

PeakTech®

Prüf- und Messtechnik

 Spitzentechnologie, die überzeugt



PeakTech® 9020 A

Operation Manual

DVB S/T/C Level Meter

NOTE: This manual is a first template, as the device is temporarily still under development. Some technical specifications may change until the final product will be released.

Precautions

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

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.

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

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GENERAL SAFETY:

Topics to be considered:

Please strictly follow the below mentioned instructions so as to prevent damage that can happen to you or your device.

Before cleaning your device, pull the power cord and turn it off via Key of Power on/off and clean it with dry cloth.

Do not use accessories or additional apparatus that are not recommended by manufacturer as they may damage the device and may void the guarantee. When moving your device, protect it against impacts and falls otherwise the device may be damaged. Carry your device certainly in its bag and never carry it in boxes such as toolkit and together with the equipment that may possibly damage the device; otherwise, device will not be covered by guarantee.

Do not use your device outdoor so as to protect your device against liquid contact during rainy and snowy weather. Liquid contact may damage your device and device is not covered by guarantee.

When connecting your device with LNB, please be careful against short circuit; otherwise, LNB and your device may be damaged.

Service-related topics :

Do not attempt to repair your device on your own. When you open the cover of your device, it will not be covered by guarantee. For all services related to device, keep in contact with your seller or technical service.

INTRODUCTION

Digital satellite finder is simple and convenient for setting and aligning a satellite dish. With the parameters of satellite, you can set and align a satellite dish quickly, easily and accurately.

Accessories

1. User's manual
2. Power Adapter
3. Power Cable
4. In-vehicle lighter charger adapter
5. Remote control
6. AV IN/OUT cable
7. BNC connector (Female)
8. Power convert cable

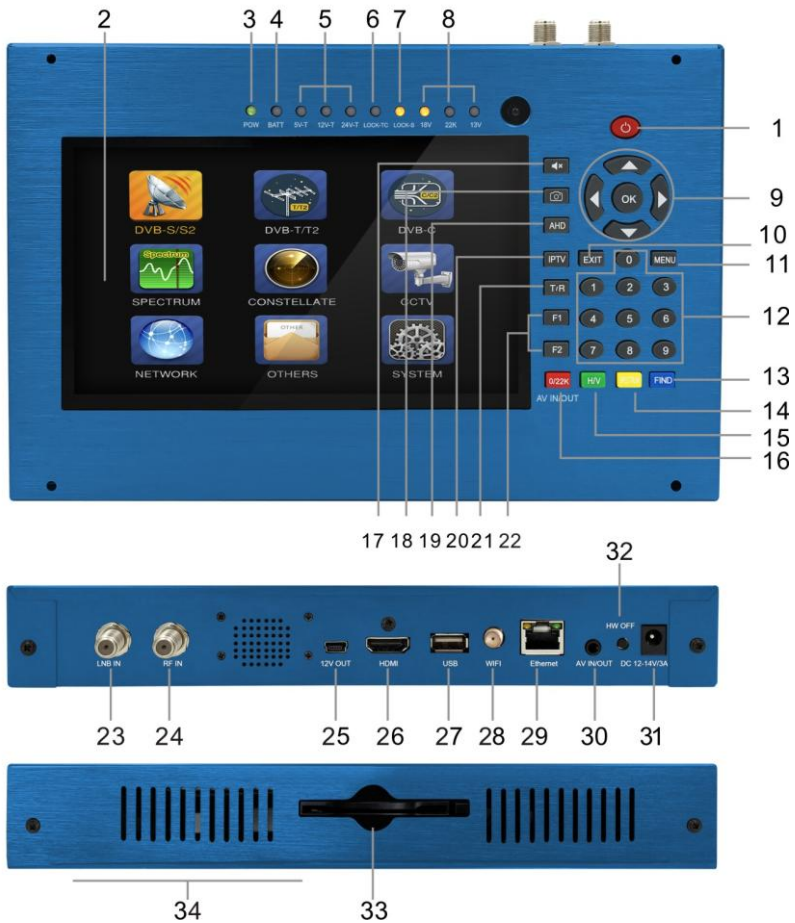


Due to your electrical charger adapter with 14 volt of output, you can ensure device to remain charged continuously and thanks to that, you can use your device in environments that do not have electricity. You can easily charge your device during your travel due to your lighter charger adapter in car. Keep lighter charger adapter away from situations such as compression, impact and overloading. Do not open it for the purpose of repair and examination.



Remote Control keys actions are same as the key on the device

A. Front panel



1. POWER key :

For turn-on/ turn-off. To press and hold for 3 seconds to power

2. LCD Screen

Shows menus and programs clearly

3. Power Light:

Indicates the Power status

Normally:

Green: the meter is power on

Dim: the meter is power off

4. Battery Light:

Light is Red indicates the meter is being charged now.

Light is Green indicates the meter is full charged

5. 5V-T/ 12V-T/ 24V-T Light:

Indicates ANT 5V ON/12V ON / 24V ON/OFF

6. LOCK-T/C:

This light will be on when Terrestrial signal or cable signal is locked.

7. LOCK-S:

This light will be on when Satellite signal is locked.

8. 22k/13v/18v light:

Indicates the mode of 22k/13v/18v

9. Arrow key and OK key:

Use Arrow key to browse the item, press OK key to select

10. EXIT key:

Exits from the present menu and backs to the previous on the device

11. MENU key :

Enters and exits the main menu

12. Numerical key:

Enters numerical settings directly.

13. FIND key:

Accesses easy satellite find menu that sets a satellite dish quickly.

14. Spectrum:

Spectrum analyzer

15. H/V:

A quick key to switch 13/18V output on the DISH SETUP menu

16. 0/22K / AV IN/OUT :

A quick key to switch 22K output on the DISH SETUP menu

Or AV IN/OUT switch

17. Mute:

Quickly mute the beep alarm when signal is locked.

18. Screenshot

Store the displayed as an image when USB disk connecting.

19. AHD

For entering CCTV mode to receive the AHD signal.

20. IPTV

For watching IPTV programs by connecting the Ethernet. (Depends on the local service available or not.)

21. T/R:

Selects and plays TV/RADIO channel in playing mode.

22. Function key:

F1: Changes the signal bar on DISH SETUP menu

F2: Actives DiSEqC 1.2 function on the DISH SETUP menu

23. LNB INPUT:

Satellite signal input port; connect directly to satellite antenna with coaxial cable

24. RF IN:

Antenna input connection port

25. 12V OUT

12 Voltage output, can be used for CCTV camera

26. HDMI:

Audio and video output socket for the high definition television set

27. USB port :

Connects with USB disk for upgrade. Backup channel list.

28. WIFI connector

For receiving the WIFI signal

29. Ethernet port

For connecting the network to receive IPTV

30. AV IN/OUT:

Audio and video input/output socket

AV IN Audio L+ video

AV OUT Audio L+ Audio R+ video

31. Charge port

Connects with the charger cord.

32. HW OFF

Reset. Turn off the device from hardware.

33. Smartcard reader.

Common Interface Slot

34. Battery Cover

Battery can be replaced easily

B. Shortcut key operation

1) **0/22K**

A quick key to switch AV IN/OUT on the channel display.

A quick key to switch 22K output on the DVB-S/S2 Setup menu

2) **H/V**

A quick key to switch 13V/18V output on the DVB-S/S2 Setup menu

3) **Spectrum**

A quick key to display the spectrum information

4) **FIND**

A quick key to enter the S/S2 setup menu

5) **T/R**

Press TV/RADIO key in the playing mode to shift

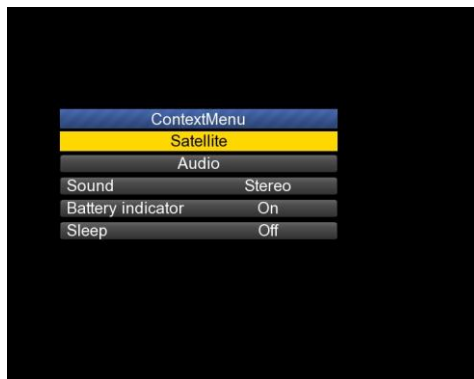
6) **F1:**

Press <F1> button to check the signal information when broadcasting program. The bar meter of Level , BER and C/N will display on the screen.

Press <F1> again, Level and C/N value will display on the screen.

