

High Definition Digital Satellite PVR

User's Manual

F-9000HD PVR



 **UltraPlus®**

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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 a 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, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not alter the mains plug in any way. 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 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 in case of 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 the power-supply cord or plug being damaged, liquid being spilt on the apparatus or objects having fallen into the apparatus. Also if the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped servicing is required.

WARNING : *To Prevent fire or shock hazard do not expose the set to rain or moisture.*

2. Notice

- These servicing 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. 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

3. Copyright

This manual is protected by copyright laws.

Copying and/or reproduction of this manual in part or whole without Ultraplus's prior written approval is prohibited.

4. Disclaimer

The manufacturers, distributors and agents are not liable to any kind of damage caused by the use of the information contained in this manual.

The instruction and descriptions which this manual contains are based on the time of this manual's production.

The manufacturer constantly updates it with new functions and technology.

All the specifications are subject to change without prior notice.

5. Trademarks



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC



Dolby is a trademark of Dolby Laboratories

Dolby and the 'double-D' symbol are trademarks of Dolby Laboratories

Before You Begin

1. Main Features

- ✓ Twin Tuner HDTV PVR Receiver (H.264/ MPEG4 HD)
- ✓ Supports MPEG4 /MPEG2 - HD/SD, DVB-S2 /DVB-S
- ✓ Embedded Linux OS & Ethernet port
- ✓ Time Shifting, Recording & Playback with Internal HDD (SATA) / External HDD (USB 2.0)
- ✓ Simultaneously Records 2 Channels and allows Watching of 2 others (PIP)
- ✓ True Blind Scan & Multi-Satellite Search
- ✓ Dual USB 2.0 Ports Front/Rear
- ✓ MP3 and JPEG player over USB port
- ✓ Premium Grade Universal remote control unit
- ✓ HDMI Output (576i, 576p, 720p, 1080i)
- ✓ PIP (Picture-in-Picture) & Multi Picture Display(*)
- ✓ Premium Grade VFD Display (12 Digit Alphanumeric)
- ✓ Multi-LNB support via DiSEqC 1.0, 1.1, 1.2 and USALS
- ✓ Powerful Extended EPG supports 8-Day and Event Recording
- ✓ Supports DivX file Playback
- ✓ Powerful Service Control with Favorites, Lock, Skip, Move and Delete Functions
- ✓ User Friendly & Multi-language Supported (OSD & Menu)
- ✓ Teletext / Subtitle Supported
- ✓ Maximum 10,000 Services Programmable
- ✓ High Definition On-Screen Display in True Color
- ✓ Supports YPbPr Output in HD
- ✓ RGB, CVBS, Y/C Video & Audio Output via SCART
- ✓ Digital Optical AC3 Output (SPDIF)
- ✓ Up - Scalar for SD/HD Channels up to 1080i
- ✓ 1 Smart Card Reader and 2 Common Interface Slots
- ✓ 1W Stand-by Power Consumption

NOTE : (*) This feature(Multi-picture Display) may not be available until a new firmware version is installed. Please refer to your local dealer / distributor for clarification.

2. Accessories

User's Manual



Remote Control



AAA size Batteries X2



HDMI Cable (Option)

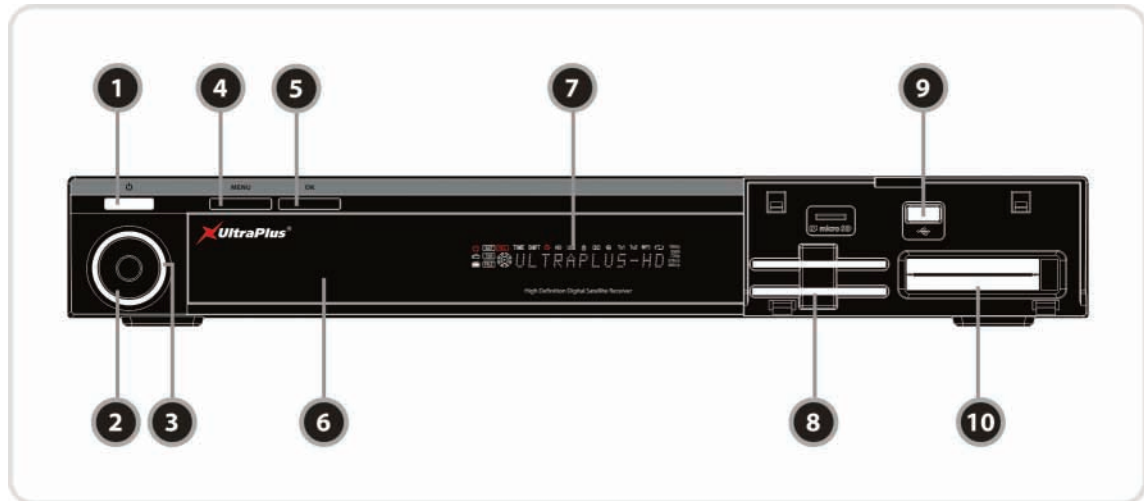


Loop through Cable (Option)



