Stab - USALS
UNIVERSAL SATELLITES
AUTOMATIC LOCATION SYSTEM

USB2.0

DVB
Digital Video
Broadcasting

OPENSAT

9700 / 9900 HDPVR

DIGITAL SATELLITE RECEIVER

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

DOLBY
DIGITAL

DIVX

IMPORTANT NOTICE

■ Safety Precaution and Warning

To reduce the risk of electric shock, do not remove cover and do not expose this appliance to rain or moisture.

This symbol indicates dangerous voltage inside the product and there's a risk of electric shock or personal injury.

This symbol indicates important instructions accompanying the product.

Disposal of old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection system)
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

1. POWER SUPPLY

AC 100V-250V, 50/60Hz
- Operate this product only from the type of power supply indicated on the marking label. If you are not sure of it, consult your local power company.
- Disconnect the product from the power before you start any maintenance.

2. OVERLOADING

- Do not overload a wall outlet, extension cord as this may result in electric fire or shock.

3. LIQUID

- The product should not be exposed to any kind of liquid. In addition, no objects filled with liquid should be placed on this product.

4. CLEANING

- Disconnect the product from the wall outlet before cleaning.
- Use a light damp cloth (no solvents) to dust the product.

5. VENTILATION

- The slots on top of the product must be left uncovered to allow proper airflow.

IMPORTANT NOTICE

- Do not stand the product on soft furnishings or carpets.
- Do not stack electronic equipments on top of the product.

6. ATTACHMENTS

- Do not use any unsupported attachments as these may be hazardous or cause damage to the product.

7. CONNECTION TO THE SATELLITE DISH LNB

- Disconnect the product from the power before connecting or disconnecting the cable from the satellite dish. Failure to do so can damage the LNB.

8. CONNECTION TO THE TV

- Disconnect the product from the power before connecting or disconnecting the cable from the TV. Failure to do so can damage the TV.

9. EARTHING

- The LNB cable must be earthed to the system earth for the satellite dish.

10. LOCATION

- Place the product indoors to avoid exposing it to rain or sun.
- Do not place it near a radiator or heat generator.
- Make sure it has more than 10 cm clearance from any appliances that has electromagnetic influences, such as a TV or a VCR.
- Do not block the openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface.
- If you place the product on a rack or a bookcase, ensure that there is adequate ventilation and that you have followed the manufacturer's instructions for mounting.
- A falling product can cause serious injury to a child or adult, and serious damage to the appliance.

11. LIGHTNING, **STORM OR NOT IN USE**

- Unplug the product from the wall outlet and disconnect the antenna during a thunderstorm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-surges.

12. EXTRANEOUS OBJECTS

- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts.

13. REPLACEMENT OF PARTS

- When replacement of parts is required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part.
- Unauthorized substitution may result in additional damage to the unit.

CONTENTS

GETTING STARTED

## 1.1 Features

- Fully compliant with MPEG-4 HD / H.264 (DVB-S/DVB-S2)
- SCPC/MCPC Receivable from C /Ku-Band Satellites
- Smartcard reader
- 2 Common Interface
- 8000 channels programmable
- DivX file playback
- Electronic Program Guide for multi channel & single channel
- Subtitle & Teletext supported
- Blind scan / Fastscan / Unicable supported
- DiSEqC 1.0 / 1.1 / 1.2 / USALS support
- Multifeed function for selected channel
- Vacuum Fluorescent Display
- Optical Digital Audio output (S/PDIF) and AC-3 bitstream out
- MP3 playback
- JPEG picture view
- USB 2.0 interface for USB storage device
- Powerful trick mode support
  Seek (jump), Fast forward/Rewind upto 32X, Slow playback upto 1/4X
- Time shift
- Background recording & playback while recording function
- USB device management
- Backup / Restore function for software and channel data
- Easy software update through USB interface
- Easy Timer management
- Video resolution upto 1080i
- Various video output (HDMI, YPbPr, Scart, CVBS)
- Fast Ethernet RJ-45 interface (10/100M)
- Customized parental lock function
- Hi-color graphic user interface
- Channel manager support (favorite / move / delete / lock / rename)
- Support multiple OSD language
- Brilliant User Friendly OSD
- Advanced channel search option

