



Lime Sat
Digital Satellite Receiver



Digital Satellite Receiver

Digital Satellite Receiver

USER'S MANUAL

LIMESAT HD AIR

DIGITAL SATELLITE RECEIVER



Lime Sat



Table of Contents

1. Safety Precautions	1. Important Safety Instructions 2. Notice 3. FCC
2. Before You Begin	1. Main Features 2. Accessories
3. Hardware Descriptions	1. Front Panel Configuration 2. Rear Panel Configuration 3. Remote Control Unit
4. Connections Diagram	1. Receiver To TV
5. Guide of Functions	1. Select Service 2. Information Window 3. Electronic Program Guide (EPG) 4. Satellite List 5. Favorite Group 6. Volume Control 7. Pause 8. Audio 9. Closed Caption
6. Guide of Main Menu	1. Installation 2. Configuration 3. Channel List 4. Utilities 5. PVR & Timeshift
7. Troubleshooting	
8. Specifications	
9. Wi-Fi Specifications	
10. Multi-Brand IR Remote Controller	

Table of Contents

Safety Precautions

Table of Contents	Before you Begin	Hardware Descriptions	Connections Diagram	Guide of Functions	Guide of Main Menu	Trouble-shooting	Specifications	Wi-Fi Spec.	RCU
-------------------	------------------	-----------------------	---------------------	--------------------	--------------------	------------------	----------------	-------------	-----

Safety Precautions

1. Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not reverse the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Warning:
TO PREVENT FIRE OR SHOCK HAZARD DO NOT EXPOSE THE SET TO RAIN OR MOISTURE.

2. Notice

- These serving instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.



TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE THE COVER (OR BACK).
NO USER-SERVICEABLE PARTS ARE INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Safety Precautions

3. FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Caution: Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- 1) Reorient or relocate the receiving antenna.
- 2) Increase the separation between the equipment and receiver.
- 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- 4) Consult the dealer or an experienced radio/TV technician for help.

Table of Contents

Safety Precautions

Before You Begin

Table of Contents

Safety Precautions

Hardware Descriptions

Connections Diagram

Guide of Functions

Guide of Main Menu

Trouble-shooting

Specifications

Wi-Fi Spec.


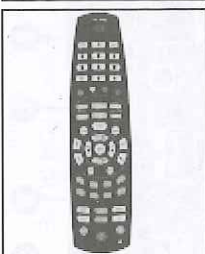

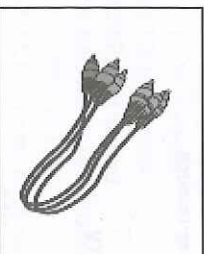


RCU

Before You Begin

1. Main Features

- 1) External USB2.0 HOST HDD supporting for Timeshift & Live recording or playback simultaneously, powerful track mode.
- 2) MPEG-2 & MPEG-4 AVC (H.264)
- 3) DVB-S, DVB-S2 compliant.
- 4) Multi-LNB controlled by Diseqc control version 1.2 and USALS.
- 5) USB 2.0 HOST support.
- 6) Brilliant 65,535 colors full-resolution on screen display.
- 7) Multi-Language supported (OSD & MENU).
- 8) Software upgrade via RJ-45 LAN & RS-232 Serial Port & USB.
- 9) True to life HD (High Definition : HDMI)
- 10) CVBS video & Audio output via RCA.
- 11) Component (Y/Pb/Pr) output via RCA.
- 12) Channel sorting by Alphabet, Transponder, CAS.
- 13) Maximum 10,000 channel programmable.
- 14) Closed Caption support.
- 15) Favorite channel groups.
- 16) Support extended 7-Day EPG.
- 17) Parental Lock & Receiver Lock.
- 18) Powerful channel control by favorites, lock, skip, move and delete.
- 19) Universal Remote Controller.
- 20) Wi-Fi IEEE 802.11b/g/n Support.
- 21) 3G Modem Support.(EVDO/HSRPA/WCDMA/TD-SCDMA)
- 22) WPA and WPA2 Support.

