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# Notice

Read this manual carefully and make sure you understand the provided instructions. For your safety, check what the result each action will be.

## Warnings, Cautions and Notes

Throughout the whole manual, pay special attention to the following marks that indicate hazardous situations.



### Caution

Indicates a situation which, if not avoided, could damage the equipment or apparatus.



### Warnings

Indicates a hazardous situation which, if not avoided, could result in serious injury.



### Note

Indicates additional information to the user to make the user aware of possible problems and information of any importance to help the user to understand, to use and to maintain the installation.



***Correct Disposal of This Product***  
***(Waste Electrical & Electronic Equipment)***

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

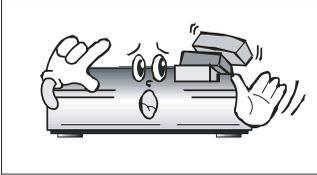
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

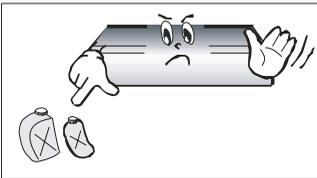
# Safety Information

This digital satellite receiver has been manufactured to comply with international safety standards. Please read the following safety precautions carefully.

## Safety Instructions and Precautions



Avoid placing heavy things and blocking ventilation passage.  
(Passage blocking can cause fire)



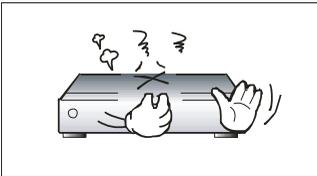
Avoid scrubbing the surface with Benzene or Volatile gasoline. Color can be damaged.



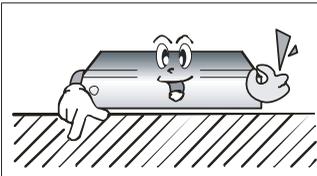
Leave the power and the antenna off for the long absence or during thunder storm.



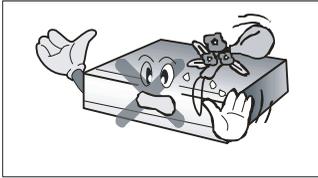
Avoid dropping and damaging Remote Control Unit.



If there is smoke or burning smell, turn off & un-plug the set immediately. Contact your local repair center for advice.



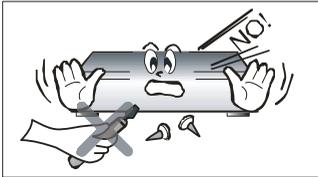
Avoid place the set on slippery and slant surface.



Keep away from the water.



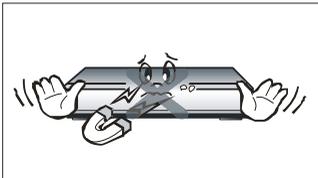
Clear off the dust. Dust or Metallic particles inside the set can cause fire and electric shock.



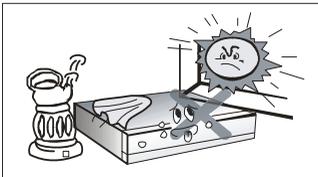
Avoid dissembling and assembling. Do not open the set.



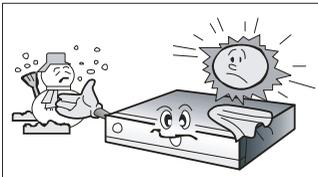
Do not snatch the cable to plug out.  
Do not move the set while power cord is plugged in.



Keep the distance from Magnetic items and Audio Speaker.



Place the set with the good ventilation and away from the direct sunlight and humidity.



Avoid the temperature of over 30C and below 5C.

# 1 Before You Begin

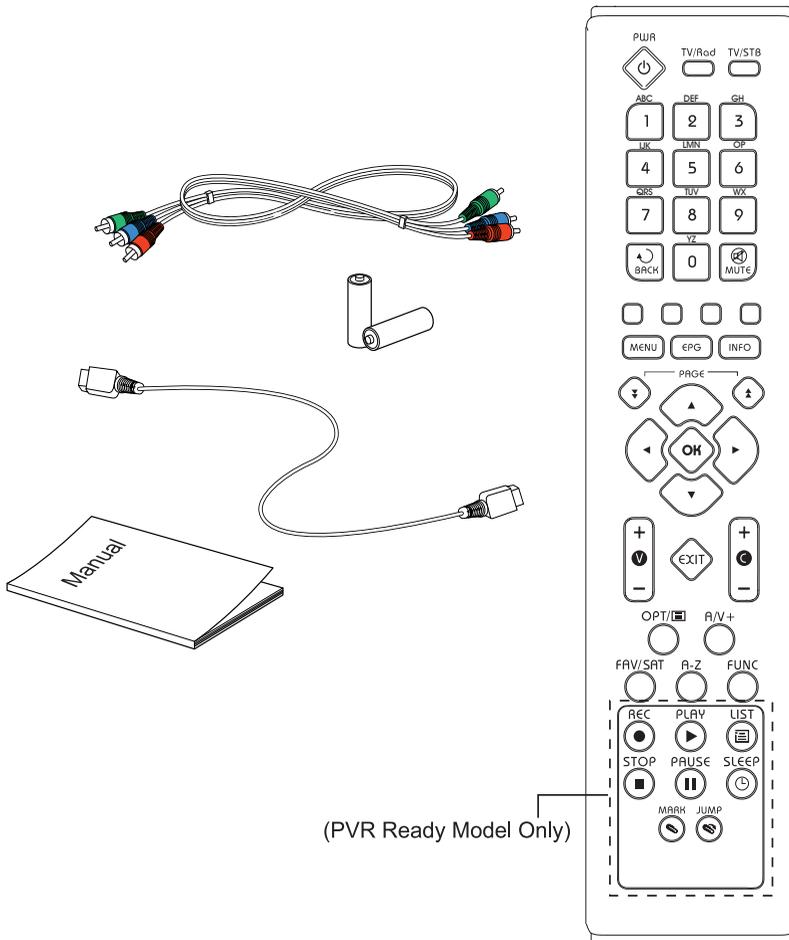
## 1.1 Features

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Brilliant On Screen Graphic  
MPEG-2 & MPEG-4 Fully DVB Compliant  
MPEG-2 Video (MP@ML), MPEG-1 Audio Layer1,Layer2  
LNB Controlling Logic  
SCPC/MCPC Receivable from C / Ku-Band Satellites  
Digital Tuner with Loop-through  
HDMI, Component, 2 Scarts, Composite Video, Audio L/R  
Wide Symbol Rate 1~45Mbps & Frequency Input 950 ~ 2150MHz  
DiSEqC 1.2 Supported  
S/PDIF AC3 Audio  
User friendly OSD Menu with Full Function  
256 Color Graphic User Interface  
Multi-language menu  
4-digit 7-segment LED Display  
Variable Aspect Ratio (4.3, 16:9) with Pan Vector or Letter Box  
EPG(Electronic Program Guide) for On-screen Channel Information  
Teletext and Subtitle Supported (VBI & OSD)  
Installation by Easy Setup Guide  
Capacity for Storing Multi Channel (4000 Channels, 500 Transponders)  
Favorite Channel and Parental Lock Function  
RS232C Port for Upgrading System Software  
Recording / Playback in STB or PC (PVR Ready Model Only)  
S/W / Channel data transfer through USB 2.0 (PVR Ready Model Only)  
Bookmarking & jump function (PVR Ready Model Only)

## 1.2 Accessories

- Component video cable
- HDMI cable
- Operating instruction (this Manual)
- Remote Control
- AAA dry cell batteries x 2