1.2 Front panel
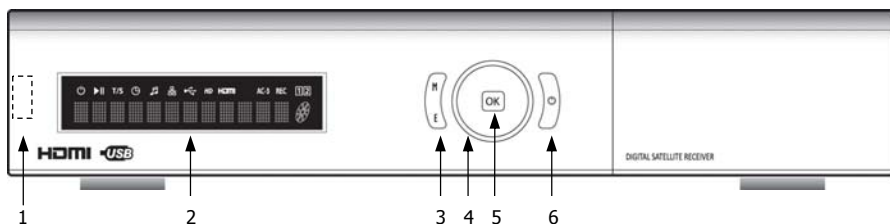
| 1	USB	USB 2.0 Interface
2	VFD DISPLAY	Vaccum Fluorescent Display
3	MENU	Normal mode : Display the main menu Menu mode : Exit menu mode
	EXIT	Return to previous menu
4	NAVIGATION	Up/Dn : Channel change, Left/Right : Volume control
5	OK	Normal mode : Display channel list Menu mode : Select menu item
6	STAND BY	Stand by mode [ON/OFF]

※ VFD icon description
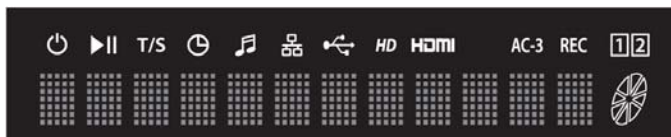
1	⏻	Turned on in stand by mode
2	▶‖	Indicates PLAY / PAUSE in playback mode
3	T/S	Turned on when Time shift is activated
4	⏱	Turned on when Timer setting is stored
5	♬	Turned on in MP3 play mode
6	品	Turned on as Ethernet connection is established
7	⟜⟍	Turned on as USB device is connected
8	HD	Indicates that current channel is High Definition
9	HDMI	Turned on when HDMI connection is established to TV
10	AC-3	Indicates that current channel has DOLBY DIGITAL Audio
11	REC	Turned on while in recording
12	✿	Turned on in playback mode

1.3 Rear panel
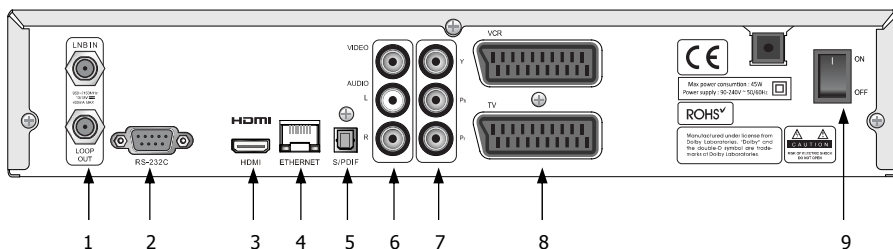
1	LNB IN	Connect satellite antenna cable
	LOOP OUT	Connect to another STB (LNB IN)
2	RS-232C	Connect to PC for S/W update
3	HDMI	Connect to TV
4	RJ-45	Connect ethernet cable
5	S/PDIF	Optical digital audio output
6	VIDEO	Composite video output
	AUDIO (L/R)	Stereo audio output
7	YPbPr	Component output. Connect to TV
8	TV SCART	Connect to TV
	VCR SCART	Connect to VCR
9	POWER SWITCH	AC Power ON/OFF switch

1.4 Remote Control Unit

KEY	FUNCTION
☉	Stand by mode [ON/OFF]
🔇	Mute the sound
STB	Set RCU work with STB
⊟	Select AV source of TV
☉	power ON/OFF of TV
TV	Set RCU work with TV
MOTOR	Display DiseqC 1.2 setup menu
TIMER	Display Timer reservation list
V.FMT	Set screen format
M.F	Display multifeed channels
EPG	Show the Electronic Program Guide
INFO	Show the current channel information
SAT	Display satellite list scanned
MENU	Normal Mode : Show the main menu Menu Mode : Exit menu mode
EXIT	Return to previous menu
ZOOM	Display Zoom function
CH ▲▼	Normal Mode : Change channel Menu Mode : Move menu item
VOL ◄►	Normal Mode : Adjust the volume Menu Mode : Change menu item
OK	Normal Mode : Display channel list Menu Mode: Execute the select item
HD	Display HD channel list
RCL	Go back to previous channel
AV+	Display audio mode / video mode menu
FIND	Display find-window to search channel
OPT	Display subtitle / audio language menu
TTX	Display Teletext
FAV	Show Favorite Channel List
TV/RAD	Switch TV/Radio mode
▲	Display USB file browser
►	Play recorded file / MP3
❚❚	Pause play / Time shift
●	Start recording
◄❚	Slow play backward
❚►	Slow play forward
❙◄◄	Seek backward
►►❙	Seek forward
F1	Reserved for future use
◄◄	Rewind
►►	Fast forward
■	Stop