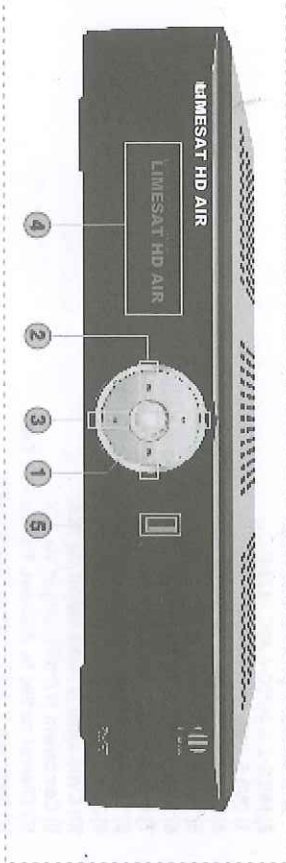
2. Accessories

User's manual	Remote Control	AAA size Batteries X 2
		
RCA Cable	LAN Cable	USB Cable
		

NOTE : If any accessories listed above are missing, contact the sales representative where you purchased this unit.

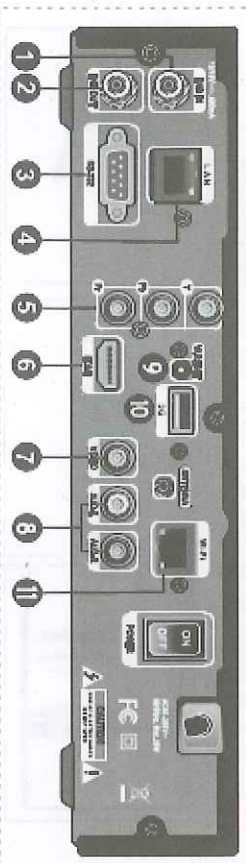
Hardware Description

1. Front Panel Configuration



- POWER Button :**
Press to switch between STANDBY and POWER ON modes.
- Volume Up/Down Button :**
Press to change volume in normal mode, to move ARROW Left/Right in menu mode.
- CH Up/Down Button :**
Press to change channels in normal mode, to move the ARROW Up/Down in menu mode.
- DISPLAY :**
The 10-digit shows channel number / name or menu state in normal mode, show local time in STANDBY mode.
- USB Port :**
To download firmware through USB memory stick.

2. Rear Panel Configuration



- LNB IN :** Use to connect a satellite antenna.
- LNB OUT :** Use it when connecting to another STB for loop-through.
- RS-232C :** Use it when connecting to your PC.
- LAN :** Use to when connecting to Internet.
- Y/Pb/Pr :** Use it when connecting component video to TV.
- HDMI :** Connect to the TV with HDMI Cable
- VIDEO :** Use it when connect to input of TV or VCR.
- AUDIO L/R :** Use it when connect audio left, right of TV or VCR.
- WARESET :** Use it when restart Wi-Fi Board (SOLD SEPARATELY)
- 3G :** Use it when connect 3G, (SOLD SEPARATELY)
- Wi-Fi :** Wire to LAN port to connect internet, (SOLD SEPARATELY)

Hardware Description

Table of Contents	Before you Begin	Safety Precautions
-------------------	------------------	--------------------

Hardware Description

Table of Contents	Safety Precautions	Before you Begin	Connections Diagram	Guide of Functions	Guide of Main Menu	Trouble-shooting	Specifications	Wi-Fi Spec.	RCU
-------------------	--------------------	------------------	---------------------	--------------------	--------------------	------------------	----------------	-------------	-----

Hardware Description

3. Remote Control Unit

- POWER:** Switch the receiver on or set it to standby mode.
- DVD:** DVD Controlling
- TV:** Universal TV mode
- STB:** Satellite Receiver mode
- AUX:** Universal AUX mode
- USB/PVR:** Activate USB Menu / Stop
- STOP / :** Stop recording/ Stop playing.
- Pause / :** Pause/ Time-shift
- RW / :** BACKWARD
- FF / :** Forward
- :** Play previous item.
- :** Play next item.
- TV/VCR:** Switch between TV and VCR.
- INPUT:**

TV Source Input "to change from Video 1 to Video 2 etc)