7) **F2:**

Press <F2> button when broadcasting program. The following picture will be displayed:



- Select the satellite, then the satellite information will be displayed.
- Select the Sound by pressing LEFT/RIGHT button to choose the sound
- Select the battery indicator by pressing LEFT/RIGHT button to display the battery information on the right top corner of the screen
- Select the Sleep by pressing LEFT/RIGHT button to setup the sleeping time.

8) Volume:

Press the <Left/Right> button to adjust the volume.

9) Screen shot

With the screen shot function you could store the device displayed measured values as an image file.

To save images, a USB disk must be connected to the device.

Press screenshot button, The image will be saved as a JPG file in the USB Disk

10) Mute

Press mute button to mute the beep of lock alarm when signal is locked.

11) AHD

Press AHD button to enter the CCTV function for receiving AHD signal quickly.

12) IPTV

Press IPTV button to enter the network sharing program after setting the network details in the main menu.

C. Power ON/OFF the equipment

This finder meter is designed for using as a portable equipment, it does not require any previous installation.

Power on:

- Press and hold the Red power button for three seconds.
- When the boot-up logo displayed on the screen, then release the power button.
- The boot-up image will be keeping displayed.
- After the system loading, the language selecting menu appears.

Power off:

- Press and hold the Red power button for three seconds.
- When the screen and green indicator (POW) goes off, then release the power button, which returns to its rest position.

Reset:

- Press the HW OFF button on the top of the equipment, it will be turned off automatically. Use only in case of system crash or fast shutdown.

D. Menu Operation Guide

Press Menu key on the Keypad to display the main menu. The Main menu consists of 9 menu options as shown below .

- DVB-S/S2
- DVB-T/T2
- DVB-C
- SPECTRUM
- CONSTELLATION
- CCTV
- NETWORK
- OTHERS
- SYSTEM



Use the arrow keys to move the cursor in the menu.

Use OK key to confirm the selection.

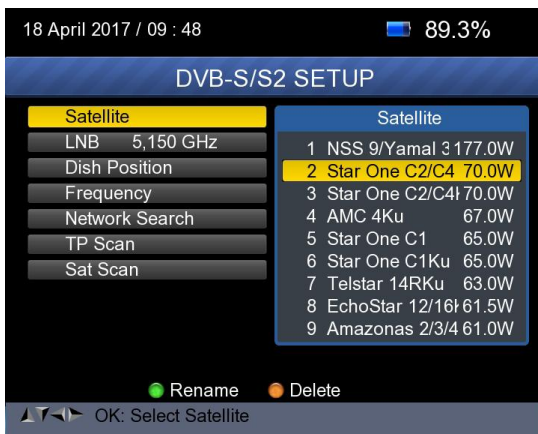
To escape the menu system at anytime, press EXIT key.

1. DVB-S/S2 SETUP

Press OK on **DVB-S/S2 setup**, then the following menu appears.



- 1) **Satellite:** Press <OK> button to display the satellite list. Search the satellite by pressing <Left/Right> button and press <Up/Down> to select the satellite. Press <OK> to confirm your selection.



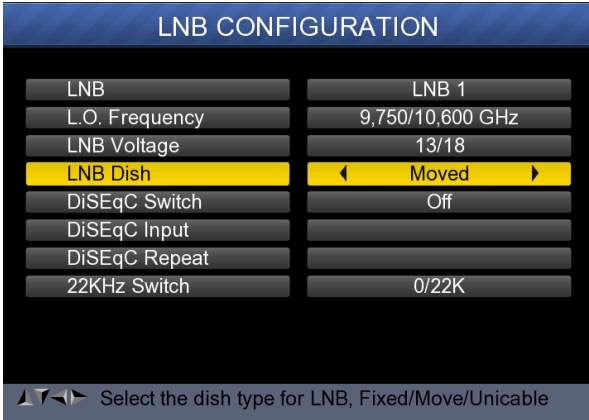
- 2) **LNB:** Press <Left/Right> button to select proper LNB type according to your physical LNB type.

Press<OK> button to setup LNB configuration as below picture

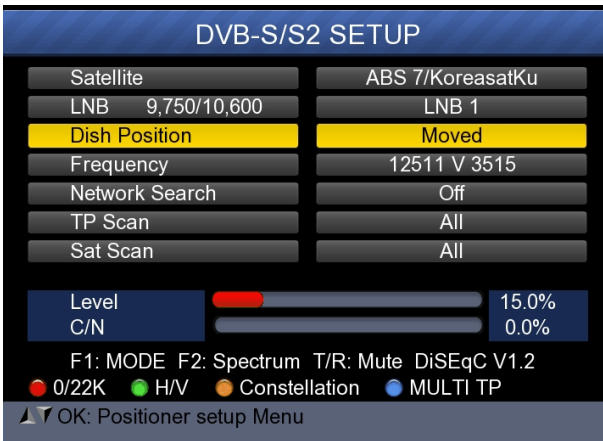


- a. **LNB:** Use <Left/Right> button to select the LNB
- b. **L.O. Frequency:** Enter the proper LNB frequency referring to your LNB by using the numeric key on the keypad.
- c. **LNB Voltage:** Use <Left/Right> button to select the LNB power.
- d. **LNB Dish:** Use <Left/Right> button to select the dish type, Fixed or Moved
- e. **DiSEqC Switch:** Use <Left/Right> button to select DiSEqC type
- f. **DiSEqC Input:** Use <Left/Right> button to select the port number to get the RF signal from the LNB ,which is connected .to DiSEqC switching box .Range 1~4.
- g. **DiSEqC Repeat:** Number of repeat of the DiSEqC command.
- h. **22KHz Switch:** Use <Left/Right> button to select switch 22KHz

- 3) **Dish Position:** First press OK button on LNB to enter LNB CONFIGURATION. Select LNB Dish to Moved by using LEFT/RIGHT button as below picture.



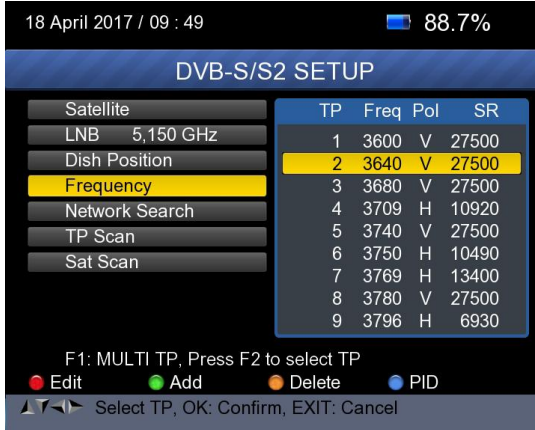
And then return to DVB-S/S2 SETUP menu, press OK button on Dish Position to setup DiSEqC 1.2/USALS, as below Picture



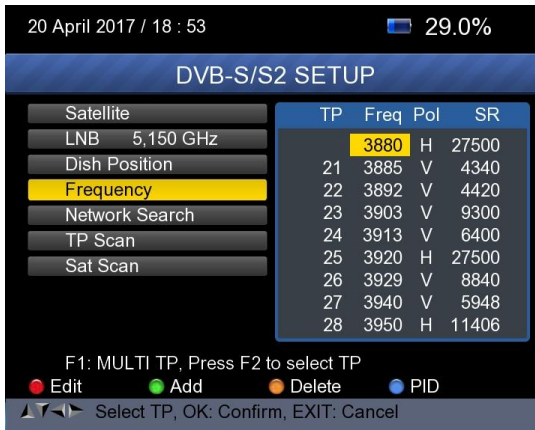


Satellite:	Use < Left/Right> button to select the satellite or Press OK button to select the Satellite
Transponder:	Use< Left/Right> button to select the transponder. Press OK button to display TP list.
Continuously Move:	Use < Left/Right> button to move positioner and press OK button to save current position.
Move Steps:	Use< Left/Right> button to move positioner by step and press OK button to save current position.
Step Size:	Use< Left/Right>button to setup one step size.
Limit Set:	Use< Left/Right>button to select East/West limit or disable limit.
Other Commands:	Use<Left/Right>button to select the command and press OK button to execute command.
USALS:	Use<Left/Right>button to select ON/OFF and press OK button set user position.

- 4) **Frequency** : Press <OK> button to display the Frequency list .Select the Frequency you want by pressing LEFT/RIGHT button or UP/DOWN button. Press <OK> to confirm your selection . You also can Edit, Add, Delete and PID the stored frequency very easily, as following picture shows.