1.5 Connecting TV, VCR

SCART

VCR

LNB IN

950~2150MHz
13/18V 400mA MAX

VIDEO

AUDIO

L

R

VCR

Y

Pb

Pr

TV

CE

Max power consumption : 45W
Power supply : 90-240V ~ 50/60Hz

ROHS

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trade-marks of Dolby Laboratories.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ON
OFF

LOOP OUT

RS-232C

HDMI

ETHERNET

S/PDIF

HDMI   Video   Audio   Y   Pb   Pr   SCART

1) Connecting with HDMI cable

Use HDMI cable as above connection illustration. HDMI has both audio and video therefore you don't need additional connection.

2) Connecting with Cinch cable

Use 3-RCA cable consisted of video and stereo audio (left, right).

3) Connecting with Component cable

Use 3-RCA cable (YPbPr). This connection serve only video.

4) Connecting with SCART cable

Use SCART cable and this serve both audio and video.

5) Connecting VCR

Use SCART cable as above illustration.

6) Connecting Antenna

Connect coaxial cable from outside antenna to LNB IN port.

GETTING STARTED

1.6 Connecting audio system

If you have external audio system like home theater, you can enjoy better and powerful audio as below connection illustration.
- Dolby digital (optical) : Use S/PDIF optical cable into Dolby digital decoder
- Stereo : Use 2-RCA cable for Audio L/R
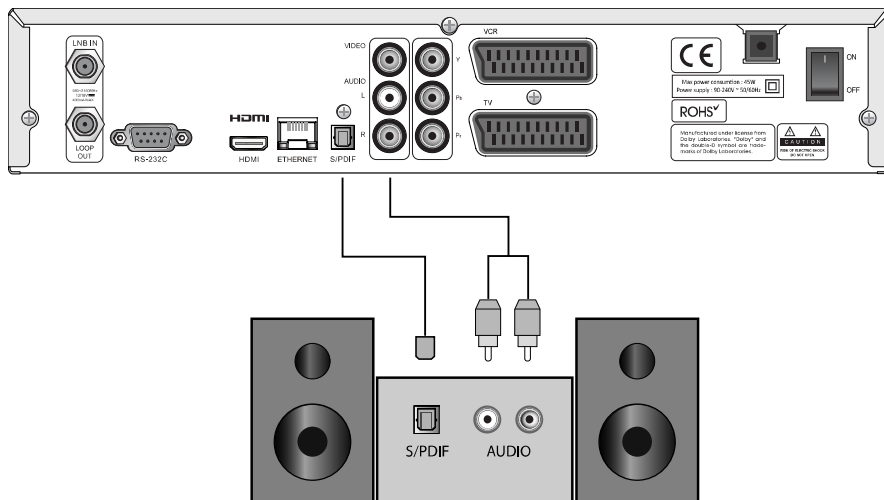
2.1 Antenna Setup

Select [**INSTALLATION**] > [**ANTENNA SETUP**] menu to setup your satellite antenna with appropriate value and search channels as below pictures.

You may need to enter PIN code to enter [**ANTENNA SETUP**]. Default PIN code is 0000 and you can change this code in [**PARENTAL LOCK**] menu later.

◆ Satellite – select satellite to setup.

Press OK to open satellite list box or use Left/Right button.

* TIP : Left/Right button display selected satelites only for your convenience

◆ DiSEqC Port – select correct DiSEqC port number if you are using DiSEqC switch
◆ DiSEqC Uncommit – select if you are using DiSEqC 1.2 switch
◆ TP Freq – enter TP frequency for checking signal strength
◆ LNB Type – enter correct LNB type installed
◆ 22KHz – select ON/OFF if you are using 22KHz switch
◆ Search Option – you can select either ALL/One TP/Free Only/Network Scan
◆ Power – select either OFF/13V/18V/Auto
◆ S/Q – signal strength / quality strength

Start Search – Press OK to start channel searching

Help !!!   TP Edit – Press RED button on RCU to perform [**ADVANCED SCAN**] to ADD, DELETE, EDIT TP.

2.2 Advanced scan

Select [**INSTALLATION**] > [**ADVANCED SCAN**] menu to search channels manipulating TP value as below pictures.

◆ Satellite – select satellite to setup.

Press OK to open satellite list box or use Left/Right button.