15. RECORD / Start recording

16. MUTE : Turn the sound On/Off

17. V-/+: Change volume

18. CH+/+ : Change channel.

19. GUIDE : Show the TV/Radio program guide.

20. EXIT : Exit current menu step by step.

21. MENU: Activate main menu or exit to live channel.

22. P+/+ : PGUP PGDN

23. FAV: To get favorite channel list you set before

24. SAT: Show the scanned satellite list.

25. 1-9: Input channel num

26. AUDIO: Select or change the Audio.

27. PAUSE: Freeze the picture.

28. ZOOM: Picture Zooming function.

29. THEME SEARCH: THEME SEARCH FOR GUIDE

30. NAME SEARCH: NAME SEARCH GUIDE

31. CC: CC

32. IP INFO: IP INFO

33. F1: No function

34. F2: No function

35. FF: Fast forward

36. PAL/NTSC: TV FORMAT SWITCH

37. SLEEP: SLEEP

38. SET: Function setup key

Entering DEVICE Codes Manually

1. Turn on the DEVICE .

2. Select your appropriate Device Code from The List Below.

3. Press and Hold the SET key for about 3 seconds until LED starts blinks.



Connections Diagram

3. Remote Control Unit

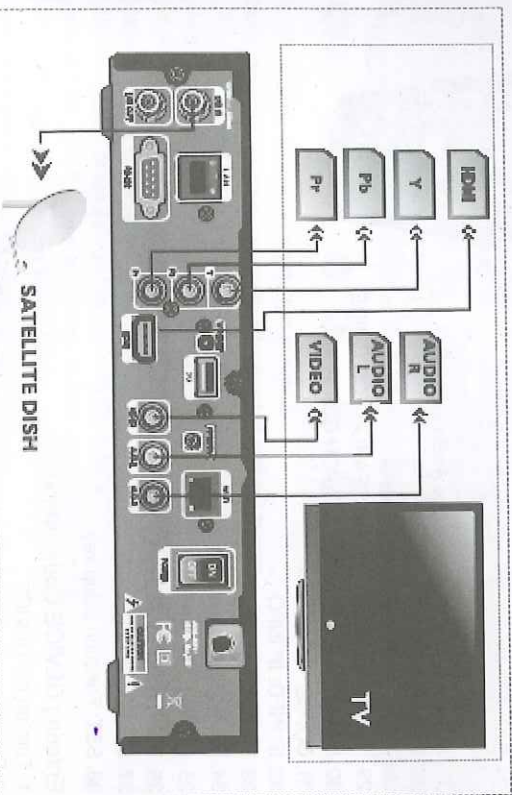
- Press the DEVICE key (e.g.: TV key), the LED will blink once.
- Enter the 4-digit code selected in Step 1. If the 4 digit code is entered correctly, the LED light will blink 4 times. If the 4 digit code is not entered correctly, the LED will blink 4 times very fast. Please Try Step 5 once more.
- Please check if the remote control can operate your device correctly. If not, please try another code from the same DEVICE list below to properly operate your device.
- If all these steps fail to operate your DEVICE, please Try the "Auto Search" Feature.

Auto search

- Press and hold the SET key for about 3 seconds until the LED light starts blinking.
- Press the DEVICE key you want to search (e.g.: TV, DVD, STB,AUX), the LED light will blink repeatedly. Now the remote control is in Auto Search Mode.
- Press THEME SEARCH key or NAME SEARCH key at 2 second intervals which will send a new code to the Device until the Device is powered off. After the Device is Powered Off press the OK key to save the current code in the remote control. Press the SET key and the LED will blink 4 times to exit and save the code for your DEVICE.

1. Receiver to TV

- Connect the satellite antenna cable to LNB IN.
- Connect the VIDEO and AUDIO L, R to VIDEO IN and AUDIO L, R in of TV.
- Connect the Y, Pb, Pr to component input (Y, Pb,Pr) of TV(if necessary).
- Connect the HDMI to HDMI input of TV



Connections Diagram

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Guide of Functions

Guide of Main Menu

Trouble-shooting

Specifications

Wi-Fi Spec

RCU

Guide of Functions

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Main Menu

Trouble-shooting

Specifications

Wi-Fi Spec

RCU

Guide of Functions

1. Select Service

To select the desired channel, you can use below methods

1.1 Using UP/DOWN buttons

You can navigate between channels using UP/DOWN buttons. Whenever you press the UP/DOWN button, current channel will be changed to next/previous channel. You have to press UP or DOWN button until find the channel you want.