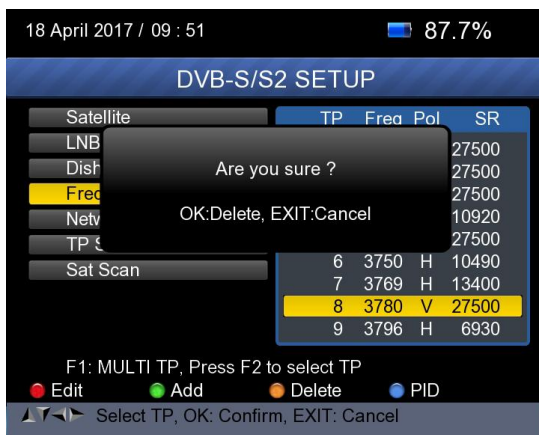
- ① **Edit:** Press <Red(0/22K)> button to edit Frequency using the numeric keys. Press UP/DOWN key to select “Pol”. Press <OK> button to confirm the operation and save the result



- ② **Add:** Press <Green (H/V)> button to add Frequency using the numeric keys .Press UP/DOWN key to select “Pol”. Press <OK> button to confirm the operation and save the result



- ③ **Delete:** Press LEFT/RIGHT or UP/DOWN button to select Delete option. Press <Yellow(Spectrum)> button to set delete status. You will see a confirmation message ,Please <OK> to delete or <EXIT> to cancel the operation and save the result.



- ④ **PID:** Press the <Blue(Find)>button to show the PID information for the frequency

- 5) **Network search:** Use <Left/Right>button to choose ON/OFF
- 6) **TP SCAN:** Scan transponders one by one. Press OK to start scan channel.



- 7) **SAT SCAN:** Scan all the transponders in one satellite (these transponders have been set)

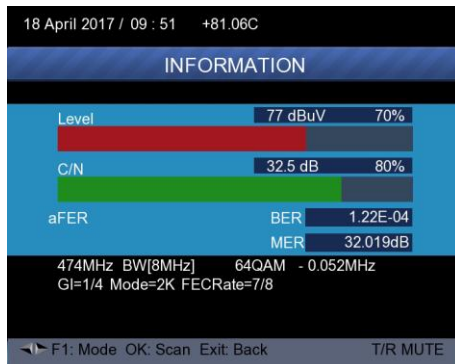
Note: In the course of signal searching, you can see the bar meter of the LEVEL and QUALITY, at the same time the LOCK light will come on with the speaker notification. DiSEqC will indicate which port is connected to the DiSEqC 1.0 switch

8) Signal Information

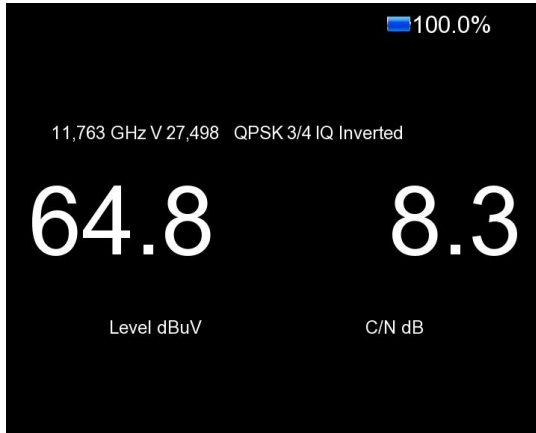
- Press F1 to display the signal information

You can see the bar meter of the LEVEL and C/N.

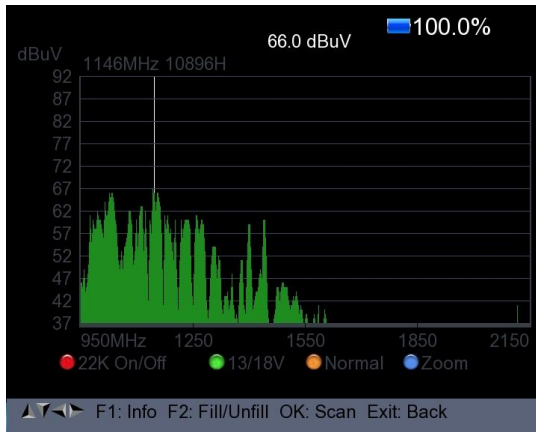
Use <Left/Right> or mute button to adjust beep alarm volume.



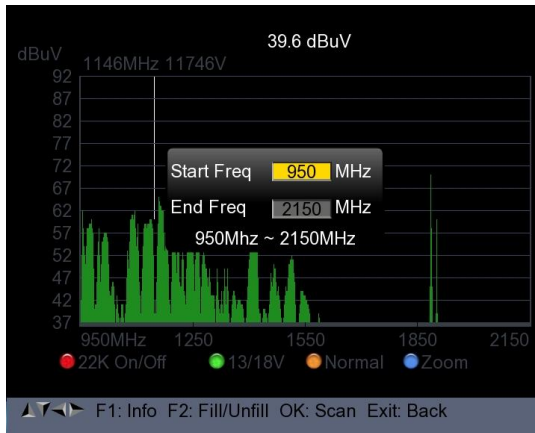
- Press F1 again to display the Level and C/N value.



- Press F2 to display the spectrum information

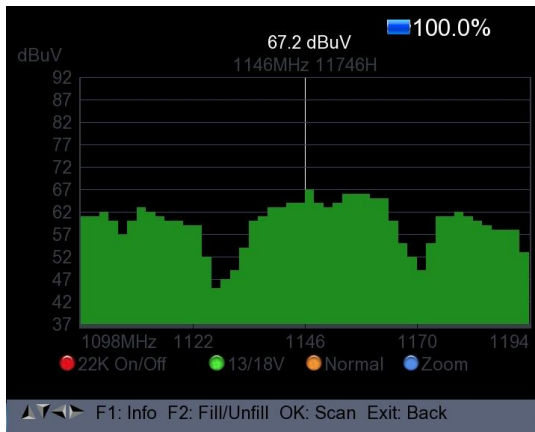


- 1) Press <Red(0/22K)> button to turn on / turn off the 22KHz control .
- 2) Press<Green (13/18V)> button to shift between 13/18V.
- 3) Press<Left/Right>button to move Frequency
- 4) Press <Yellow(Spectrum)> button to display following picture:



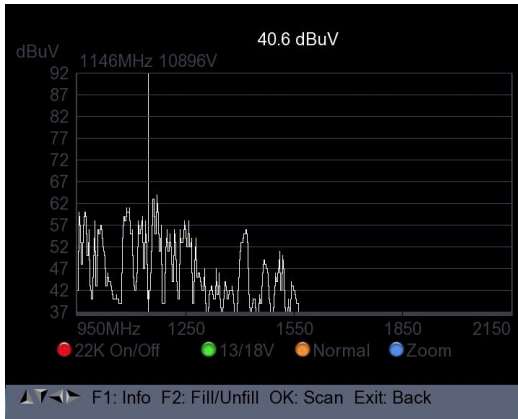
You can change parameters such as Start frequency and end frequency by using the numeric keys

5) Press <Blue(Find)> button to zoom in/out the frequency as following picture:

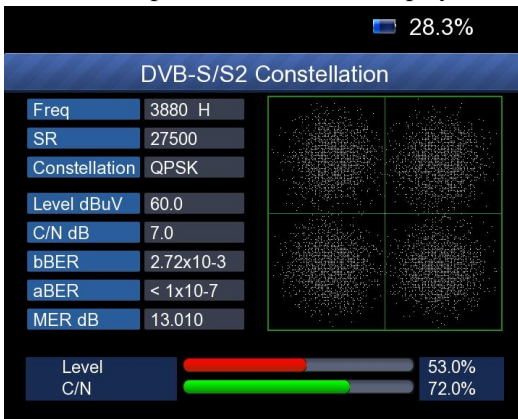


6) Press F1 button to display the info of the signal

7) Press F2 button to fill or unfill the spectrum display as following picture.