* TIP : Left/Right button display selected satelites only for your convenience

◆ Frequency – select TP frequency what you want to search

◆ Symbol rate – enter correct value for TP you selected

◆ Polarization – select either Horizontal (18V)/Vertical (13V)

◆ Modulation – select either DVB-QPSK/DVB-S2 QPSK/DVB-S2 8PSK

◆ Pilots – this will be enabled when you select DVB-S2 modulation

◆ FEC – this will be enabled when you select DVB-S2 modulation

◆ Search Option – you can select either ALL/One TP/Free Only/Network Scan

Start Search – Press OK to start searching

Help !!!   TP Add – enter new TP information by entering new value

TP Delete – delete current TP

PID add – Press BLUE button on RCU to perform [**CHANNEL ADD**] to add channel in manual mode.

2.3 Motor Setup

If you have DiSEqC 1.2 Motor box installed with your antenna, enable it in this menu to it setup as below picture.

USALS function also located in this menu.

* TIP : USALS is very convenient motorized DiSEqC system that support DiSEqC 1.3 command. With the help of this function, you can get the satellite position automatically if you know your location.

◆ Motor type – select either Motor/USALS/OFF
◆ Satellite – select satellite to setup
◆ Frequency – select TP frequency what you want to search
◆ Drive – press Left/Right button to move motor in each direction
        Motor moves continously until stop it by pressing OK button
◆ Drive step – press Left/Right button to move motor in each direction
            Motor moves only one step to locate satellite in precise position
◆ Command
        Store SAT Position : save satellite position with current setting value
        Goto SAT Position : move saved position
        Goto Center : move center position
        Limit Off : delete existing limit value
        Set East Limit/West Limit : set moving range of motor from east to west
        Recalculate Position : recalculate position when you entered new value
◆ Satellite Position – enter satellite position in degree
◆ Search Option – you can select either ALL/One TP/Free Only/Network Scan

   Start Search – Press OK to start searching

   Help !!!   My Position – enter your antenna position in Longitude/Latitude degree. This value is for calculating origin/displacement of dish and satellite.

2.4 Multisat search

This menu perform batch work of channel searching for selected satellites.

Select satellite to search by pressing OK button and press RED button/GREEN button.

RED : search for all kinds of channels
GREEN : search for FTA channels only

* TIP : If there's no satellite you want to search, then configure satellite first in antenna setup menu.

2.5 Blind search

This menu perform scrutinized channel search by checking all frequency point.

- ◆ Satellite – select satellite to search
- ◆ Polarization – select either Horizontal (18V)/Vertical (13V)
- ◆ Frequency start – enter start frequency
- ◆ Frequency end – enter end frequency
- ◆ Drive step – select frequency step either 2/4/6/8/10MHz

Start Search – Press OK to start blind searching

2.6 Fast scan

This is a kind of network search and you can simply scan specific channels from providers.
Supported packages are Canal Digitaal/TVV/TeleSAT from Astra (19.2E) satellite.
Simply select package and Start Search.

* TIP : Astra satellite should be configured prior to this scan.

2.7 Factory reset

This will return all the user setting to factory default value including channel data.
You may need to enter PIN code [Default PIN code is 0000] and you can change this code in
[**PARENTAL LOCK**] menu.

� **Caution** : All Channel data will be deleted !!!

CHANNEL MANAGER

Select [**MAIN MENU**] > [**CHANNEL MANAGER**] to perform edit channels, favorite list and satellite/TP as below picture.

3.1 Channel edit

Edit channels using Lock/Move/Delete/Rename functions.

* Tip   You can select each categories by Left/Right button.
         Press TV/RAD button on RCU to switch from TV channels to Radio channels.

🔒 Lock   🗑 Delete   ↕ Move   ▦ Rename

3.1.1 Lock

Press OK on the channel you want to lock, then LOCK icon will be displayed. Multiple selection is possible for one time operation.

When you complete checking, press MENU button or Left/Right button then message box will ask for your final confirmation.

Locked channel ask for PIN code before playing video/audio.

Help !!!   Sort : you can change channel list order by NAME/CAS/TP
            Watch : you can watch selected channel for identification

3.1.2 Delete

Press OK on the channel you want to delete, then CHECK icon will be displayed. Multiple selection is possible for one time operation.

When you complete checking, press MENU button or Left/Right button then message box will ask for your final confirmation.

3.1.3 Move

Press OK on the channel you want to move, then CHECK icon will be displayed. Multiple selection is possible for one time operation.