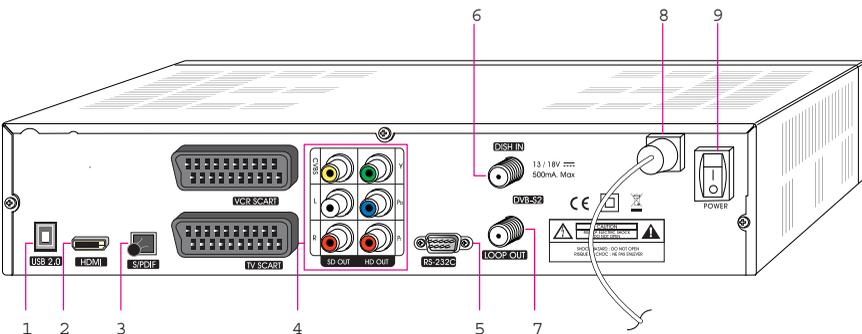


# 2 Controls and Functions

## 2.1 Front Panel

Item	Description
1. Power Button	Turns the receiver On/Off.
2 Menu/OK Button	Shows the Main menu in viewing mode. Activates the highlighted menu item in menu mode.
3. EXIT Button	Exit from the current menu or cancels the current progressing operation if applicable.
4. CH Up/Down Buttons (▲/▼)	Changes channels in viewing mode and moves the cursor up/down in menu mode.
5. Volume Up/Down Buttons (◀/▶)	Increases/ decreases the volume levels in viewing mode and changes settings in menu mode.
7. Display (4-digit 7-segment)	4-digit display of channel information. The red LED is the STAND BY indicator.
8. USB 2.0 port (PVR Ready Model Only)	Two USB ports. One is in front and another is in rear.

## 2.2 Rear Panel

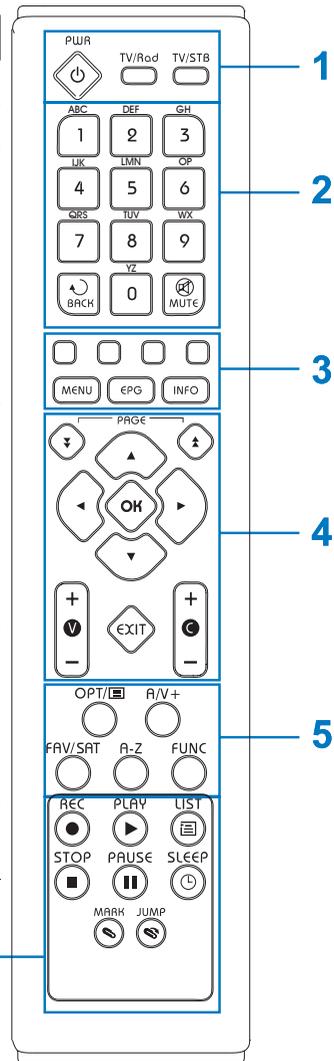


Item	Description
<b>1. USB2.0 (PVR Ready Model Only)</b>	USB2.0 Connector
<b>2. HDMI</b>	Connect HDMI input of TV or PC monitor.
<b>3. S/PDIF</b>	Output for connection to a digital amplifier.
<b>4. CVBS OUT</b>	Using standard video cables, these jacks connect CVBS(Yellow).
<b>Stereo Audio OUT</b>	Using standard stereo audio cables, these jacks connect L/R(White, Red).
<b>YPbPr OUT</b>	Using standard A/V cables, these jacks connect Y/Pb/Pr(Green, Blue, Red) HD component video input.
<b>5. RS-232C</b>	Connects to a Set-top box or a PC serial port.
<b>6. DISH IN 13/18(14/19)V 500mA Max</b>	Connect the satellite dish.
<b>7. LOOP OUT</b>	Loop Out is a output port of the DISH IN signal.
<b>8. Electric Inlet Lead</b>	90~240V AC(Auto-selectable), 50~60Hz. Make sure to check the power specification.
<b>9. Power Cord</b>	AC Power Switch.

## 2.3 Remote Control Unit

All receiver features can be controlled with the remote controller.

Button	Description
<b>1. POWER</b>	Turns the receiver On/Off.
<b>TV/Rad</b>	Switches between TV and Radio.
<b>TV/STB</b>	The TV/STB button is used to switch between TV and STB mode.
<b>2. NUMERIC Buttons</b> (0 ~ 9)	Select channels or can use as a alphabetic search key in the sorted channel lists.
<b>BACK</b>	Move to the previous channel.
<b>MUTE</b>	Turns the sound on/off.
<b>3. RED (●)</b>	For Teletext
<b>GREEN (●)</b>	
<b>YELLOW (●)</b>	
<b>BLUE (●)</b>	
<b>MENU</b>	Display the main menu of the receiver and come out from inner level to viewing mode(Exit all).
<b>EPG</b>	Shows the TV/Radio Channel guide.
<b>Information</b>	Shows the information of the Banner and EPG.



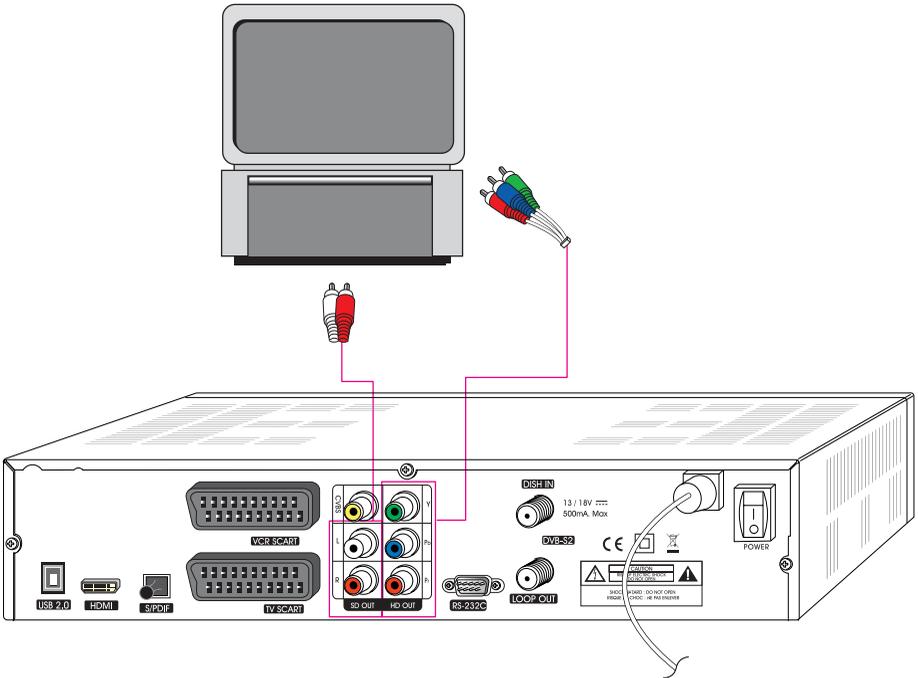
**6** (PVR Ready Model Only)

Button	Description
4. ◀/▶ (◀/▶)	Moves left/right or change settings in menu mode. Changes channels in viewing mode.
▲/▼ (▲/▼)	Moves up/down in menu mode.
OK (OK)	Confirms the choices and/or selections the highlighted menu item. While watching TV or listening to Radio, press the OK button and the channel list will appear.
V+/-	Changes the volume level in viewing mode.
Page +/- (◀/▶)	Selects other menu pages with sub-pages.
C+/- , EXIT	Changes channels in viewing mode. Go back step or exit from the menu of the receiver.
5. Opt	Selects the option such as Audio Language, Teletext Language and Subtitle Language.
A/V+	Selects video mode(4:3, 4:3 Letter Box, 16:9)and audio mode(Left, Right, Stereo and Joint).
FAV/SAT	Selects the group of satellite or favorite.
A-Z	Sorts the channels automatically in alphabetical order.
FUNC	Changes HD resolution.
6. REC(Record)	Record the channel.
PLAY	Playback the recorded files.
PAUSE	Pause playing mode.
STOP	Stop playing mode.
LIST	Display the filelist.
MARK	Set the bookmark.
JUMP	Jump to bookmarked point.
SLEEP	You can turn the STB off after minutes set.