- Press <Yellow(Spectrum)> button to display the constellation



- 9) **MULTI TP:** Press the <Blue(Find)> button to display multi TP

ChinaSat 6B SIGNAL Level/Quality							
Freq(MHz)	Symbol	PoI	Modulation	Level(dBuV)	C/N(dB)		
20	3880	27500	H	DVB-S	57.6	0.0	
21	3885	4340	V	DVB-S	53.8	9.6	✓
22	3892	4420	V	DVB-S	54.4	6.2	✓
23	3903	9300	V	DVB-S	54.2	8.4	✓
24	3913	6400	V	DVB-S	56.0	7.8	✓
25	3920	27500	H				
26	3929	8840	V				
27	3940	5948	V				

OK: Save to flash and USB, Double click Power save as jpg

2. DVB-T/T2 SETUP

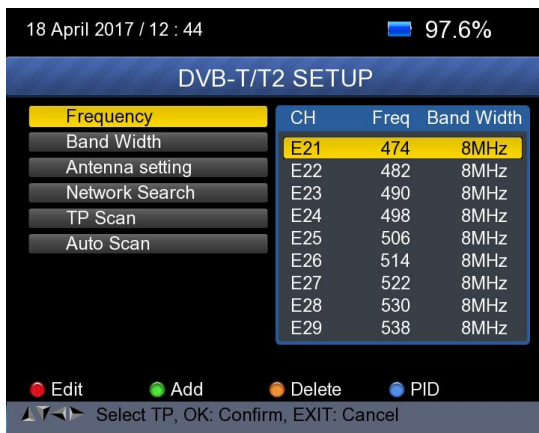
Press OK on **DVB-T/T2 setup** then the following window appears.



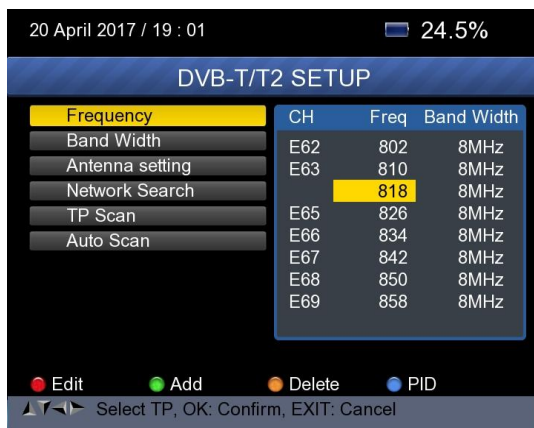
1) Frequency:

Press <Left/ Right> button to select the frequency and the corresponding bandwidth will be showed on the screen.

Press <OK> button to enter the Frequency list. Press <Up/Down> button to select frequency one by one, press <Left/Right> button to select page by page.



- **Edit frequency:** Press <Red (Edit)> button to edit the frequency by numeric numbers. Press <Up/Down> button to select the Band Width. And then Press <OK> button to confirm the operation and save the result. Or press< EXIT> button to cancel the operation.



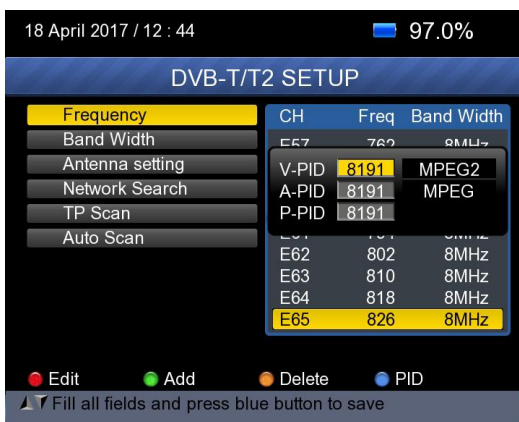
- **Add frequency:** Press <Green (Add)> button to add the frequency by numeric numbers. Press <Up/Down> button to select the Band Width. And then Press <OK> button to confirm the operation and save the result. Or press< EXIT> button to cancel the operation.



- **Delete frequency:** Press <Left/ Right> button to select option, and then press <Yellow (Delete)> button, you will see the confirm message. Press <OK/EXIT> button to delete or cancel this operation.



- **PID information:** Press <Blue(PID)> button to check the PID information of the Frequency.



2) Antenna setting:

Press <Left/Right> button to select antenna power 5V/12V/24V

3) Network Search:

Press <Left/Right> button to select Network Scan mode ON/OFF.

4) Scan the possible frequency and bandwidth to receive the programs, then Press <Up/Down> button to TP Scan or Auto Scan.

Note: In the course of signal searching, you can see the bar meter of the LEVEL and C/N, at the same time the LOCK light will come on with the speaker notification

● TP Scan:

Scan transponders one by one on default frequency and bandwidth.

- Press <Up/Down> button to TP Scan.
- Press <Left/Right> button to select TP Scan mode.
- Press <OK> button, one message box will be displayed



- Press <OK> button to delete the existing program and start the TP Scan. Or press <Exit> button to save the existing program and start the TP Scan.



- **Auto Scan:**

Scan all range of frequency and bandwidth.

It costs time to do Auto Scan, user can press <OK> to skip or <EXIT> to exit at anytime

- Press <Up/Down> button to Auto Scan.
- Press <Left/Right> button to select Auto Scan mode.
- Press <OK> button, one message box will be displayed

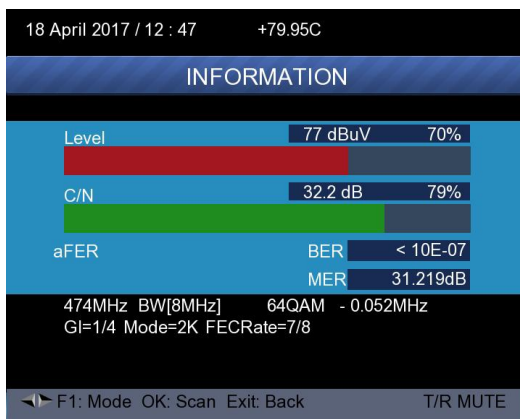


- Press <OK> button to delete the existing program and start the TP Scan. Or press <Exit> button to save the existing program and start the Auto Scan.



5) Signal information:

- Press F1 to display the signal information. You can see the bar meter of the LEVEL and C/N. Press <Left/Right> button to change volume, T/R button to mute.

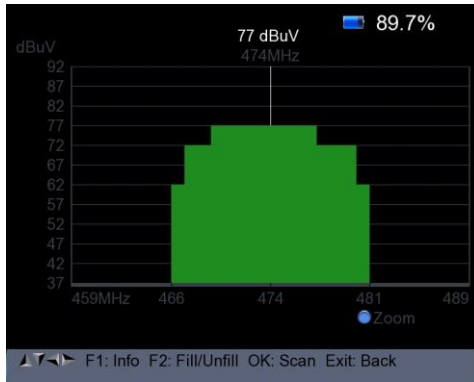


6) Spectrum:

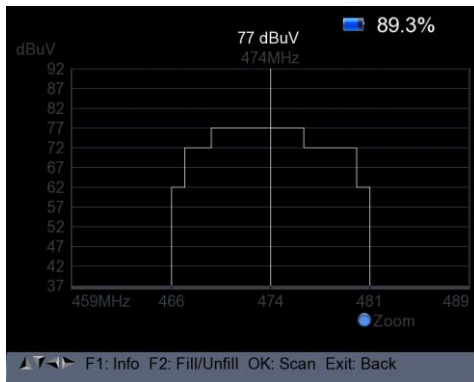
- Press F2 to display the spectrum information



- Press <Blue (Zoom)> button to zoom in/out the frequency

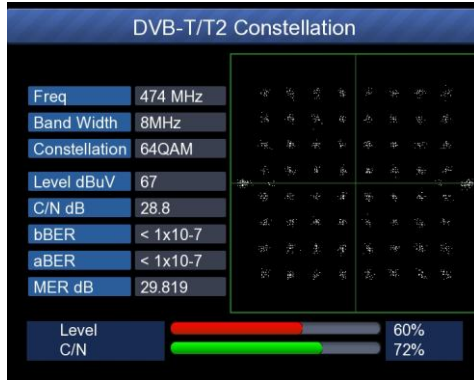


- Press F2 button to fill or unfill the spectrum as following picture.