When you complete checking, locate cursor to the point you want to put moved channels and press BLUE button.

Press MENU or Left/Right button then message box will ask for your final confirmation.

3.1.4 Rename

Press OK on the channel you want to rename, then Key box will be displayed. Change name using HELP buttons including VOL button.

When complete, press YELLOW button to save.

Press MENU or Left/Right button then message box will ask for your final confirmation.

3.2 Favorite edit

Available favorite categories are NEWS/DRAMA, MOVIE/SPORTS/CHILDREN/CULTURE/MUSIC/SHOW, GAME/ETC.

These categories names are changeable by pressing BLUE button.

Press FAV button to set category on the right list box then select channel on the left list box by pressing OK button.

HEART icon will be displayed on the left list box and channel name will be on the right list box.

Press MENU or EXIT button then message box will ask for your final confirmation.

3.3 Satellite/TP edit

This menu offer EDIT(rename, change values)/ADD/DELETE functions for satellite and TP.

- ◆ EDIT – Satellite : change name or position

    Transponder : change frequency, symbol rate, polarization and modulation
- ◆ ADD – add new satellite or transponder
- ◆ DELETE – delete existing satellite or transponder

※ Caution : deleting satellite or transponder will cause deleting channels belonged to the satellite or TP.

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SYSTEM SETUP

4.1 Language setup

Select OSD language/Audio language by pressing OK button or Left/Right button.

Set subtitle language ON to display subtuitle on supported channel.

4.2 OSD setup

- ◆ Display Info Bar – select either 2/3/5/10 seconds or Always ON/Always OFF
- ◆ Transparency – select either 0~100. The less value the more transparent. 100 is opaque.
- ◆ Brightness/Contrast/Saturation – Adjust color environment of video.
                          This function doesn't work with digital connection.
- ◆ CAM Message – ON : display CAM message on live video overlapped when needed
                 OFF : no message from CAM
- ◆ Channel Selection Option – This function give you option to select channel in OK list box.
         Manual : channel changed only when you press OK button
        Automatic : as you move cursor, channel change without pressing OK button.
                STB will display channel where the cursor located
- ◆ Divx Subtitle : Set ON to display subtitle when you play Divx video file.
             [*.Srt file or *.sub file are supported to display]

4.3 A/V setup

◆ HD Type

Select either 576p/720p/1080i for video resolution of HD channels.

◆ TV Type

Select either AUTO/PAL/NTSC according to your TV

◆ Aspect Ratio

Select either 4:3/16:9

- ◆ Screen control - Select either Letter Box/PanScan/Ignore
- ◆ RGB/YUV - Select either RGB/YUV for video output
- ◆ S/PDIF – Dolby Digital : 5.1 CH AC-3 digital output for external decoder
  PCM : 2 CH down-mix digital output

4.4 Time setup

- ◆ GMT On – Select ON to set time automatically.
  Select OFF to enter time manually.
- ◆ GMT Offset – Enter time offset from GMT based on your location.
- ◆ Local Offset – Enter time offset for accurate time if your location has time difference.
- ◆ Local Time : Set GMT OFF to enter time manually.
- ◆ Summer Time : Select either On/Off

SYSTEM SETUP

4.5 Parental lock

* Tip : You may need to enter PIN code to
proceed this menu.
Default PIN code is 0000.

◆ Parental Rate – Select age limit either 12/16/18.

　　　　　　　　　PIN code is required when you watch higher rated contents than set here.

◆ Channel Lock – When set On, PIN code is required to enter [CHANNEL MANAGER] menu.
◆ Installation Lock – When set On, PIN code is required to enter [INSTALLATION] menu.
◆ Front Lock – When set On, PIN code is required to use front panel buttons.
◆ Teletext Lock – When set On, PIN code is required to use teletext service.
◆ New PIN code – Enter new PIN code to change.
◆ Verify PIN code – Enter new PIN code once again.

4.6 Information

CAS

Select [**INSTALLATION**] > [**CAS**] menu as below picture.