# 3. Connections

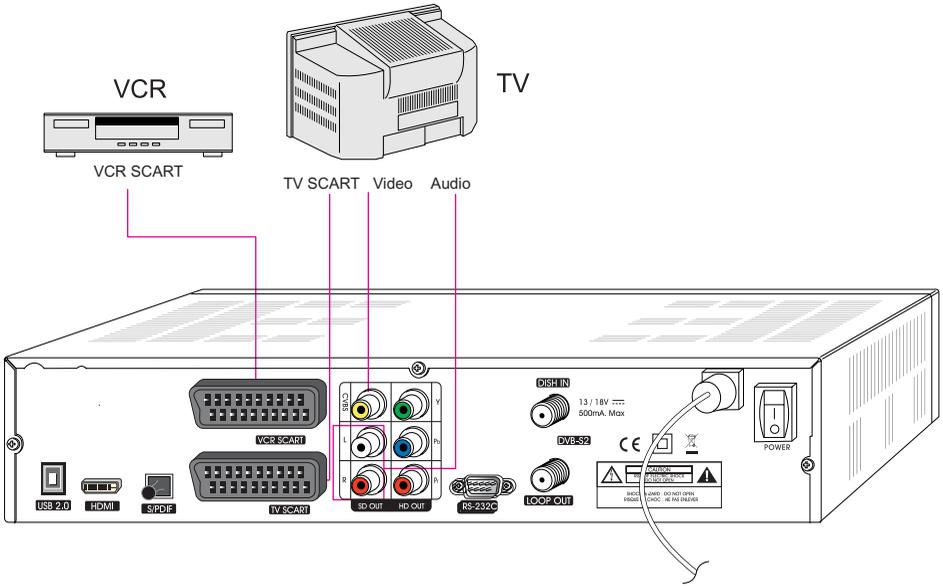
## 3.1 Connecting to TV

<Connecting to digital TV which can support HD resolution (1080i,720p&576i) using YPbPr port>



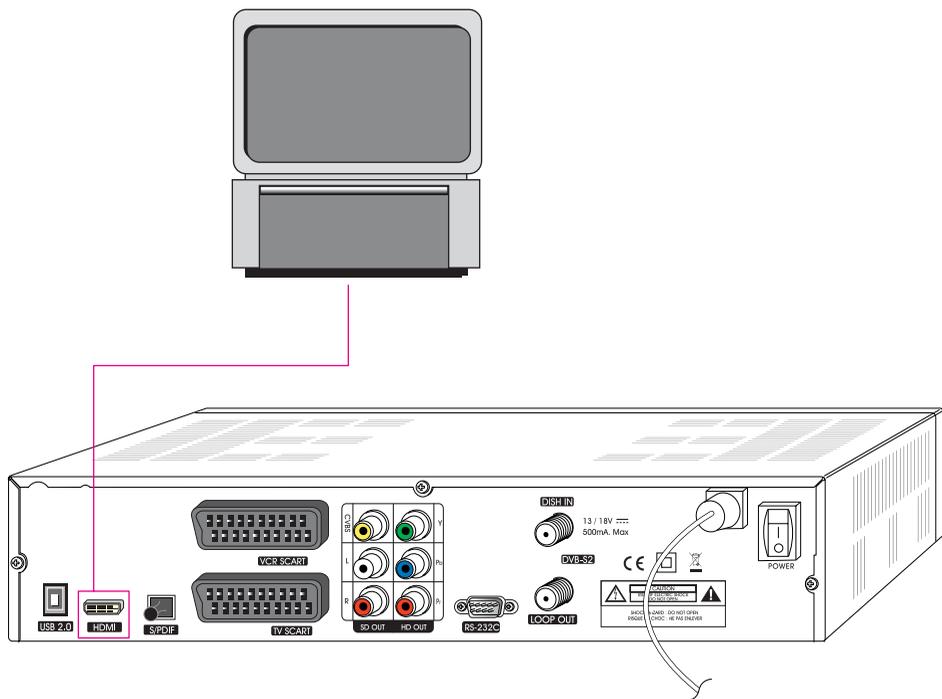
1. Connect STB's YPbPr OUT and audio L/R OUT to YPbPr IN and audio L/R IN of TV.
2. Set STB's video output mode to 1080i or 720p or 576p using 'FUNC' key of remote controller.  
Please check TV's user manual for detail connecting method of the YPbPr input port.

## <Receiver to TV and VCR with SCART Cables >



1. Connect the Video and Audio of TV to the Video and Audio. Connect Red and White connector to Audio R and Audio L, and Yellow to Video port respectively.
2. Connect the TV SCART of TV to lower SCART connector with fully featured SCART cable.
3. Connect the VCR SCART of VCR to upper SCART connector with fully featured SCART cable.
4. Go to section 3.2, Connecting to Dish, then connect your dish.

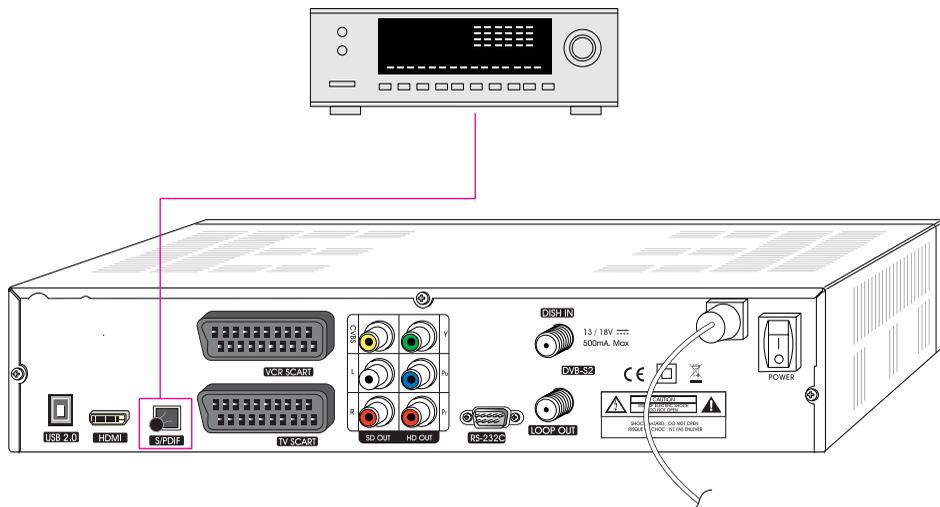
## <Connecting to PC monitor or digital TV which has HDMI input port>



1. Connect STB's HDMI OUT to HDMI IN of monitor or TV.
2. Set STB's video output mode to 1080i or 720p or 576p using 'FUNC' key of remote controller.