1.2 Using NUMERIC buttons

If you know the channel number, enter the number directly using NUMERIC buttons.

1.3 Using Channel List

To select the desired channel in the channel list, you should firstly display the channel list using OK button. Use ARROW buttons to select a desired channel and press OK button. In the Channel List window, you can also use additional functions with COLOR buttons



2. Information Window

If you want to view the current channel information window press INFO button. Then the information window will appear. This information window is automatically displayed when changing channels. This window contains many items such as channel number, channel name, scrambled channel, Teletext, subtitle, Dolby Digital symbol, duration time and so on. Press INFO button once more, you can get more detailed information.



3. Electronic Program Guide(EPG)

Electronic Program Guide (EPG) helps you navigate through all the possible viewing options. The EPG supplies information such as program listings, start/end times and detailed information about the program listings for all available channels. The availability and amount of these program details will vary depending on the particular broadcaster.



- If you press EPG button, EPG menu will be displayed.
- Press the ARROW buttons to move to other channel or to see previous/next guide.
- Press EPG button once to view full EPG (Entertainment Program Guide) and press button twice to view only selected EPG. Press button consecutively to go back and forth.
- Press GREEN button to view next day EPG and RED button to view EPG for previous day.
- Select the program by using the ARROW buttons then set the timer by pressing OK.

Guide of Functions

4. Satellite List

Select the SAT (satellite) button to view all satellite listings. Scroll through the various satellites using the ARROW buttons, and select the appropriate satellite by pressing OK.

5. Favorite Group

Select the FAV (favorite) button to view all favorite groups. Scroll through the various favorite group using the ARROW buttons, and select the appropriate satellite by pressing OK.

6. Volume Control

- ① To control audio volume while you are watching a channel, press LEFT/RIGHT button to control volume.
- ② Volume control bar will be appeared in top of the screen.
- ③ When necessary, press MUTE button to turn audio sound on/off.

7. PAUSE

The PAUSE button is used to freeze the video. Press PAUSE button once more to resume the video.

8. AUDIO

To adjust the audio status of the current channel, press YELLOW button, then audio related menu will be displayed.

9. Closed Caption

To display of Close Captioning press C.C on your remote control. Close Captioning is based on the transmitted data.

Guide of Functions

Table of Contents	Safety Precautions	Before you Begin	Hardware Descriptions	Connections Diagram	Guide of Functions	Main Menu	Trouble-shooting	Specifications	Wi-Fi Spec.	RCU
-------------------	--------------------	------------------	-----------------------	---------------------	--------------------	-----------	------------------	----------------	-------------	-----

Guide of Main Menu

Table of Contents	Safety Precautions	Before you Begin	Hardware Descriptions	Connections Diagram	Guide of Functions	Trouble-shooting	Specifications	Wi-Fi Spec.	RCU
-------------------	--------------------	------------------	-----------------------	---------------------	--------------------	------------------	----------------	-------------	-----

Guide of Main Menu



To display the menu, press MENU button at any time. You can select the sub menu using ARROW buttons. The selected sub menu becomes highlighted. When you have selected the sub menu you want, press the OK button. If you want to return to the previous menu, press the MENU button. And if you want to exit from the menu, press the EXIT button.

1. Installation

1.1 Dish Settings

Select the antenna and LNB settings for channel search. The values that are set in this menu will be available for selection in other channel searching menus.



- ① Satellite : Select the satellite what you want to search the channel.
 - Press the LEFT/RIGHT button to select the satellite.
 - Select the wanted satellite name.
 - If the desired satellite name is not listed then select User Defined.
- ② LNB Power : Select the LNB power.
- ③ LNB Type : Select the LNB type.
- ④ LNB Frequency : Select the L.O. frequency that is set to antenna.
 - Use the LEFT/RIGHT buttons to select the LNB frequency.
 - If the required LNB frequency is not available, then select '0' and enter the frequency manually using the NUMERIC buttons.
 - When you select Universal in LNB type, both 9750 and 10600 are supported at the same time. And LNB 22KHz setting is disabled.
- ⑤ LNB 22KHz : When you use a dual LNB or two antennas connected to a 22KHz tone switch box, make 22KHz tone switch enable or disable to select LNB or antenna.
- ⑥ DISQC SW : Select your DISQC10 port connection to your receiver.