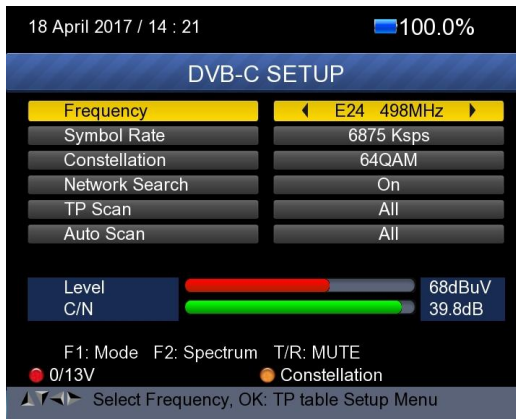
7) Constellation:

- Press <Yellow> button to display the constellation as below



3. DVB-C SETUP

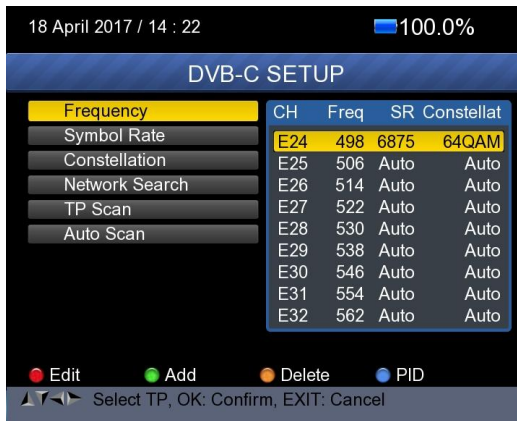
Press OK on the **DVB-C setup**, then the following figure appears.



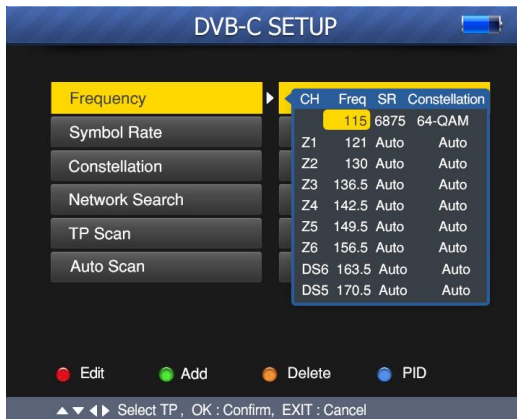
1) Frequency:

Press <Left/ Right> button to select the frequency and the corresponding Symbol rate and Constellation will be showed on the screen automatically.

Press <OK> button to enter the Frequency list. Press <Up/Down> button to select frequency one by one, press <Left/Right> button to select page by page

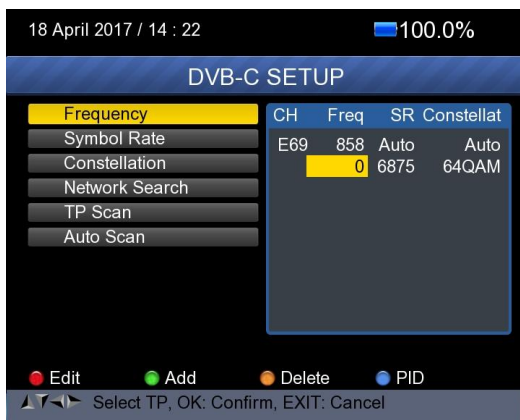


- Edit frequency: Press <Red (Edit)> button to edit the frequency by numeric numbers. Press <Up/Down> button to select the Band Width. And then Press <OK> button to confirm the operation and save the result. Or press< EXIT> button to cancel the operation.

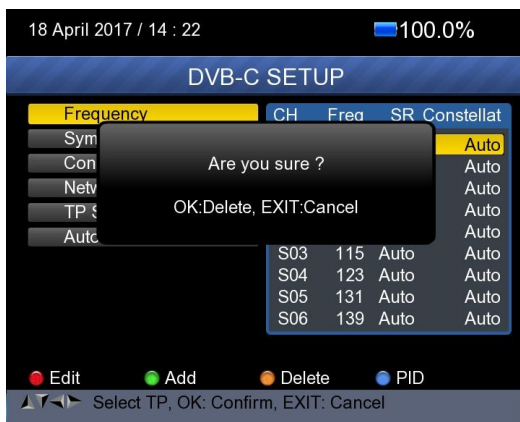


- Add frequency: Press <Green (Add)> button to add the frequency by numeric numbers. Press <Up/Down> button to

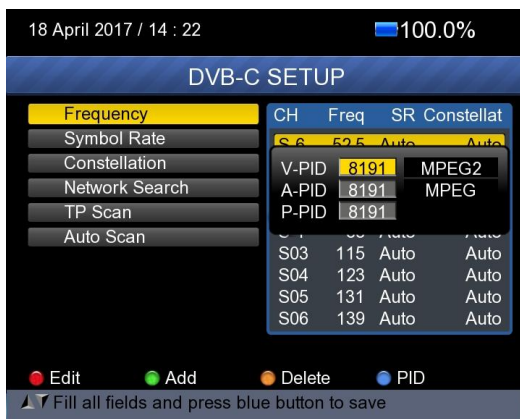
select the Band Width. And then Press <OK> button to confirm the operation and save the result. Or press <EXIT> button to cancel this operation.



- Delete frequency: Press <Left/ Right> button to select option, and then press <Yellow (Delete)> button, you will see the confirm message. Press <OK/EXIT> button to delete or cancel this operation.



- Press <Blue(PID)> button to check the PID information of the Frequency.



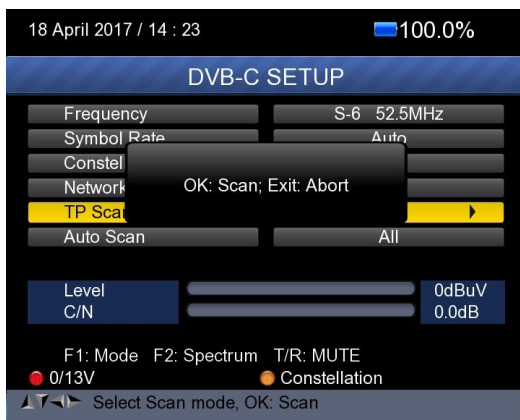
2) Network Search:

Press <Left/Right> button to select Network Scan mode ON/OFF.

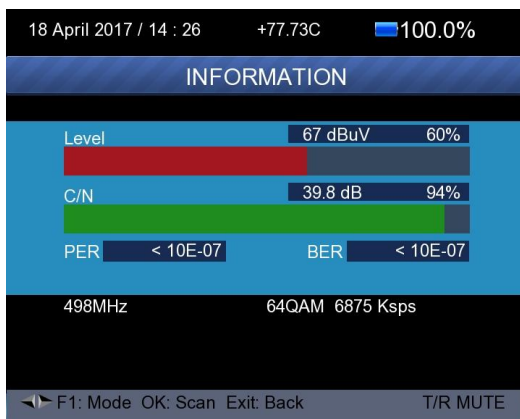
3) TP Scan:

Scan transponders one by one on default frequency and bandwidth.

- Press <Up/Down> button to TP Scan.
- Press <Left/Right> button to select TP Scan mode.
- Press <OK> button, one message box will be displayed



- Press <OK> button to delete the existing program and start the TP Scan. Or press <Exit> button to save the existing program and start the TP Scan.

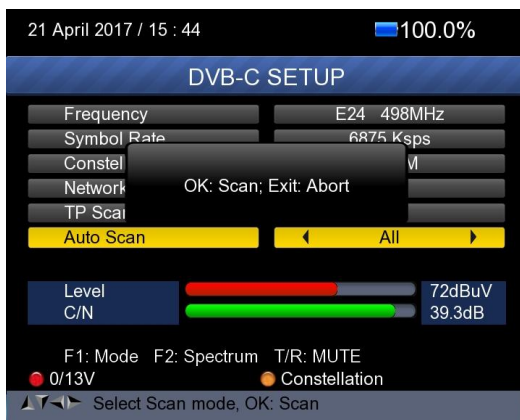


4) Auto Scan:

Scan all range of frequency and bandwidth.

It costs time to do Auto Scan, user can press <OK> to skip or <EXIT> to exit at anytime

- Press <Up/Down> button to Auto Scan.
- Press <Left/Right> button to select Auto Scan mode.
- Press <OK> button, one message box will be displayed

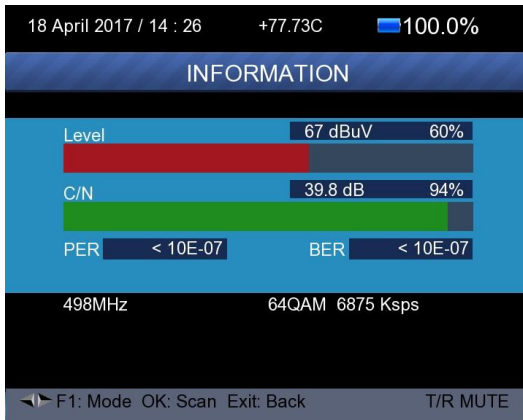


- Press <OK> button to delete the existing program and start the TP Scan. Or press <Exit> button to save the existing program and start the TP Scan.