*For the best access to HD programming at the highest available resolution, use this connection method.*

## <Connecting to A/V receiver (Dolby digital amplifier)>

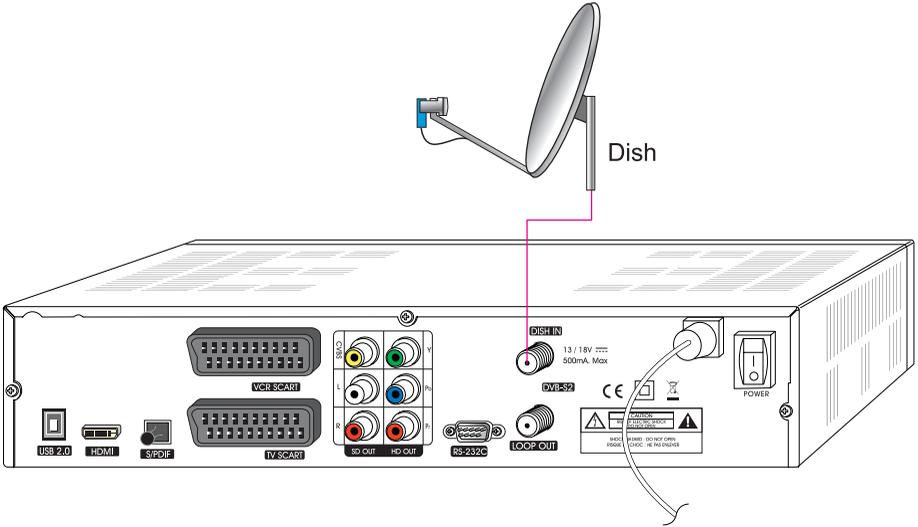


1. Connect STB's optical digital audio out to A/V receiver.
2. Go to TV Output menu and set "Dolby Digital(DD)" to enable.

## 3.2 Connecting to Dish

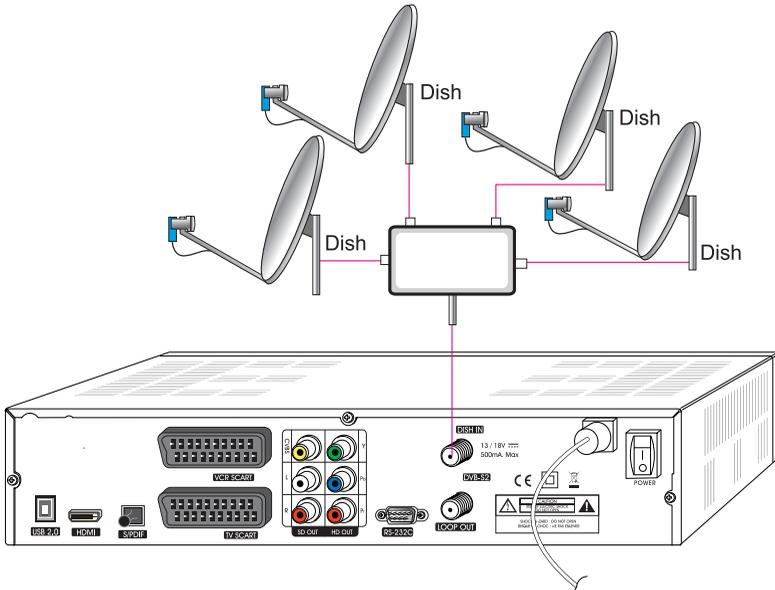
### <Dish>

Connect the Satellite antenna cable to DISH IN.



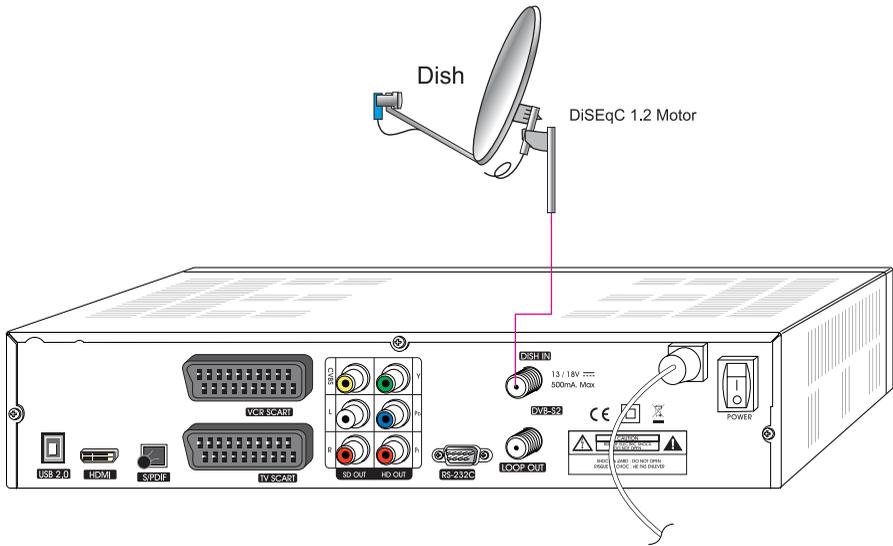
### <Fixed Dishes Using a DiSEqC switch>

Connect the output of DiSEqC 1.0 to DISH IN of the receiver.



## <Motorized Dish Using DiSEqC 1.2>

Connect the output of DiSEqC 1.2 to DISH IN of the receiver.



# 4. Menu Overview

## 4.1 Menu Instruction



Press the MENU button to display the main menu. You can select the sub menu using the ▲/▼/◀/▶ button. The selected sub menu becomes highlighted. When you have selected the sub menu you want, press the **OK** button. When you want to return to the previous menu, press the **EXIT** button. When you want to return to the live screen, press the Menu button.

## 4.2 Menu Help

In the menu, short information is displayed at the bottom of the screen.



: Using ▲/▼ button.



: Using P+ / P- button.



: Using ◀/▶ button.



: Using **OK** button.



: Using Opt, A/V+, Fav button.



: Using **EXIT** button.



: Numerical button or ◀ Button.

## 4.3 Menu Structure

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In the menu, short information is displayed at the bottom of the screen.

### Installation

Dish : Select the dish and LNB settings for channel search.

Auto Scan : Search the whole channel automatically without inputting the special parameters.

Manual Scan : Search the channel manually with user's inputting parameters.

Transponder Edit : Delete, Edit, or Add Transponder in Satellite.

### Option

TV Output : Select the video or audio output.

Language : Select the display language, audio language, and subtitle language.

Time Setting : Setting current time.

Parental Control : Change the password and select the censorship classification

OSD Display : Setting OSD display time and transparency.

### Channel

Sorting : Choose the channel sort type, such as by Transponder, Network, CAS.

Reservation : Reserving channels you want to record at your desired time.

Delete : Delete the channels such as Favorite, TV/Radio CAS, etc.

### Advanced

Reset Factory Default : Restore the receiver to the default values.

Channel Upload : Transfer the programs from receiver to receiver or PC.

S/W Upload : Transfer the software from receiver to receiver or PC.

USB Transfer : Transfer the programs or software from receiver to STB or STB to receiver.(PVR Ready Model Only)

### Status

Information : Check the version of satellite receiver.

### PVR

Record Setting : Set default record time

HDD Information : Check the capacity of HDD.

Format HDD : Format HDD permanently.

# 5. Menu Operation

## 5.1 First Installation

You can install the receiver using First Installation for your convenience. 'First Installation' allow you to set your receiver using simple procedure.