1.2 Positioner Settings

- ① Satellite : Select the satellite what you want to search the service.
 - Press the LEFT/RIGHT button to select the satellite.
 - Select the wanted satellite name.
 - If the desired satellite name is not listed then select User Defined.
- ② Frequency : Select frequency what you want to check the signal.
- ③ DISQC motor



Off
-No positioner connected, Just DISQC 10 switch.

DISQC 1.2

- Move : To move the dish from East to West with pressing LEFT/RIGHT button.
- Move Fine : To move the dish in detail from East to West with pressing LEFT/RIGHT button.
- Limit : Set your Dish East and West limit to be moved.
- Go To : Move Dish to the stored location.
- Save/Recalculate : Save the location or recalculate the new location.

Guide of Main Menu

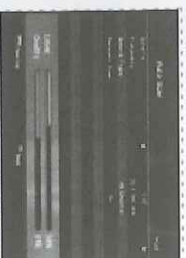
Table of Contents

- **USALS**
- Move : To move the dish from East to West with pressing LEFT/RIGHT button.
- Limit : Set your Dish East and West limit to be moved.
- Set Degree : Insert the satellite location.
- Antenna Position : Move to Q position and insert antenna longitude and latitude of your present location by pressing numeric keys on RCU.
- Go To : Move Dish to the stored location.



1. 3 Auto Scan

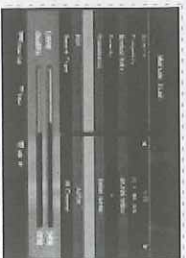
- Frequency : Select the frequency from the list to search.
- Search Type : Select the search type.



You can select Off or On. When you select 'On', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.

1. 4 Manual Scan

- Frequency : Select the frequency from the list to search.
- Symbol rate : Enter the symbol rate using the NUMERIC buttons.
- Polarity : Select the polarity.
- Search Type : Select the search type.
- Transmission : Select the DVBS QPSK, DVB-S2 QPSK/QPSK2



1. 4 PID Scan

- Frequency : Select the frequency from the list to search.
- Symbol rate : Enter the symbol rate using the NUMERIC buttons.
- Polarity : Select the polarity.
- Transmission : Select the DVBS QPSK, DVB-S2 QPSK/QPSK2
- Video PID : Input the video PID.
- Audio PID : Input the audio PID.
- PCR PID : Input the PCR PID.



Guide of Main Menu

Guide of Main Menu

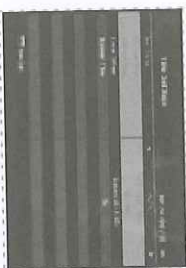
Table of Contents

2. Configuration

2. 1 Time Settings

In this menu, you can set up your local time setting.

- GMT : Set On and local time is determined by adjusting the differences from GMT(Greenwich Meantime) according to your location.
- Current Date : Set GMT On and it will be determined by GMT. Set Off and you can modify by pressing button.
- Current Time : Set GMT On and it will be determined by GMT. Set Off and you can modify by pressing numeric keys on Remote control unit/RCU.
- Local Offset : Set GMT On and local time is GMT time + local offset



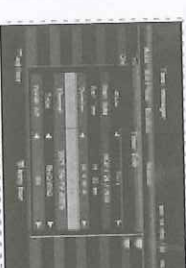
2. 2 Time Manager

This sub menu allows you to set up the reserved recording and wake up mode on your receiver.

Press the RED button while in the guide menu, and press "OK" to select a timer's parameter(Once/Daily/Weekly).



- Start Date : Press 'OK' button, and you can select the start date on calendar after press 'OK' button again.
- Start Time : Input the time for start using the numeric buttons.
- Duration : Select the duration by pressing Left/Right buttons.
- Channel : Select the channel.
- Type : Select the Type(Play/Record)
- Power Off : After finishing above setting, set up receiver power On/Off.