This menu provide you with detailed information about smartcard and common interface module like version, serial number, authorization, etc.
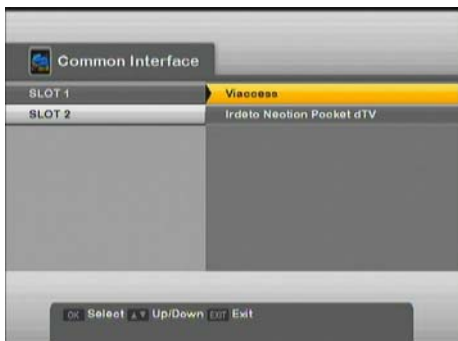
5.1 Smartcard

General information, Available entitlements and E-mail addess is possible in this menu.
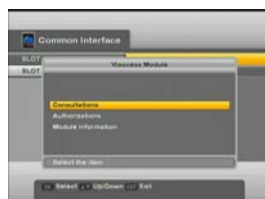
General Card Information menu.
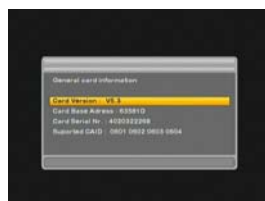
5.2 Common Interface

Select OK among SLOT 1 / SLOT 2 to see the information.

CAM Information

5.3 RS-232

This menu is provision for future use.

6.1 PVR

◆ Record Size

  Select either 1 ~ 12 hours.

  This is continous recording time when end time is not set.

◆ Timeshift

  Select either On/Off.

  Set it On to enable timeshift function.

6.2 USB

Attach USB device [memory stick or USB Hard disk] into USB port on the side of front panel to use multimedia functions like software update, MP3 playback, JPEG picture view, DivX playback, recording, playback with various trick mode, etc…

Supported file system of USB device is FAT32.

Select [**MAIN MENU**] > [**MULTIMEDIA**] > [**USB**] or press [▲] button on RCU after connecting USB memory or HDD, then USB manager displayed as below picture.

In case of no USB device connected, no list is available.

For unformatted USB device, format function is ready in this menu.

■ **File filter**

Press [**FAV**] button on RCU to display files in filter according to there file type as ALL, APP/DBS, MP3, JPG, AVI/MPG/MP4.

◆ All : display all types of file

◆ APP/DBS : APP file is software and DBS file is database (channel, TP, etc.) file type.

◆ MP3 : Mpeg Layer-3 audio file type

◆ JPG : JPEG picture file type

◆ AVI/MPG/MP4 : DivX video file type

■ **Format**

Press [YELLOW] button to initialize new USB device or format USB device.
  ※ Caution : all data will be deleted in USB device
            File system of USB device will be FAT32 after formatting and this is compatible with PC

■ **Delete**

Press [BLUE] button to delete file or directory in USB device.
  ※ Caution : directory should be empty

MULTIMEDIA

■ MP3 playback

Select MP3 file in USB manager and press OK to play with visual player program as below picture.

File list on the left window shows MP3 files in USB device while right window shows play list and currently playing file.

◆ ADD/ADD all : add selected MP3 file into play list queue
◆ Repeat : play currently playing file repeatedly
◆ Random : play MP3 file in play list in random selection

■ JPEG view

Select JPG file in USB manager and press OK to display it as below picture.

Tip while watching picture in full screen, press left/right button on RCU [◀ ▶] to rotate picture in anticlockwise or clockwise.

■ DivX playback

Select AVI/MPG/MP4 file in USB manager and press OK to play.
Supported video codec is Mpeg-1, Mpeg-2, Mpeg-4 DivX-5 with maximum resolution 720x576.

For displaying subtitle along with DivX file, simply put *.srt or *.sub file in the same directory as DivX.
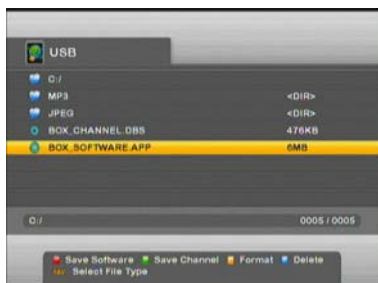
MULTIMEDIA

■ Software update / backup

Select APP file in USB manager and press OK to update software of STB.

STB will be automatically rebooted after updating software.

To save or backup current system software, press [RED] button then BOX_SOFTWARE.APP file will be created in USB device.

Tip keep the saved file in safe storage device for future use

■ DB backup / restore

To save or backup current database (channel list, TP, etc.), press [GREEN] button then BOX_CHANNEL.DBS file will be created in USB device.

For restoring it, simply select file and press OK as below picture.

Tip keep the saved file in safe storage device for future use

■ **Recording**

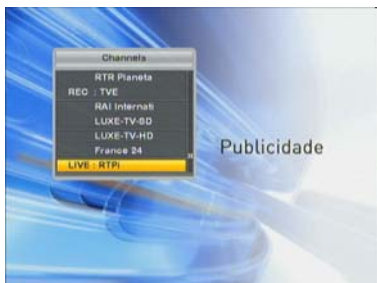To record current watching channel, press [●] button on RCU then recording will be immediately started.