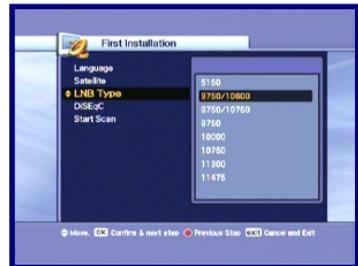
1. Select the desired language using the ▲/▼ button.
2. Press the **OK** button to confirm and go to the next step.



1. Select the desired satellite using the ▲/▼ button.
2. Press the **OK** button to confirm and go to the next step.



1. Select LNB Type using the ▲/▼ button.
2. Press the **OK** button to confirm and go to the next step.



1. If you use a DiSEqC 1.0 switch, select DiSEqC option using the ▲/▼ button.
2. Press the  button to confirm and go to the next step.



1. After all settings are done, press the button to start scanning.

If you want to know more detail description about each procedure, please refer to the following installation part in 5.2.



Previous Step button : If you want to go to the previous step, press the **RED** button and then you can reset options.

Cancel and Exit button : If you want to skip 'First installation', press the **Exit** button.

## 5.2 Installation

### 5.2.1 Dish

1. Press the **Menu** button to display the main menu.
2. Press the **OK** button on the sub menu.  
The password pop-up window appears. All sub menus such as Dish, Auto Scan, Manual Scan, and Transponder Edit on the Installation are locked by password. The default password is "0000".



Use the **▲/▼** button, you can move upwards and downwards in this mode.

In any item, such as Dish, Satellite, transponder etc. if you want to check the detail view, use the **◀/▶** button.



1. Press the **◀/▶** button, the right screen shows the pre-selected 32 satellite lists.
2. Select the desired satellite, and press the **OK** button. Then change the satellite column will be by the desired Satellite name.  
If you can't find the desired satellite, select any satellite and press the **OK** button.



1. Press the **◀/▶** button to watch the satellite in the pre-programmed lists. Press the **OK** button to replace the Current satellite with the selected satellite.



1. Press the ◀/▶ button, the right screen shows the transponder lists.
2. Press the OK button to select other transponders. If you select one of the alternative satellite names, the transponder list is changed automatically according to the selected satellite name.



1. Select one of the LNB Power types using the ◀/▶ button. You can select LNB Power value as 13/18V normally or if the distance between antenna and receiver is further than 60m, you can select LNB Power value as 14/19V.



1. Select the LNB Type value. If you have selected User Single or User Dual, enter LNB frequency value directly, and press the OK button. If you select LNB Type value as 9750/10600, 9750/10750 or User Dual, 22KHz value is fixed to auto mode, in other case you can select a value depending on usage of 22KHz tone switch box.



1. Select Switch Type if used.
2. If you use a DiSEqC 1.0 switch, select DiSEqC on the Switch Type.
3. Select one of the DiSEqC inputs from the Option.



1. Select Switch Type.
2. If you use a DiSEqC 1.1 switch, select SMATV on the Switch Type.
3. Enter a value with the numeric key. (950~2150).



1. Select Switch Type.
2. If you use a DiSEqC 1.2 motor, select the Motor on the Switch Type.
3. Change position of your Motor through the Option.



## DiSEqC 1.2 Options

Move West-East : Press the ◀/▶ button to move the motor.

Store Position : Press the  button to save the current position.

Go to Position : Press the  button to move the motor to the stored position.

Go to Reference : Press the  button to move the motor to the 0 position.

Set West Limit : Press the  button to fix West limit.

Set East Limit : Press the  button to fix East limit.

Enable Limit : Press the  button to change the limit.

(Set West Limit & Set East Limit can be available with Disable Limit status)

1. Select Switch Type.
2. If you use a USALS motor, select from the Switch Type using the ◀/▶ button.
3. Change position of your USALS motor through the Option.



Go to Position : Press the  button to move the motor to the position calculated by the longitude and latitude.

## 5.2.2 Auto Scan

You can search the channels offered by the satellite for which your antenna has been configured.

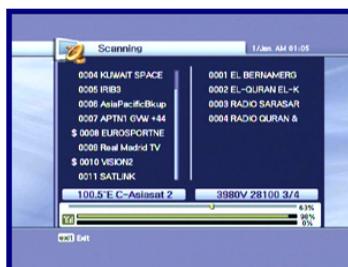
1. Select the satellite for scanning using ▲/▼ button and press the **OK** button.
2. The check mark indicates which satellite has been marked for scanning.
3. Press the ◀/▶ button, select scan option using ▲/▼ button, and press the **OK** button.
4. If you want to scan the satellite move to "Start Scan" and press the **OK** button.



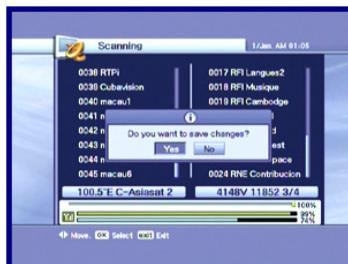
1. Select Free+CAS or CAS using the ▲/▼/◀/▶ button.
2. Press the **RED** button, CAS Pop-up window will appear.
3. Select the kind of CAS using the ▲/▼ button.
4. Press the **OK** button.
5. If you want to scan the satellite, move to "Start Scan" and press the **OK** button.



1. The left window shows TV channels and the right window shows Radio channels during the scanning process. White channel names are new channels downloaded to your receiver. Black channel names are already existing channels.



1. If you press the **OK** button when scanning for channels, pop-up window appears.
2. When you complete scanning for channels, a similar pop-up menu appears.
3. If you want to save the updated channels, select 'Yes'.



### 5.2.3 Manual Scan

1. Change to the specific values you want to scan.
2. Press the **OK** button to start the manual scan.



- Dish : The target satellite for the manual scan.
- Frequency : The frequency of the transponder you want to find manually.
- Polarity : The polarity of the transponder you want to find.
- Symbol Rate : The symbol rate of the transponder you want to find.
- Modulation : The selection of modulation (DVB-S QPSK, DVB-S2 QPSK and DVB-S2 8PSK)
- Pilot : The DVB-S2 parameter (DVB-S2 modulation mode only)
- Code Rate : The code rate of the transponder you want to find.
- Scan Mode : In the Free Channel mode, the receiver scans all channels without scrambled service.
- Service Type : The selection of TV, Radio and TV&Radio.
- Network Search : When enable, the receiver searches for more transponders using the network index table.
- PID Search : Search using Auto PID, Manual Dec, Manual Hex.

1. When you select Manual Dec option, a pop-up menu appears.
2. Enter the value of Video PID, Audio PID and PCR PID with numeric keys.
3. Press the **OK** button to scan PIDs or press the **OK** button to make the pop-up menu disappeared.



1. When you select the Manual Hex option, a pop up menu appears.
2. Enter the value of Video PID, Audio PID and PCR PID with pop-up keypad.
3. Press 'Done' on the pop-up keypad to save PIDs or press the **EXIT** button to make the pop-up menu disappeared.



## 5.2.4 Transponder Edit

1. Press the **RED** button to select the satellite in the left screen or the transponder in the right screen.
2. Select one of Delete, Edit or Add from the pop-up window. (The satellite and transponder cannot be deleted if the channels of the selected satellite have already been Downloaded)
3. If you press the **OK** button, the current changing state will be saved and exit.



## 5.3 Option

### 5.3.1 A/V Output Setting

1. Select the TV output options using the **▲/▼/◀/▶** button.
2. If you press the **OK** button, the changed state will be saved and exit.



- TV Screen : Select the screen format of your TV.(4:3, 4:3 Letter Box, 16:9)  
Dolby Digital(DD) : Set the Channel to display the audio and video signal on your TV.  
Digital Audio : Select "Dolby Digital(DD)" or "PCM" for SPDIF audio out.