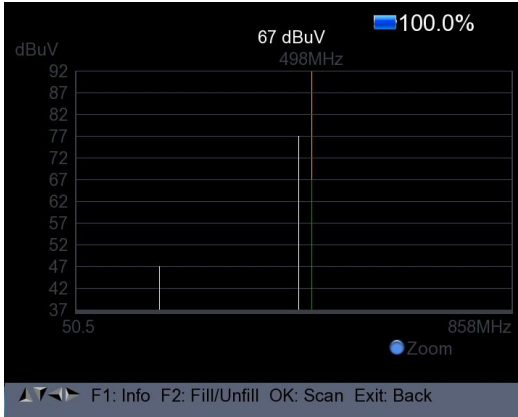
5) Signal information:

- Press F1 to display the signal information. You can see the bar meter of the LEVEL and C/N. Press <Left/Right> button to change volume, T/R button to mute.

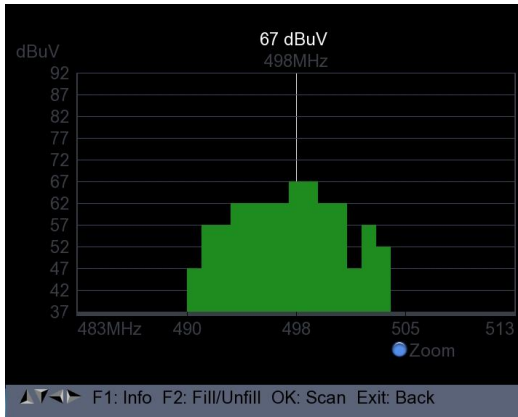


6) Spectrum:

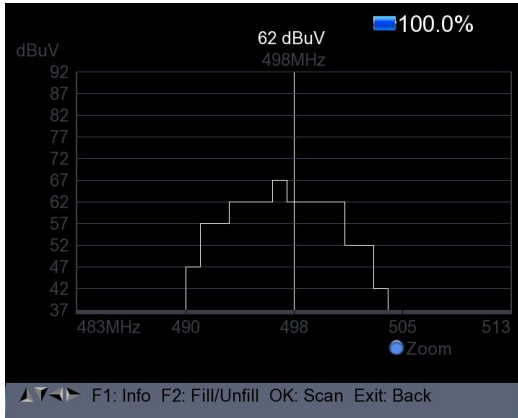
- Press F2 to display the spectrum information



- Press <Blue (Zoom)> button to zoom in/out the frequency as following picture

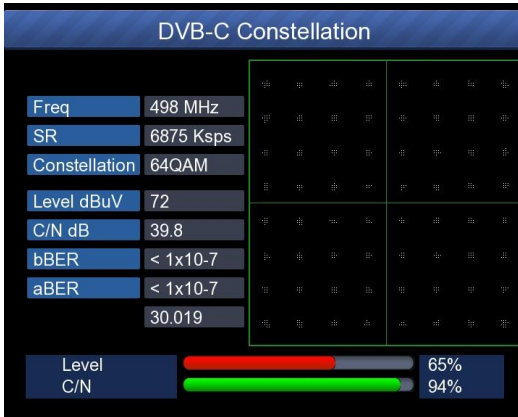


- Press F2 button to fill or unfill the spectrum as following picture.



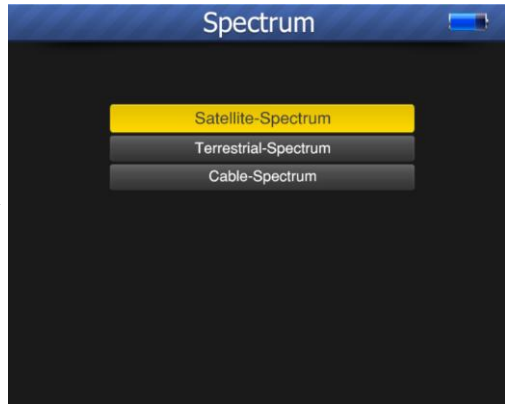
7) Constellation:

- Press <Yellow(constellation)> button to display the constellation diagram as following picture.



4. SPECTRUM

- Satellite - Spectrum
- Terrestrial - Spectrum
- Cable - Spectrum



Reference the spectrum function in the DVB-S/S2, DVB-T/T2 and DVB-C SETUP menu.

5. CONSTELLATION

- Satellite - Constellation
- Terrestrial - Constellation
- Cable - Constellation



Reference the Constellation function in the DVB-S/S2, DVB-T/T2 and DVB-C SETUP menu.

6. CCTV MONITOR

Press AV IN/OUT button to activate the CCTV monitor function when the camera is connecting with the meter.

The following diagram is the connecting instruction.

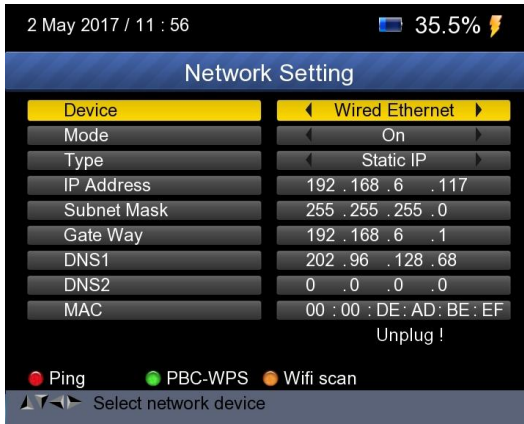


NOTE: This function just can be working when the camera is connecting.

7. NETWORK

Press OK on NETWORK to enter the network setting.

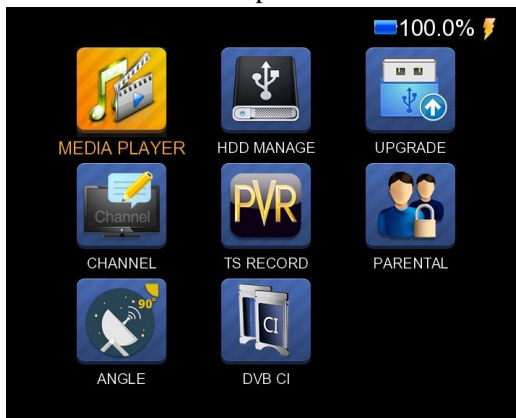
Ethernet cable must be connected when using Wired Ethernet mode



8. OTHERS

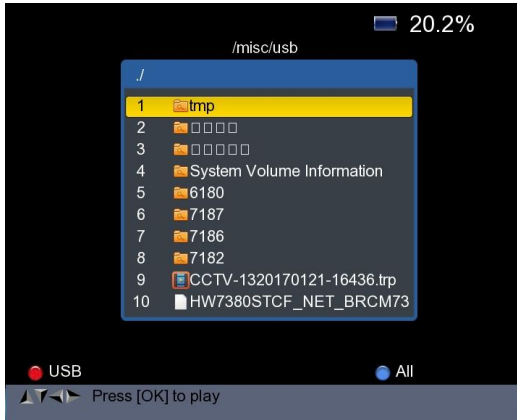
Press OK on OTHERS then the following window appears.

The menu consists of 8 menu options as shown below:



Note: Some menu options relate to the USB and PVR function, external Hard-Disk-Drive must be connected to the USB port of the device.

8.1 MEDIA PLAYER

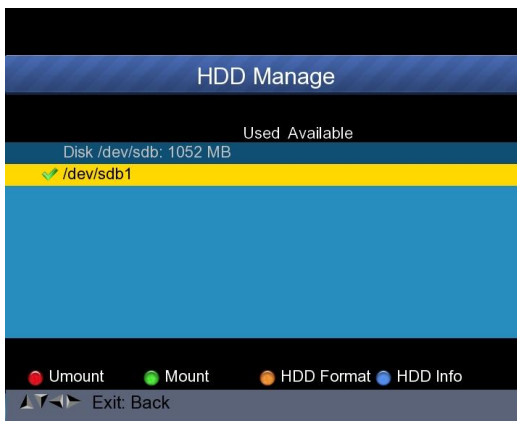


Check the information from the external hard drive which you connected to the meter.