Small message box on the upper right corner show channel name and recording time.

To stop recording, press STOP [■] button.

■ **Background Recording**

While recording one channel in background, you can watch another channel at the same time.

Press [OK] button on RCU then available channel list box appeared.

REC : recording channel in background

LIVE : watching channel

Tip this channel list box is available only in same TP as recording channel belongs

This picture shows background recording function;

Recording channel : LUXE-TV-HD
Watching channel : RAI International

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MULTIMEDIA

■ Time shift

While watching channel, press [PAUSE] button on RCU then time shift immediately started.

While time shift is working, trick modes are supported like Play/Pause/Seek/FF/REW as well as slow playback in both direction.

Refer to RCU picture in page 8 in this manual for trick mode key operation.
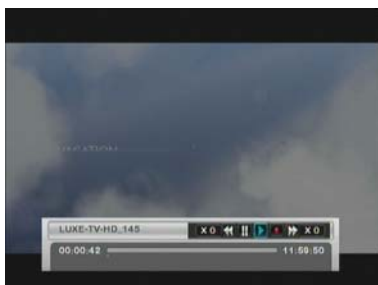
Press [●] button on RCU to switch recording.

■ Playback

To play recorded file in USB device, press [▶] button on RCU then recorded file list box appeared as below picture.

Recorded file list box

◆ Delete : delete a selected file
◆ All delete : delete all files
◆ Next Partition : switch to next partition if
   USB device have more than one partition.

Simple select file and press OK to play.

Playback infobar

While playback, trick modes are supported like Play/Pause/Seek/FF/REW as well as slow playback in both direction.

Refer to RCU picture in page 8 in this manual for trick mode key operation.

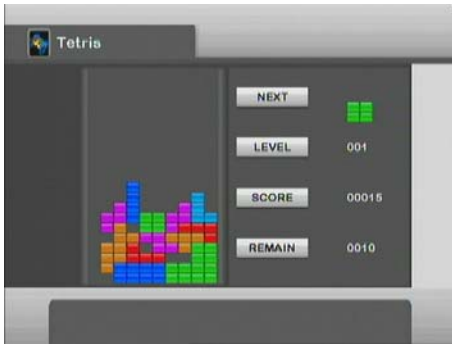# MULTIMEDIA

■ Background Recording & playback

While recording one channel in background, you can playback recorded file at the same time.
Simply start recording and press [▶] button on RCU to select file to playback.

Press [■] button to stop playback first and then you can stop recording.

6.3 Calendar

7.1 Tetris

Key Operation

- ◆ OK - rotate
- ◆ Down – Move down
- ◆ Left/Right – Move Left/Right

TIMER

8.1 Menu description

1. Mode

Available categories are Wake Up/Sleep/Duration/Recording.

◆ Wake Up : STB will be turned on at designated time and keep it on.
◆ Sleep : STB will be turned off at designated time.
◆ Duration : STB will be turned on at designated time and turned off after designated duration.
◆ Recording : STB will start recording at designated time and stop it after designated duration.

  ※ USB storage device like memory stick or HDD should be connected to STB for recording event.

2. Cycle

◆ Once – Event perform one time and deleted from Timer event list.
◆ Daily – Event perform every day at designated time.
           To stop this event, delete it from event list
◆ Weekly – Event perform designated week day and designated time.
           To stop this event, delete it from event list

3. Date/On Time/Duration/Program Name

◆ Date – Set event date.
◆ On Time – Set event starting time.
◆ Duration – Set event duration time.
◆ Program name – Set TV/Radio channel for event.

TIMER

8.2 Operation

Available event list is 7 regardless of Mode.

◆ EDIT – Change/Edit existing event.
◆ ADD – Add new event.
◆ DELETE – Delete existing event.

9.1 Electronic Program Guide

To display program guide (current and next program) for currently viewing channel, press [EPG] button on RCU then you will see below picture.
Seven days EPG is available.

◆ Key Operation

▲▼ Button : Change channel
◀▶ Button : Change time table
OK Button : Watch channel in PIG
RED Button : Change date to previous day
GREEN Button : Change date to next day
RECORD Button : Reservation for recording

When recording reservation is made, ● icon will be added to selected program and this reservation will be listed in [TIMER] menu.
※ USB Memory or HDD should be connected before recording started.