### 5.3.2 Language

1. Select the language options using the **▲/▼/◀/▶** button.
2. Press the **OK** button to change the selected language.



- Display : Change the language used in the OSD and Menus.  
Audio 1-2 : Change the language that you listen to audio in.  
Subtitle 1-2 : Change the language that you watch the subtitle in.

### 5.3.3 Time Setting

1. Setting current time using the ▲/▼/◀/▶ button.
2. If you press the **OK** button, current changing state will be saved and exit.

Time Mode (TDT, USER).

TDT : Receive the time from broadcaster.

USER : Set the time directly by user.

Offset : Set the time difference between GMT and the local time.

Day light saving : Day light saving will work only in case of 'Enable' mode.

Start day : Day light saving start day.

End day : Day light saving end day.

We recommend to select 'USER MODE' in 'TIME MODE' MENU for more accurate timer recording (PVR Ready Model Only)



### 5.3.4 Parental Control

1. If you want to change the password, press the ◀/▶ button, following message requiring new password will be displayed.
2. Change the password into new one by numeric button.
3. To ensure your change, you are supposed to input a password once more.



1. Select your desired rating level using the ◀/▶ button.
2. Press the **OK** button to save and exit. Rating mode allows you to block channel according to the age level you have set.



View All : All channels can be watched.

7 : Channels are blocked under the age of 7.

12 : Channels are blocked under the age of 12.

15 : Channels are blocked under the age of 15.

18 : Channels are blocked under the age of 18.

You have to enter password to watch the channels which is blocked by the age level.

### 5.3.5 OSD Display

1. Select the options using the ▲/▼/◀/▶ button.
2. If you press the **OK** button, current changing state will be saved and exit.



Banner display time : Banner will disappear after setting time passed.(1~9).

Screen Saver : Screen Saver is a function to protect your TV in case Radio status or in Menu. (Disable, 5, 10, 20, 30, 60, 120 Minutes)

OSD Mixweight : Select the OSD transparent type. (Low, Middle, High).

## 5.4 Channel

### 5.4.1 Sorting

1. Select Sorting Type using the ◀/▶ button.
2. If you press the **OK** button, current changing state will be Saved and exit



Transponder : Channels are sorted into transponder order.

Network : Channels are sorted into service provider order.

CAS : Channels are sorted into Scramble channels and Free channels order.

### 5.4.2 Reservation

You can reserve a Channel at your desired time. In this mode, you can reserve channels up to 8.

1. Press the **RED** button to edit the reserved channel. And then use the ▲/▼/◀/▶ button to the detail setting for your reservation.



1. To add more, press the **GREEN** button. Press the **YELLOW** button to delete the reservation.
2. After all settings are done, press the button to save and exit.



If it is duplicated with the time zone that was already registered at a reservation list, the alarm message appears which it is not able to register. In this case, you must register a reservation for other time zone.



-  : Just one time action (After action was done, event will be deleted on the list.)
-  : Action execution in weekday
-  : Action execution in weekend
-  : Action execution weekly
-  : Action execution in every day
-  : Radio channel(FTA, CI)
-  : Radio channel(PVR only)
-  : TV channel(FTA, CI)
-  : TV channel(PVR only)

### 5.4.3 Delete

You can delete channels. You can select not only Mode such as Channel and Favorite, but also Option such as TV, Radio and etc.

1. Select the Mode and Option you want to delete channels using the ▲/▼/◀/▶ button.
2. Press the  button to delete and exit.



## 5.5 Advanced

### 5.5.1 Reset Factory Default

1. If you want to change the set into the default values, press the **OK** button. The following confirmation window will appear.
2. If you select 'Yes', the system will be reset to the primitive state like new receiver.



### 5.5.2 Channel Upload

1. Connect the receiver with other receiver or PC through RS-232 cable.
2. For the target receiver, turn the AC Power off, then turn on again.
3. You can watch the transfer status of software.



### 5.5.3 S/W Upload

1. Connect the receiver with other receiver or PC through RS-232 cable.
2. For the target receiver, turn the AC Power off, then turn on again.
3. You can watch the transfer status of software.



### 5.5.4 USB Transfer (PVR Ready Model Only)

If your STB has a USB interface in the front panel, you can transfer the channel data or the system software between a set-top box and a USB drive.

1. Select data type and the source & the target (USB-STB or STB-USB), and press the OK button.



1. If the data exists in the target, the data will be removed and the new data will be replaced.



1. The window will appear on the TV screen if the data exists in the target. If you select "Yes", the data will be transferred. The window will appear on the TV screen while the data being transferred. You should keep USB connection until transferring is done.



1. The window will appear on the TV screen after data transferring is done.



## 5.6 Status

### 5.6.1 System Information

1. You can watch the system information such as Model ID, Hardware version, Software version, and Loader version.



## 5.7 PVR

### 5.7.1 Record Setting

1. You can set the default record time between 5 minutes and 10 hours.



### 5.7.2 HDD Information

1. You can see the capacity of HDD such as Total size, Free size, Used size and the model name of HDD.



### 5.7.3 Format HDD

1. If you press the **OK** button, you can delete all files in HDD permanently.



# 6. Viewing General Information

## 6.1 Banner Information



1. Whenever you press the INFO button, the banner information window appears for a few seconds.

1. If you press the INFO button again on the banner, the detail EPG window appears.
2. If you press the **OK** button, information and EPG window will disappear.
3. Press the P+- button and then you can change the channel.
4. If '▶' exists on the Banner, press the ◀/▶ button and then you can watch the next EPG.

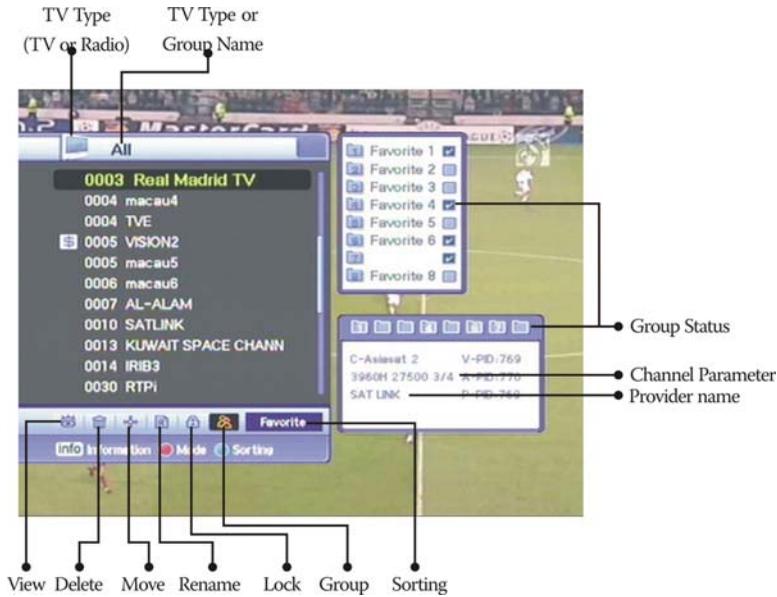


## 6.2 TV & Radio changing

While watching TV or listening to Radio, you can select TV or Radio using the TV/Rad button.



## 6.3 TV or Radio Channel Lists



### 6.3.1 Watching Mode

While watching TV or listening to Radio, you can watch the channel list. Press the **OK** button to display the channel list. You can watch several icons at the bottom of the channel list.

Each icon has a special and convenient function for user. If you want to change the mode, press the Opt button to go to the desired icon.