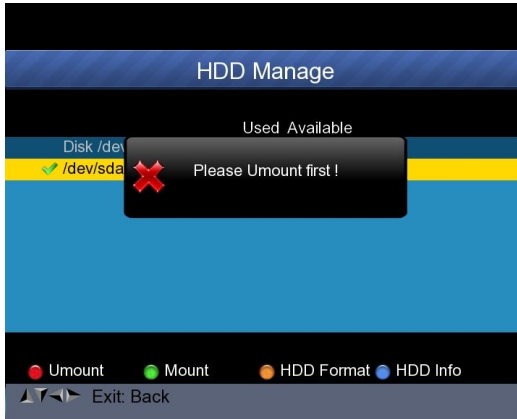
Use <Up/Down> and OK button to select the recorded program for playing back and view the pictures.

8.2 HDD MANAGE

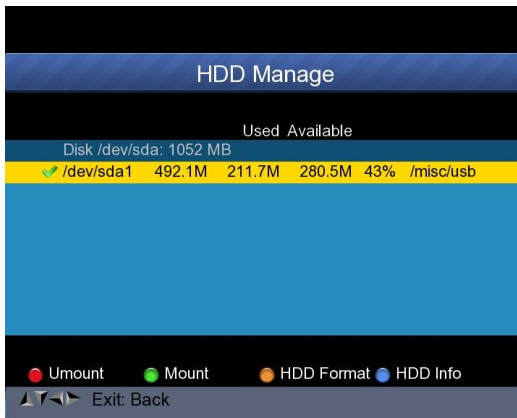
Select the **HDD MANAGE** in main menu and press OK. The following picture will be displayed.



- 1) Press the <Red(0/22K)> button to unmount the external hard drive
- 2) Press the <Green(H/V)> button to mount the external hard drive again.
- 3) Press the <Yellow(Spectrum)> button to format the external hard drive. A warning bar will be displayed as following picture.



- 4) After unmount the external hard drive, press the YELLOW button again to format.
- 5) Press the <Blue(Find)> button to display the information of the hard drive. As following picture shown.



8.3 UPGRADE

This function can be used to store and update satellite data, Also can be used to upgrade main program of the meter.

8.3.1 Satellite information update

Connect a USB disk to the meter first, then you can enter the **UPGRADE** function. The following picture will be displayed.



- 1) Press the <Blue(Find)> button to backup the satellite information, satellite list, channel data and so on.
- 2) Press the <Red(0/22K)> button to display the firmware in the hard drive and press OK button to upgrade the firmware .
- 3) Press the <Green(H/V)> button to display the channel data in the hard drive and press OK button to upgrade the channel data.
- 4) Press the <Yellow(Spectrum)> button to display the all data including the firmware and channel data.

8.3.2 Main Program upgrade

After receiving the main software from supplier, put the software (IMX format) into the USB disk and connect to the device.

Select the UPGRADE in the menu, following picture will be shown

Move the cursor to the IMX file and press OK, then the device starting to upgrade. After upgrading, the device will be power off automatically. You can power on the device again.

Also, there is another way to upgrade the main software.

Upgrade Software via USB port automatically.

- 1) Press <ON/OFF> Button ,turn off the device Then Insert USB disk .
- 2) Press <ON/OFF> button ,turn on the device ,The device will automatic identification the Software.
- 3) The LOCK light flashed, that is software upgrading now .
- 4) The LOCK light constant light. Software upgrade have been completed .
- 5) Press <ON/OFF> Button ,turn off the device, Pull out the USB disk. Upgrade was completed.

8.4 CHANNEL LIST EDIT

There are two types of program.One is TV and the other is Radio.

The operation of the List and Guide at TV and Radio are the same.

Press Menu button to display main menu. Select the Edit Channel

List and press OK, If there are some programs stored in the

Device. User will see the TV list menu as below :



You can manage the stored channels ,TV and Radio Channels. Sort, Fav, Edit and Delete them very easily.

1) To sort a channel:

- ① Locate the channel you want to sort. Press the <Red(O/22K)> button. You will get four ways to sort the channel by Name, Table, LCN and Manual .

- ② Press <Blue(FIND)> button, one message box will be displayed.



- ③ Input the serial number by using the numeric keys . Press the <OK> button .The channel will change sequence.

- 2) **To set favorite channels :** Press <Green(H/V)> button to set your favorite channes in Fav 1,2,3,4



- 3) **To Edit Channels:** Press <Yellow(Spectrum)> button to edit channels by Lock, Skip, Rename and Modify PID.

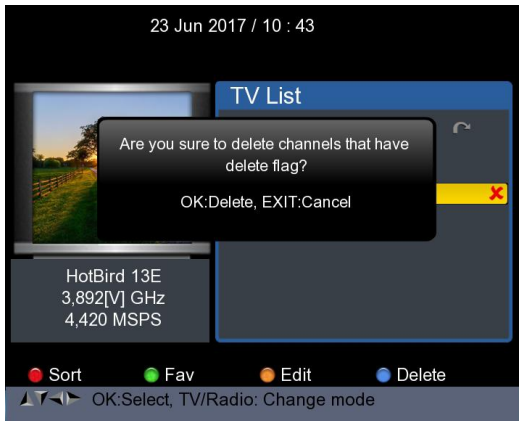


- 4) **To delete channel:** Press <Blue(FIND)> Button to delete the channel, the following picture will be displayed.



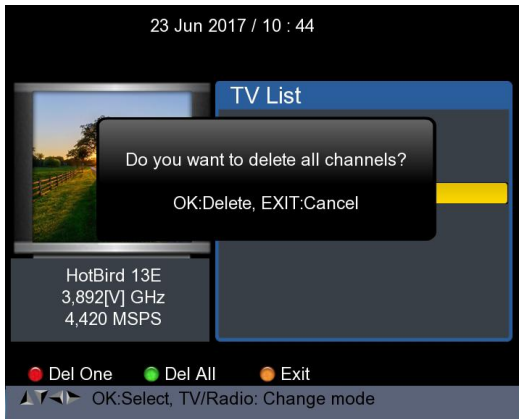
- ① Press Left /Right button to select page turning, Press Up/Down button to select the channel .
- ② Locate the channel you want to delete, and press <Red(O/22K)> button, the channel will be marked with the symbol “X” .
- ③ Repeat step 2 with those channels you want to delete.

- ④ To confirm the deletion .Press EXIT twice, You will see a confirmation message .
- ⑤ Press OK key to confirm the deletion .or Press EXIT to cancel.



Press <Green(H/V)> button to delete all of the channels,You will see a confirmation message .

Press OK key to confirm the deletion .or Press EXIT to cancel.



5) Channel Information

Use <UP/DOWN> or <LEFT/RIGHT> keys to move the cursor. In the meantime, Channel information: Satellite name, transponder information will be displayed on the left side .

8.5 TS RECORD

Connect the USB disk to the device, select the TS RECORD menu.



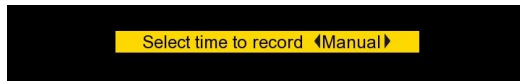
Press 0/22k red button start to record the program in TS format.

Press H/V green button to stop the recording and the program will be saved to the USB disk automatically.

8.5.1 PVR function.

With the same function as the receiver, this Finder also has time shift and program recording function. USB memory device must be connected before using this function.

1. Press 0/22K button ,you will see the picture as below.

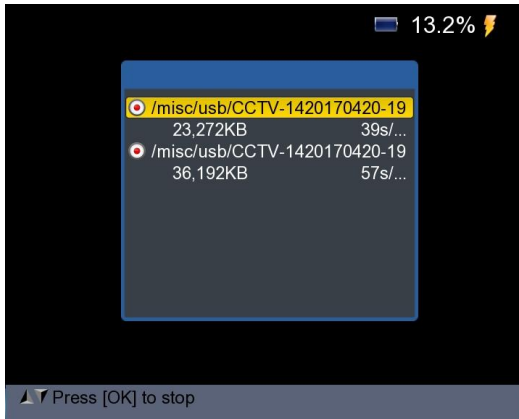


2. Then press <Right/Left> keys to select the recording time.

And then press OK button to confirm the time for recording.