2. 3 AV Output Settings

- Audio Language : Select default language when changing channels.
- Screen Format : Select the aspect ratio of TV which is connected to STB. (4:3/16:9)
- Display Format : Select the format which the video is to be displayed on screen. (Letter Box / Pan Scan) In case of 16:9 mode, this option is not available.
- HD Video Output : Select the 480p / 720p / 1080i



2. 4 UI Settings

- Menu Language : Select your OSD menu language.
- Transparency : Select OSD transparency.
- Information timeout : Set the display duration of information window displayed on the screen after changing channels.
- Volume timeout : Set the display duration of volume bar displayed on the screen after changing volume.



Guide of Main Menu

2. 5 System Recovery



Access to System Recovery is controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access System Recovery menu, the pop-up window will instruct you to input a PIN code. (If necessary, you can change it.) Note : The default PIN code is "0000".

- Delete All Channels : Delete all channels from your channel list.
- Factory Set : Press OK button to erase all channels and restore default setting.



3. Channel list

3. 1 Set Favorites



Press FAV button to mark the favorite group list. Once, favorite group is chosen, left side window will show all channel list marked and right side window will show only the marked channel list. Using ARROW and OK buttons you may add any channel to the favorite group or delete any channel from the favorite group.

3. 2 Edit Channels

All channel lists will be shown on left side of window. Move the highlighted bar to the channel what you want to edit its name and press OK button. Then you can see the virtual keyboard. Using ARROW and OK buttons, you can edit the channel name.



- Lock Channels : To lock channel.
- Skip Channels : To skip channel.
- Delete Channels : To delete channel.
- Delete All Channels : To delete all channels.
- Rename : To rename channel.

3. 3 Parental Control



Access to channels and programs is controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access parental control menu, the pop-up window will instruct you to input a PIN code. (If necessary, you can change it.) Note : The default PIN code is "0000".

Guide of Main Menu

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Functions

Trouble-shooting

Specifications

Wi-Fi Spec.

RCU

Guide of Main Menu

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Functions

Trouble-shooting

Specifications

Wi-Fi Spec.

RCU



- Receiver Lock : Set On and receiver will ask to enter PIN code when power on.
- Install Lock : Set On and receiver will ask to enter PIN code when access to installation menu.
- Age Limit : Select age limit to access a channel among NR, G, PG, PG-13, R and MC-17.
- Hide Skip Channels : To hide skipped channels.
- Hide Lock Channels : To hide lock channels.
- Current Password : Input the current password to change it.
- New Password : Input new password to be changed.
- Verify Password : Input new password to be changed.

4. Utilities

4. 1 MP3 Player



Stick the external USB memory into the provided USB port on front panel. Once inserted, press OK button to read external USB memory stick and choose the MP3 file from the window you want to play.

4. 2 Image Viewer



You can display the image file that is in the external USB memory stick on the screen. Select the image file (jpeg format) and press OK button to display the image.

4. 3 Data Transfer



- Transfer Channel data to USB storage : If you want to use channel data in the future, this menu allows you to store current channel data. Press OK button to store current channel data to external USB storage.
- Data download from USB storage : This menu allows you to download the stored firmware data from external USB storage. Press OK button to download data.

4. 4 PVR MENU



- You can show the recorded list and play from the stored USB external HDD driver.
- Select the play list.
- Select the file you want to play and press "OK" button to play.
- Press "OK" button again to get it full screen.

Guide of Main Menu

4. 5 System Information



This displays general information about what hardware and software version your receiver is running on.

5. PVR & Time-Shift

- NOTE :**
1. Do not remove the USB device while recording a program.
 2. You can't change to another channel while recording a program.
 3. This function is available when USB device is connected.

5. 1 Instant Recording



- You can record a current channel by using REC button().
- If you stop the recording, press STOP button().

5. 2 Timer Recording



- You can record a channel at EPG menu.
- Select a channel to record, and press 'OK' button.
- icon will be marked at the channels to record.

5. 3 Play List & Replay



- Press button at normal video mode, and you will directly move to the Play List menu.
- Select a file to replay by using Up/Down button, and press 'OK' button to play.

5. 4 Time-Shift



- Press button at normal video mode.