1. Press the **OK** button or A-Z button. If you want to view the sorted channel list, press the A-Z button.
2. Press the **▲/▼** button to move the cursor.
3. Press the **OK** button to watch the desired channel.
4. If you want to hide the channel list, press the **View** button.



When you want to sort the channels, press the A-Z button.

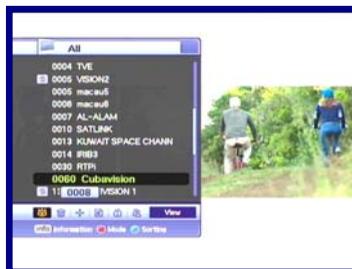
When you want to change the TV/Radio mode, press the TV/Rad button.

When you want to watch the next or previous channel page, press the P+- button.

1. Press the INFO button to watch the information for a selected channel.
2. Press the EXIT button to hide the information.



1. If you know the correct channel-number to watch, press the number using the numeric button.



1. If you want to go Alphabetic move, you must change the channel list to the sorted status. To become the sorted status, press the A-Z button on the channel list or on the Live screen.

2. Press the numeric button. Then Alphabetic Pad will appear.

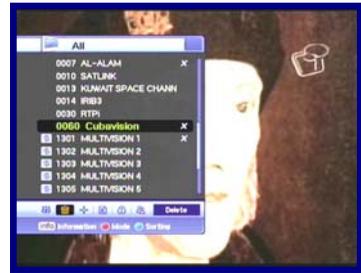
3. You can select the Alphabet using the numeric key(1-9)/▲/▼/◀/▶ button.

4. Press the OK button. If the selected channel by user input-letter not exists, there will be any change.



### 6.3.2 Delete Mode

1. Select the Delete Icon using the Opt button.
2. Select channel you want to delete using the ▲/▼ button. Press the **OK** button. Checked sign will be marked on the right side of the channel name.
3. Press the **EXIT** button to save and exit.



### 6.3.3 Move Mode

1. Select the Move Icon using the Opt button.
2. Select the channel which will be located in other position.
3. Press the **OK** button, and then a sign which indicates "move" will be marked on the right side of the channel name.
4. Set the new position using the ▲/▼ button.
5. If you want to complete moving channel, press the **OK** button. Then "move" sign will disappear on the right side of the channel name.
6. Press the **EXIT** button to save and exit.



### 6.3.4 Rename Mode

1. Select Rename Icon using the Opt button.
2. Select the channel to rename and press the **OK** button. And then a small editing name window will be displayed.
3. You can write each letter of the channel name using the ▲/▼/◀/▶ button and the **OK** button.
4. After renaming is done, select Done tab and then press the **OK** button.
5. Press the **EXIT** button to exit.



You can change the Favorite group name.

1. Select the desired group.
2. Change the name of group according to above procedures.

<Remark>

It is impossible that Delete & Group function can be changed in grouping mode.



- Space : Write between two characters.
- Back : Delete characters.
- Caps : Change between caps and lower case letter.
- Done : To save the change.
- Cancel : Exit rename mode.

### 6.3.5 Lock Mode

1. Select Lock Icon using the Opt button.
2. Select the channel to be locked and press the  button.
3. Set the password. Locking mark will appear on the left side of the Channel name. To cancel it, just press the  button.
4. Press the **EXIT** button to save and exit.



### 6.3.6 Group Mode

You can make the group up to the 8th group. It can accommodate 100 Channels in one group. So you can get 800 favorite channels.

1. Select Group Icon using the Opt button.
2. Select the channels that you want to make favorite channel list.
3. Press the  button, and then a small favorite Window will appear on the right side of the screen.
4. Choose the group number using the / button and press the  button. To cancel it, just press the  button again.



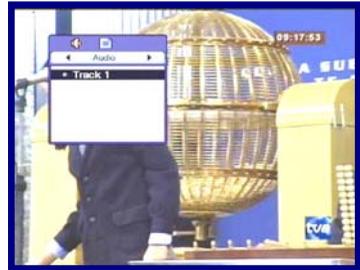
5. If you want to select other channel in current group, press the ◀/▶ button. And then highlighted channel will be showed on the channel list.
6. Press the OK button to set the group with selected group using the ◀/▶ button.
7. Press the EXIT button to save and exit.

## 6.4 Option

While watching TV or listening to Radio, press the Opt button. You can watch small pop-up window. You can select a option.(Audio Language, Teletext Language, Subtitle Language) If you want to change the option mode, press the ◀/▶ button.

### 6.4.1 Audio Language

1. Select the 'Audio' using the ◀/▶ button.
2. Press the ▲/▼ button to select a desired audio language.
3. Press the OK button to change the audio language.



### 6.4.2 Close Caption

1. Select the 'Close Caption' using the ◀/▶ button.
2. Press the ▲/▼ button to select enable.
3. Press the OK button.
4. You can watch the Close Caption contents in the language if it is available.



## 6.5 A/V+

While watching TV or listening to Radio, press the A/V+ button. You can watch small pop-up window. You can select a option.(Audio Mode, Video Mode) If you want to change the option mode, press the ◀/▶ button.

## 6.5.1 Audio Mode

1. Select the 'Audio Mode' using the ◀/▶ button.
2. Press the ▲/▼ button to set the output direction for speakers.  
(STEREO, LEFT, RIGHT, JOINT)
3. Press the OK button to save and exit.



## 6.5.2 Video Mode

1. Select the 'Video Mode' using the ◀/▶ button.
2. Press the ▲/▼ button to set screen format of your TV.  
(4:3, 16:9 Letter Box, 16:9)
3. Press the OK button to save and exit.



## 6.6 Fav

While watching TV or listening to Radio, press the Fav button. You can watch small pop-up window. You can select a Favorite group.

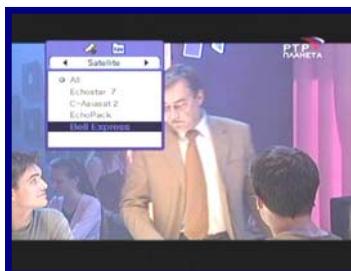
### 6.6.1 Satellite

1. Select the 'Satellite' using the ◀/▶ button.
2. Press the ▲/▼ button to select a Satellite.
3. Press the OK button, then you can watch the channel list of selected Satellite.



### 6.6.2 Favorite

1. Select the 'Favorite' using the ◀/▶ button.
2. Press the ▲/▼ button to select a group.
3. Press the OK button, then you can watch the channel list of selected group.





# 7. PVR

## 7.1 File List



Play Delete Rename

### <Description of icons>



: AV file format of recorded channels



: Radio file format

### 7.1.1 Playback mode

1. Press the LIST button, you can see the file list.
2. Select the recorded file using the red button.
3. Select the recorded and then the file will be played.
4. Press the EXIT or LIST button to close the file list.



### 7.1.2 Delete mode

1. Select the 'Delete mode' using the red button.
2. Select the file you want to delete using the ▲/▼ button.
3. If you decide to delete the file, press 'Yes' on the pop-up window.
4. Press the EXIT button to exit.