To display EPG in Daily category, press YELLOW Button and you will get below picture.
This menu shows more detailed program description for selected channel from 00:00 to 24:00.
To return Weekly EPG menu, press YELLOW button.

◆ Key Operation

▲▼ Button : Change time table
◀▶ Button : Change Channel
OK Button : Display description of program
RED Button : Change date to previous day
GREEN Button : Change date to next day
RECORD Button : Reservation for recording

9.2 Channel list

Press OK button in live screen then channel list box will be available as below picture.

Press TV/Rad button to switch TV channel list to Radio channel list, vice versa.

Press FAV button to show your favorite channel list.
✻ Favorite channel list should be configured prior to use.

Press SAT button to show only channels that are belonged to satellite you selected.

◆ SORT – Change channel order by name, CAS or TP Frequency.
      To return all channel list, press BLUE button.
◆ FIND – Find channel by entering name in screen keypad, this is shortcut to find channel quickly.
◆ HD – Display only HD channels.
      To return all channel list, press BLUE button or press HD button once again.

9.3 Infobar

Press INFO button while you're in live screen then infobox will give you detailed information on watching channel.
This function toggles as [normal mode] > [extended mode] > [off] by the number you press INFO button.
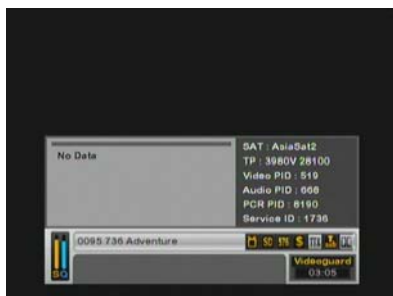
Extended mode provide you with more information like full EPG, satellite, TP, PID info and service ID than normal mode.

9.4 Teletext

Press TTX button on RCU to invoke teletext information. This service is available only with the channel that serve teletext.

You may need to enter PIN code if you set teletext lock option ON in [PARENTAL LOCK] menu.

To browse detailed information on teletext, enter numbers with RCU as seen on category screen.
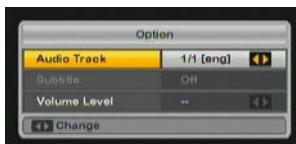
9.5 AV Mode

Press AV+ button on RCU to set Audio Mode [Stereo/Left/Right] and Aspect Ratio of screen [16:9/4:3] and Screen Control [Letter Box/PanScan/Ignore]

9.6 Option

Press OPT button on RCU to set Audio Track and subtitle and volume. Supported audio track and subtitles are varied on the channels.

SPECIFICATIONS

Tuner & Decoder

Tuner	DVB-S + DVB-S2
Frequency range	950 ~ 2150 MHz
DISEqC	1.0/1.1/1.2/USALS
LNB	13/18V, 22 KHz Tone, DiSeqC 1.2 support
Demodulation	QPSK, 8PSK
Symbol rate	1 ~ 45 MS/s 10 ~ 31 MS/s

MPEG Transport Stream A/V Decoding

Transport stream	MPEG-2 ISO/IEC 13818-1
Profile level	MPEG-2 MP@HL, MPEG-4 AVC HP@L4.1, DivX
Audio decoding	MPEG-1 Layer1,2&3(MP3), MPEG-2 layer2, MPEG-2 AAC
	MPEG-4 AAC LC, MPEG-4 AAC+SBR2
	Dolby Digital, 6 to 2 Channel Downmixing
Video resolution	1080i, 720p, 480p/576p, 480i/576i
Audio mode	Stereo L/R, Dolby Digital

Main system

Main CPU	STi710x
Memory	System: DDR 128Mbyte
	Video: DDR 64Mbyte
Flash Memory	8M byte

Front panel

Control buttons	Up, Down, Left, Right, Ok, Menu, Exit, Power
Display	12-Digit clear VFD
USB	1 X USB 2.0
Smartcard	1 slot Compliance to IS7816
Common interface	2 slots Compliance to EN50221

A/V & Data interface

RCA A/V	CVBS, Audio L/R
Component	Y, Pb, Pr
S/PDIF	Dolby AC-3 or PCM output (Optical)
SCART	Dual (TV, VCR)
USB	Type-A USB 2.0
HDMI	Support HDMI 1.1
RJ-45	10/100M
RS-232C	9 pin D-sub

Power Supply

Type	SMPS
Input range	AC 100V-240V
Power Consumption	Max 45W