶:** Change the transponder
- **▲/▼:** Change the range of the Y-axis.
- **F3 (Mark/conf):** Set the center TP, the transponder of span and the range of the Y-axis.
- **F4 (Power):** Set voltage for T tuner to 0V, 5V, 12V.

4.4 CATV

Main Menu-> CATV

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



4.4.1 TP Search

Main Menu-> CATV ->TP Search

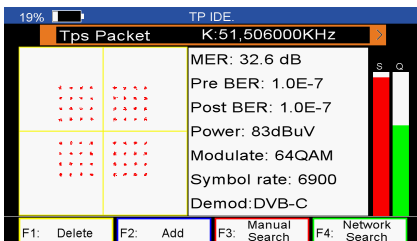
In this menu, you can Delete, Add, Search Channels.

- **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.
- **Network Search:** It will go to search automatically from the selected TP.
- **Blind Search:** A slow scanning, but may get more transponders.

4.4.2 TP IDE.

Main Menu-> CATV ->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 Network Search.



- **MER:** Modulation error rate.

- **Pre BER:** Forward error correction.

- **Post BER:** Afterward error correction.

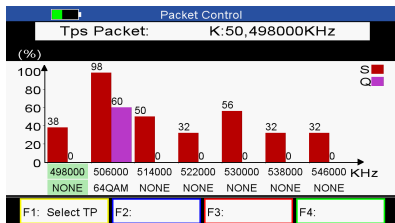
- **Power:** It will show you the strength of the transponder what you selected.

- **Modulate:** Modulation efficiency.

4.4.3 Packet Control

Main Menu-> CATV ->Packet Control

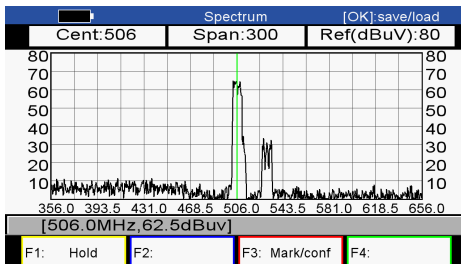
In this menu, you can know the strength and quality of each transponder.



4.4.4 Spectrum

Main Menu-> CATV ->Spectrum

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



Note: After insert USB, you can press OK button to save or load the data of spectrum. If you select saving the data, you can press OK button or exit button to close the save. Then you can find "spectrum_file_001.txt" in your USB. If you select Loading, you need to load the "spectrum_file_001.txt" in your USB, and then you can see the previously saved spectrum data.

- **Hold:** Press the F1 button to keep the spectrum.

- **◀/▶:** Change the transponder

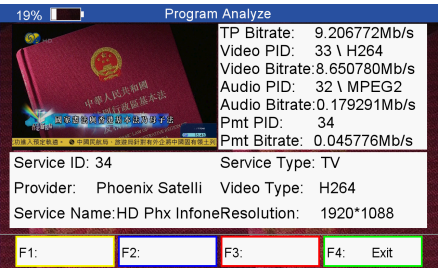
- **▲/▼:** Change the range of the Y-axis.

- **F3 (Mark/conf):** Set the center TP, the transponder of span and the range of the Y-axis.

4.5 Watch TV

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 S,T or C, and press **F2** button to switch between TV and 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.

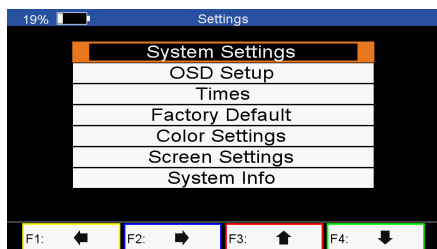
- **Full Screen:** Press **F3** button to watch TV by full screen.

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

4.6 Settings

Main Menu->Settings

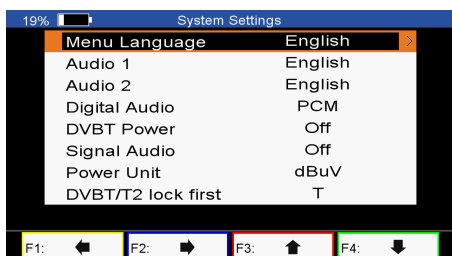
In this menu, you can set system settings, OSD settings, Screen settings, and times. You also can execute factory default, and view system information about STB.



4.6.1 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.

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

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

- **Digital Audio:** Select PCM / RAW as default output.

- **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.

- **DVBT/T2 lock first:** Set a priority lock for T2 or T.

4.6.2 OSD Setup

Main Menu->Settings->OSD Setup

- **Display Mode:** Set the HD format between 1080p, 1080i, 720p, 480i, 480p.

- **TV Type:** Set the TV Type on PAL/NTSC/Auto state.

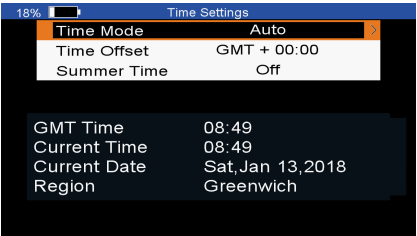
- **Screen Mode:** Set the display format according to the screen ratio. Select TV screen mode either 4:3 or 16:9 according to the TV type, or press the MODE button of RCU directly.

4.6.3 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.

4.6.4 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.