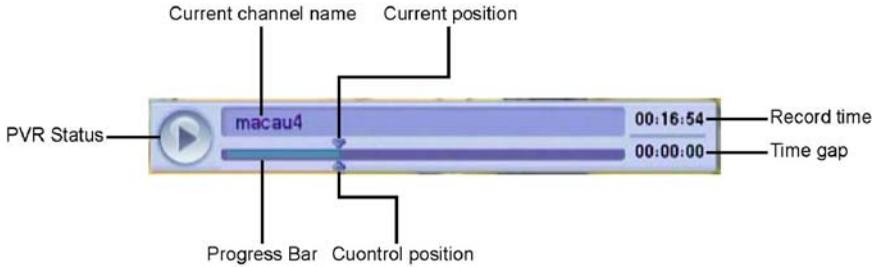
### 7.1.3 Rename Mode

1. Select 'Rename mode' using the red button.
2. Select the file to rename and press the button. And then a small editing name window will be displayed.
3. You can write each letter of the file name using the ▲/▼/◀/▶/numeric button and the button.
4. After renaming are done, select 'Done' tab and then press the button.
5. Press the EXIT button to exit.



## 7.2 PVR Banner

To access the PVR Banner, press the ▲/▼/◀/▶/ button



### <The description of icons>



: Playback status

### 9.2.2 Record

1. Press the Record( ● ) button to record the channel you're watching.
2. Record mode can't be canceled by any control such as changing channel, etc. except pressing the STOP( ■ ) button.



Max duration time for recording is set to the default record time which set in Menu.

If you want to change the duration, press the ◀/▶ button. (Minimum: 5Minutes, Maximum: 10Hours)

Record more than 30 sec.

Recorded files less than 30sec to be automatically deleted.

### 7.2.3 Playback

1. Press the LIST button to open the file list.
2. Select the file you want to watch using the ▲/▼ button.
3. Press the OK or PLAY( ▶ ) button.



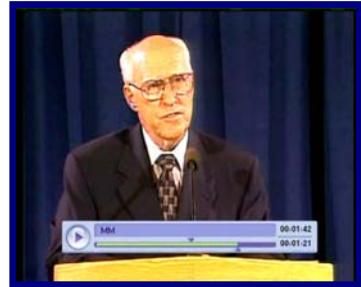
1. Press the EXIT button to exit from the file list.  
Press the ▲/▼/◀/▶/button.  
if you want to check the status of playing.



1. Press the numeric button(0~9) in Playback mode.
2. Each number means the ratio of the number to ten. If you press number 3, control position will be located 30% progressed position.

### Jump in playback mode

1. You can locate the control position to the desired position using the ◀/▶ button.
2. By releasing the ◀/▶ button, playback continues from this position.



### Bookmark

For your convenience, the bookmark function enables you to set bookmarks within the media file to continue or target a special position in media file.

1. Play the file you want to watch.
2. Move the control position to the favored position using the ◀/▶ button. Then press the MARK button and the white small bar will be placed at that position.
3. To delete the Bookmark, move the control position using the ◀/▶ button to the desired Bookmark and then the color of the control position turns black Just that time, press the MARK button.
4. Press the JUMP button and the control position will jump to the next bookmarked position and playback starts from this point.



The maximum number of the Bookmark is twenty in a file.  
The first Bookmark exists at the starting position of the file.

# Additional Information

## A.1 Troubleshooting

There may be various reasons behind receiver problems. Check the receiver according to the procedures described below. If you can't solve your problem even after following the troubleshooting procedures, please contact the dealer. Do not open the receiver cover. It may cause a dangerous situation.

<b>The front panel doesn't display any message.</b>	The power cord is not plugged in.	Check that the power cable is plugged in to the wall outlet.
<b>No picture or sound.</b>	Wrong connection of the Audio/Video output of the receiver to TV.	Connect the Audio/Video output of the receiver to TV correctly.
	Wrong connection of the antenna.	Connect the antennal cable correctly.
	No or Bad signal message appears.	Check other device connected between Antenna and the receiver, or adjust the antenna position.
	Audio muting	Press the MUTE button
	TV Power	Turn TV on.
<b>No picture.</b>	The receiver can't receive the signal.	Check the antenna cable, replace the cable, or connect the cable to the receiver tightly.
	Incorrect values of some tuner parameters.	Set the values of tuner parameters correctly. Refer to the Installation menu.
<b>No or bad signal.</b>	The UHF Antenna is not Pointing.	Adjust the antenna.
	Signal too strong.	Connect the signal attenuator to the signal input.
	Antenna is too small.	Change to a larger antenna.
<b>The remote controller does not operate.</b>	The batteries of the remote controller are not inserted or exhausted.	Check whether the batteries are inserted correctly in your remote controller. Check and replace the batteries of the remote controller.
<b>Poor picture quality. Less channels in scanning.</b>	Signal loss cable.	Change the antenna power in Antenna menu.

## A.2 Technical Specifications

### 1. Tuner & Demodulator

Parameter	Specifications
Input Frequency Range	950MHz to 2150 Mhz
RF Input Signal Level	-25 to -65dBm
RF Impedance	75
IF Bandwidth	55MHz/8MHz(Under 5Msps)
LNB Power	13/18DC, 14/19V +/-5%, 0.5Amax, 0.8Apeak overload protected
LNB Tone Switch	22kHz +/-2kHz, 0.6Vpp +/-0.2V
DiSEqC Control	Version 1.2, Tone burst A/B
Demodulation	QPSK, QAM256, VSB, 64QAM
Symbol Rate	1~45Msps/SCPC, MCPC

### 2. MPEG

Parameter	Specifications
Transport Stream	MPEG-2 ISO/IEC 13818 Transport Stream Specification
Input Rate	Max.15Mbit/s
Video	MPEG-2 MP@ML
Audio	MPEG-1/2 Audio Layer 1,2
Aspect Ratio	4:3, 16:9, 4:3 Letter Box
Video Resolution	576i, 576p, 720p, 1080i
Audio Mode	Stereo, Dual channel, Joint stereo, Mono
Audio Sampling Frequency	32/44.1/48kHz

### 3. Connector

Port	Specifications
LNB IF input	F type, IEC 169-24 Female
LNB IF Loop-through Output	F type, IEC 169-24 Female
RCA	Stereo,CVBS
Component	Y,Pb,Pr
SPDIF	Fiber-Optic connection(Digital Audio Output)
Serial Port	RS232C D-sub male type

### 4. Power Supply

Parameter	Specifications
Input Voltage	90~260VAC(SMPS)
Power Consumption	Max. 27W
Weight	Appr. 1.5KG
Operating Temperature	0°C~40°C
Storage Temperature	-40°C~65°C

## A.3 Glossary of Terms

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### **DiSEqC**

Digital Satellite Equipment Control.

### **EPG**

Electronic Program Guide. Software that enables viewers to navigate easily among the large selection of channels provided by the digital technology and choose the service they desire.

### **FEC**

Forward Error Correction. Correction of faulty bits in the received signal.

### **LNB(Low-Noise Block converter)**

The LNB is an electronic unit mounted on the satellite dish. It receives the signals reflected by the dish and converts them to signals that can be used by Satellite receiver.

### **Parental control**

A feature that allows parents to lock programs that they consider unsuitable for their children. A locked channel or program can only be unlocked with the password.

### **PIN code**

Personal Identification Number. A four-digit code that is used for locking/unlocking channels and programs, as in the parental control feature.

### **Polarization**

Polarization allows several programmes to be fitted into the same frequency band. The signals from a satellite are transmitted either with linear (vertical or horizontal) polarization or circular (right or left) polarization.

### **RS 232**

Serial communication standard data port.

## **Satellite dish**

A dish-shaped antenna to receive signals from a satellite. The dish focuses the signals into the LNB.

## **Scrambled satellite TV programme**

Some satellite TV programmes are transmitted in scrambled form. A smartcard, and possibly a CA module is needed to view such programmes.

## **Symbol rate**

Size of the digital package transmission