3. When the program is on recording, press H/V button, you will see the picture as below.



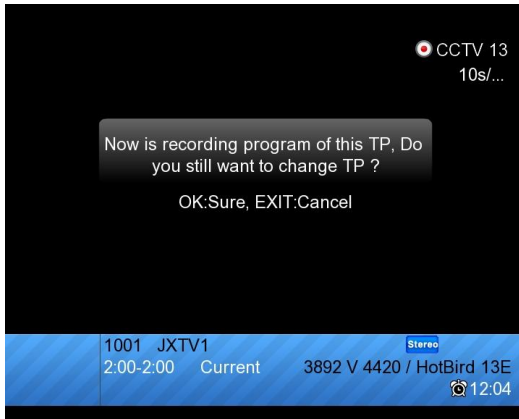
4. Then press the OK button to stop the recording. The recorded program will be saved to USB memory automatically.

5. Press AN/DG button to enter the recorded program menu. The following picture will be displayed.



Use <Up/Down> and OK button to select the recorded program for playing back.

NOTE: During recording you have the option to watch another channel, but it must be provided on the same TP. Otherwise, the following picture will be displayed.



The recording will be stopped when press OK button.

CAUTION: Do not disconnect the external hard drive while recording . It may cause damage to the recorded programs. The Finder will not display anything while the recording is on Terrestrial and Cable Program.

8.6 PARENTAL CONTROL

Select PARENTAL CONTROL to set a password to the device



8.7 ANGLE CALCULATION

Press OK on Angle Calculation then following window appears.

The screenshot shows a window titled "ANGLE CALCULATION" with a status bar at the top displaying "21 April 2017 / 16 : 36" and "100.0%". The window contains a table with two columns and ten rows. The first row is a header with "Satellite" and "NSS 9/Yamal 300K". The following rows contain numerical values and directional indicators for satellite and user location. The final row is "ANGLE CALCULATION" with "OK". At the bottom, there is a navigation bar with left and right arrow icons and the text "Select satellite, OK: display satellite list".

Satellite	NSS 9/Yamal 300K
Sat longitude	177.0
East/West	West
User latitude	47.0
North/South	North
User longitude	2.5
East/West	East
ANGLE CALCULATION	OK

- 1) Satellite: Use LEFT/RIGHT button to select the satellite or Press OK button to select the Satellite.
- 2) Sat longitude: Use numerical button to enter satellite position.
- 3) East/West: Use LEFT/RIGHT button to select satellite position is East or West.
- 4) User latitude: Use numerical button to enter latitude of your position.
- 5) North/South: Indicate if latitude is North or South.
- 6) User longitude: Use numerical button to enter longitude of your position.
- 7) East/West: Indicate if longitude is East or West.
- 8) ANGLE CALCAULATION: Press OK button to calculate azimuth and elevation of dish.

8.8 DVB-CI

The product is equipped with a slot for Common Interface (CI).

- Check the bottom of the product
- Insert the Smartcard into the CI module, and CI module into the Slot.
- Press OK on DVB CI then following window appears.

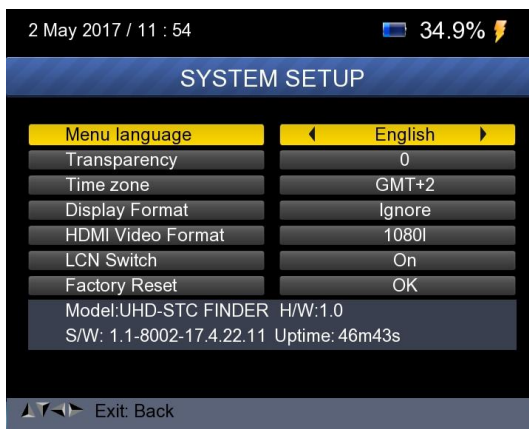


Then you can check the information of CI module using this item

Also you can change the CI module power in 3V/5V/Auto by using Red button (0/22k).

9. SYSTEM SETUP

Press OK on **SYSTEM** then the following window appears.



- 1) **Menu language:** Press <Left/Right> button to Select the desired language for menu
- 2) **Transparency:** Press <Left/Right> button to adjust the OSD transparency of all the menu of the receiver.
- 3) **Aspect Ratio:** Select 4:3, 16:9 (wide screen) and auto.
- 4) **Display Format:** If you select the display aspect ratio as “4:3”, then also the preferred aspect ratio conversion scheme for cases in which the transmitted Programme is in “16:9” format can be chosen.

The options are:

- ① Pan & Scan: The receiver interprets pan & scan vectors encoded in the Programme and crops the 16:9 input signal for display on 4:3 TV.
 - ② Letterbox: In this mode the original aspect ratio of the 16:9 input video signal is preserved, thus there are vertical black bars on the top and bottom of the screen.
 - ③ Ignore: Use this setting, if your TV set handles the aspect ratio conversion.
- 5) **Video Format:** Please choose from the available resolutions 1080p / 1080i , 720p or 576p.
 - 6) **Factory reset:** The default password is 0000. All Parameters are reset to Factory Programming.



E. Technical Specifications

System capabilities	Fully DVB compliant	Yes
LNB/TUNER Input	Connector	F type
	Frequency Range	950MHz-2150 MHz
	Signal Level	-65dBm~~-25dBm
	LNB supply	13/18V.,max500mA
	LNB Switch control	22KHz
	DiSEqC	Ver 1.0 / Ver 1.1/Ver 1.2
S/S2 Demodulator	Front End	S: QPSK
		S2: QPSK, 8PSK
	Symbol Rate	1<Rs<45M band
	SCPC and MCPC	Yes
Spectral inversion	Auto conversion	
RF TC/TUNER Input	Connector	F type
	Frequency Range	48MHz-862 MHz
	Signal Level	-87dBm~~-20dBm
	ANT supply	5V/12V/24V., max50mA
T/C Demodulator	Front End	T2: QPSK,16QAM,64QAM,256
		T: QPSK, 16QAM,64QAM
		C: 16,32,64,128,256QAM
	Channel Bandwidth	6,7,8MHz
Symbol Rate	C: 0.2Mbps~~7.2Mbps	
System resource	Processor	751MHz
	SDRAM	512Mbyte DDR3
	FLASH	1MBytes SPI + 128MBytes Nand
Video Decoder	H.265/HEVC/AVC/AVS+, AVC/H.264, MPEG-2, MPEG-4 Part 2, DivX, Xvid, MPEG-1/H.261/H.263, AVS	
	Resolution	HDMI2160P,1080P,1080i.720P,576P, 576I
Audio Codec	DD/DD+, AAC/AACHE, WMA/WMApro, MPEG I Layer 1, 2, MP3, 3D SRS	
Serial interface	Connector	USB type
Power Supply	Li-oN Battery	2600 mAh
	Supply voltage	14 Volt
	Charger	90-240V
Panel connectors	Digital tuner input	F type

F. Physical Specifications

Size	280 x 180 x 40 mm
Weight	0.75 kg
Operating temperature	0 to 45°C
Storage relative humidity	5 to 90%

Weight and dimensions are not absolutely exact values.
The battery life will be shorten if using in the extremely cold or hot weather.

Handling Precautions and Prohibitions of Battery in Sat Meter Warning:

You are using Lithium ion batteries or Nickel metal hydride batteries in the machine now, so please don't work under high temperature or high pressure conditions. If the following items happened, abnormal chemical reaction may occur which will lead to the battery overheat, emit smoke, ignite and/or burst.

- (1) incinerate and dispose the battery in fire or heat it;
- (2) pierce the battery with a nail or other sharp objects, strike it with a hammer, or step on it;
- (3) immerse the battery with water or connect the positive(+) and negative(-) terminals with a metal objects such as necklaces, hair pins, etc.

Notice:

The battery is only applicable to the charger which supplied or appointed by the manufacturer of this machine.

The charging time should be minimum 5 hours for the first time, and it should not be charged over 12 hours after the first time.

The battery should be stored within a temperature range of 0* to 40*.

When stored for a long period, charge the battery at least once per half month so as to prevent over discharge.

The battery is expendable.

Handling:

Improper setting of new battery may lead to the battery burst.

Please use the battery only supplied by the manufacturer if you want to change a new battery.

Please do not put the battery in fire or dispose it together with garbage.

Please contact the waste administrative institute in your place to get the nearest battery collection station.

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This manual is according the latest technical knowing. Technical changings which are in the interest of progress, reserved.

We herewith confirm that the units are calibrated by the factory according to the specifications as per the technical specifications.

We recommend to calibrate the unit again, after 1 year.

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