4.6.5 Color Settings

Main Menu-> Settings-> Color Settings

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

4.6.6 Screen Settings

Main Menu-> Settings-> Screen Settings

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

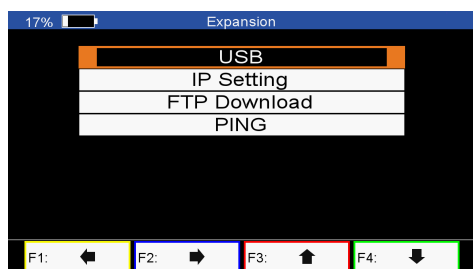
4.6.7 System info

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.

4.7 Expansion

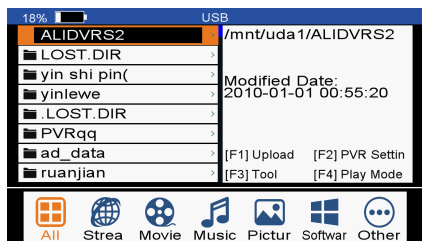
Main Menu-> Expansion



4.7.1 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) **Upload**

-Press **F1** button to upload software, data, channel list. You also can upload software to FTP.

b) **PVR Setting**

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

c) **Tool**

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

d) **Play Mode/Play list**

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

e) **Movie**

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

f) **Music**

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

g) **Picture**

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

h) **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.

4.7.2 IP Setting

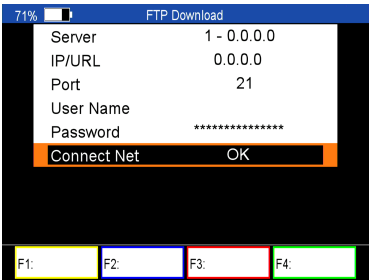
Main Menu-> Expansion -> IP Setting

If you connect the internet by using Ethernet cable it will display the connected IP address.

4.7.4 FTP Download

Main Menu-> Expansion -> FTP Download

If the network is connected, enter correct **Server, IP, User Name, Password**, and highlight **Connect Net**, press **OK** button, if the connection is successful, you can download software, music, photo and other media files from FTP menu. You also can upload software, music, photo and other media files to FTP.



4.7.5 PING

Main Menu-> Expansion -> PING

In this menu, you can through PING function to test the network.

4.8 Basic Operation

4.8.1 PVR

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



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

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

- Mute: Mute audio.

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

recording.

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

4.8.2 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.

4.8.3 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.

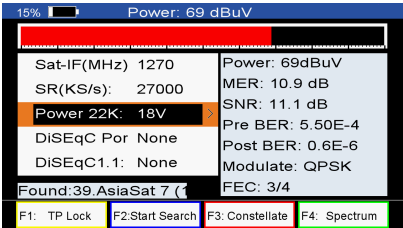


In this menu you can press **F1** button to fast backward the program, press **F2** button to play or pause the program, press **F3** button to display recording information, and press **F4** button to stop playing recording.

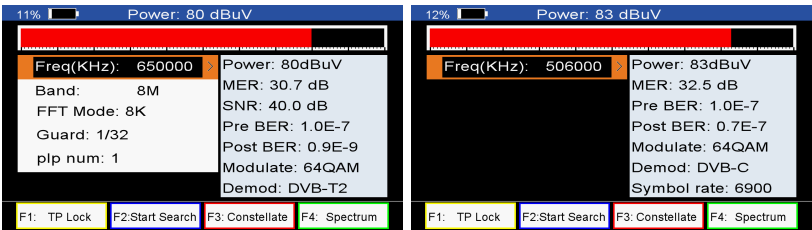
4.8.4 Find

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

If you select Satellite, you can configure the antenna setting parameters, and press **F1** button to lock signal. Then you can view the information about this Sat-IF, you also can view constellation and spectrum.



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



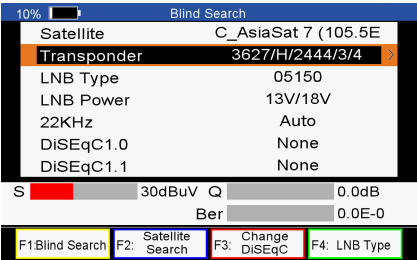
4.8.5 Scan

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

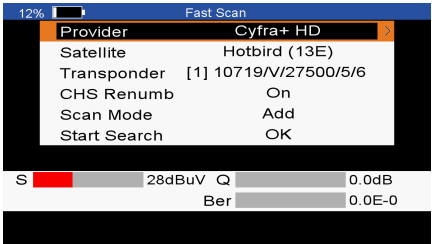


transponders of this satellite.

- 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.

V. Additional Information

5.1 Technical Specification

Monitor Display		5-inch TFT, 480*800
External Units Power supply	Satellite band	13V,18V,LNB Test(12V-20V,step:0.3V)
	22KHz signal	Selectable in satellite Band.
	DiSEqC generator	DiSEqC1.0/1.1/1.2
	Terrestrial Band	5V,12~24V
Batter Operation Time		4.5Hours
Frequency Margin	Satellite	950MHz-2150MHz
	Terrestrial & Cable	51MHZ to 858MHZ
VIDEO DECODING	DECODING	MPEG1, MPEG-2 MP@ML, H.264, VC1, DV, MPEG-4, H.265 (1080p@60fps)
	ASPECT RATIO	16:9, 4:3, Pan & Scan, Letter Box
	VIDEO FORMAT	PAL/NTSC
	VIDEO RESOLUTION	480p, 480i, 576p, 576i, 720p, 1080i, 1080P(HDMI)
Audio DECODING	DECODING	MPEG-2 layer I and II (Music cam), MPEG4 AAC, Dolby Digital (AC-3)
	HDMI	Mono, Dual Channel, Stereo, Joint Stereo