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Functions

Troubleshooting

Specifications

Wi-Fi Spec

RCU

Troubleshooting

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Functions

Guide of Main Menu

Specifications

Wi-Fi Spec

RCU

Troubleshooting

Troubleshooting

Problem	Solution
<ul style="list-style-type: none"> - Does not display any message on the front panel. 	<ul style="list-style-type: none"> - Check the main power cable and check that it is plugged into a suitable power outlet. - Check you have switched the STB main power switch ON at the rear of the STB.
<ul style="list-style-type: none"> - No Picture 	<ul style="list-style-type: none"> - See 'Does not display any message on the front panel' above. - Check the video output port is firmly connected to the TV or VCR - Check that you have selected the correct channel or video output on your TV. - Check the brightness level of the TV.
<ul style="list-style-type: none"> - Poor picture quality 	<ul style="list-style-type: none"> - See 'No Picture' above. - Check the signal level. If this is low then try adjusting the alignment of your dish.
<ul style="list-style-type: none"> - No Sound 	<ul style="list-style-type: none"> - See 'No Picture' above. - Check the volume level of the TV and STB. - Check the Mute status of the TV and STB.
<ul style="list-style-type: none"> - Remote Control does not operate 	<ul style="list-style-type: none"> - Point remote control directly towards the STB. - Check and replace batteries.
<ul style="list-style-type: none"> - No or Bad Signal 	<ul style="list-style-type: none"> - Check the LNB : Replace LNB if necessary. - Check the cable from the LNB. - Check the position of the dish, realign dish if necessary. - If you are using a DiSEqC 1.0 switch, check that you have connected the LNBs to the correct connections on the switch. - Check the 'Signal Level' and the 'Signal Quality'.

Specifications

Tuner

Input Connector	1x I/F type(3/8-UNEF-2A) with loop through
Input Frequency	950 ~ 2150MHz
RF Input Level	-25 ~ -65 dbm
LNB Power & Polarization	13.5 / 18V 500mA. Max with overload protection
DiSeqC Control	Version 1.0/1.2 compatible

Demodulator

Waveform	QPSK, 8PSK
Symbol Rate	QPSK: 1-45Mbps, 8PSK: 1-45Mbps
FEC Decoder	DVB-S2 QPSK : 1/2,3/5,2/3,3/4,4/5,5/6,6/9,9/10 DVB-S2 8PSK : 3/5,2/3,3/4,5/6,6/9,9/10

MPEG Transport Stream A/V Decoding

Transport Stream Profile & Level	13818-1 MPEG-2, H.264/MVC Transport stream specification
Input Data Rate	MPEG-2 MP@ML, MP@HL, MPEG-4 H.264/MVC Max. 90Mbit/s
Video Resolution	576p, 720p, 1080i
Video Format	4:3 Letter Box, 4:3 Pan Scan, 16:9
Audio Decoding	MPEG-1 Audio Layer I & II
Audio Mode	Stereo, Dual Channel, Joint Stereo, Mono
Frame Rate	25Hz for PAL, 30Hz for NTSC

Main System

CPU	STI 7101
Flash Memory	8MBytes
DRAM	32MBytes * 2, 64MBytes * 2

Audio / Video & Data IN/OUT

Video	CVBS Output (RCA) V/Pb/Pr Output (RCA) HD Video/Audio Output RCA (Volume and Mute Control)
HDMI	
Audio L/R	9 pin D-SUB(Male) type, Trans Rate : up to 115.200bits/s
RS-232C	
USB	USB 2.0 Host Support
DTE & DCE	DTE

Specifications

Table of Contents

Safety Precautions

Before you Begin

Hardware Descriptions

Connections Diagram

Guide of Functions

Guide of Main Menu

Trouble-shooting

Wi-Fi Spec.

RCU

Specifications

Front Panel

Slot	1 USB Host 2.0 Slot
Buttons	5 Buttons (Standby, CH Up/Down, Volume Up/Down)
Display	VFD
Remote Control Input	Infrared Receiver

Power Supply

Input Range	AC 90 ~ 250V
Power Consumption	Max. 40W
Operation Frequency	50 ~ 60 Hz (5MPS type)
Separator Internal Fuse	2A and AC 250V

Physical Specification

Size (W x H x D)	270mm X 175mm X 50mm
Weight (Net)	Around 2.0Kg
Operating Temp.	0°C ~ +45 °C
Storage Temp.	-10°C ~ +50 °C