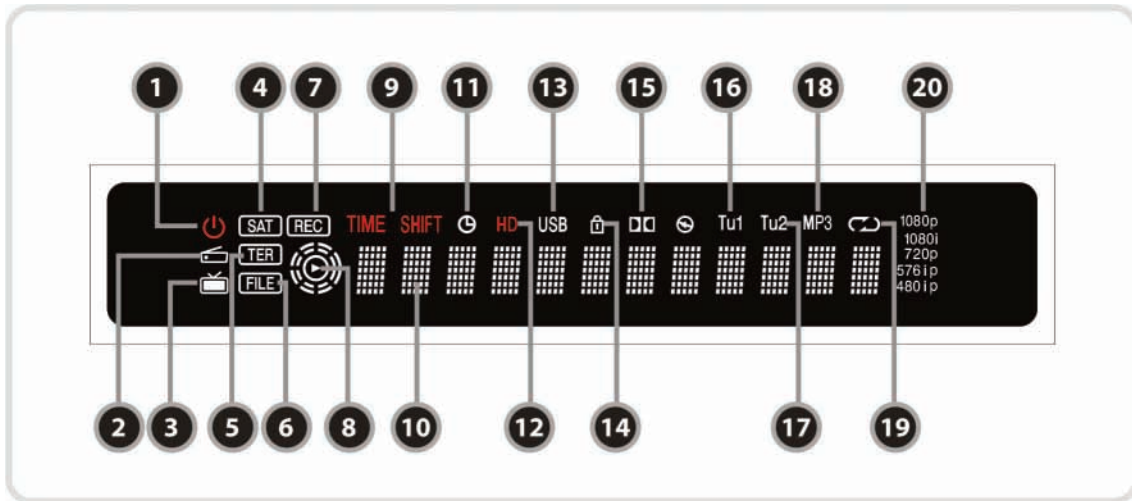
Hardware Description

1. Front Panel Configuration



1. **POWER BUTTON & LED** : Press to switch between STANDBY and POWER ON modes.
2. **Navigation Button** :
Up/Down button(CH Up/Down) : Press to change services in normal mode, or to move highlighted-bar in menu mode.
Left/Right button (Vol Up/Down) : Press to change audio volume in normal mode or to navigate menu in menu mode.
3. **LED indication LED(White)** : The LED lights on in running mode.
4. **MENU Button** : Press to display the main menu or to move to the previous menu.
5. **OK Button** : Press to display the service list in non-menu mode and to select an item or confirm a selection in menu mode.
6. **Remote Sensor** : Receives signal from the remote control.
7. **VFD Display** : The Vacuum Florescent Display can display 12-digits of alphanumeric display and various icons. These letters and icons display the current status of receiver such as service name, service information and so on.
8. **SMART CARD READER** : Insert smart card for encrypted service access.
9. **USB(Front)** : Use it when connecting to external USB storage device.
10. **CI Slot**: To receive pay-tv service you need a CA-Module and a smart card from the service provider.

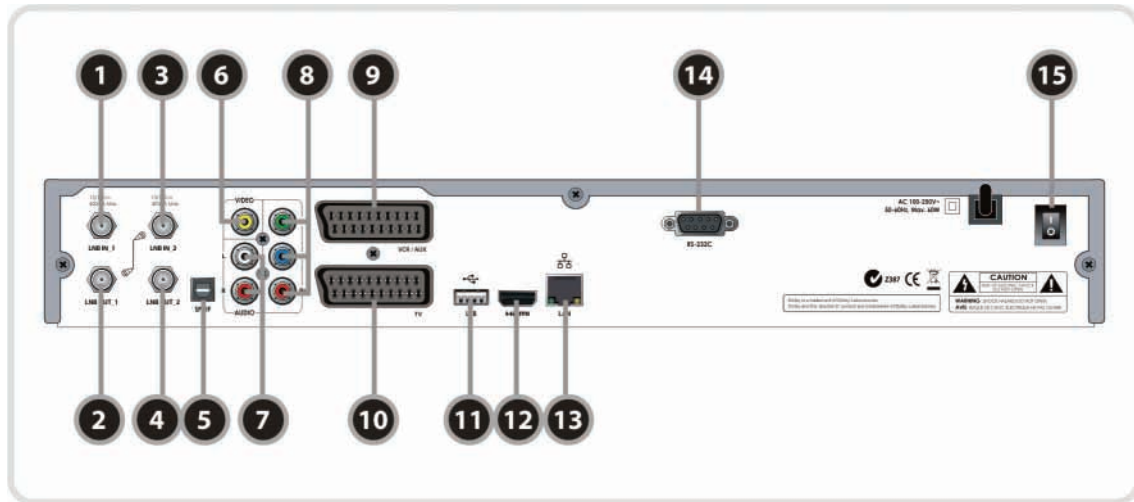
2. VFD(Vacuum Fluorescent Display)



1. **Remote Indication LED** : The LED lights when a key on the Remote Controller is pressed.
2. **Radio icon** : The icon lights when the radio service is changed.
3. **TV icon** : The icon lights when the TV service is changed.
4. **SAT** : Satellite mode.
5. **TER(Optional)** : Terrestrial mode.
6. **FILE** : The icon lights when the file list is displayed for the SATA HDD or USB Storage Device.
7. **REC** : Turned on during recording.
8. **PLAY Mode** : The icon lights when you play a file from the file list.
9. **TIME SHIFT** : Turned on during Time-shift.
10. **Information** : Display information including service name and other information.
11. **TIMER** : Turned on when a timer is set.
12. **HD** : Turned on when viewing HD services.
13. **USB** : Turned on while a USB device is working.
14. **LOCK** : Turned on during lock service.
15. **Dolby** : Turned on while watching services with Dolby Digital audio.
16. **Tu1** : Turned on if Tuner 1 is being used.
17. **Tu2** : Turned on if Tuner 2 is being used.
18. **MP3** : Turned on while listening to MP3s.
19. **Repetition(*)** : Turned on to indicate recording repetition.
20. **Resolution** : Turned on while setting the resolution.

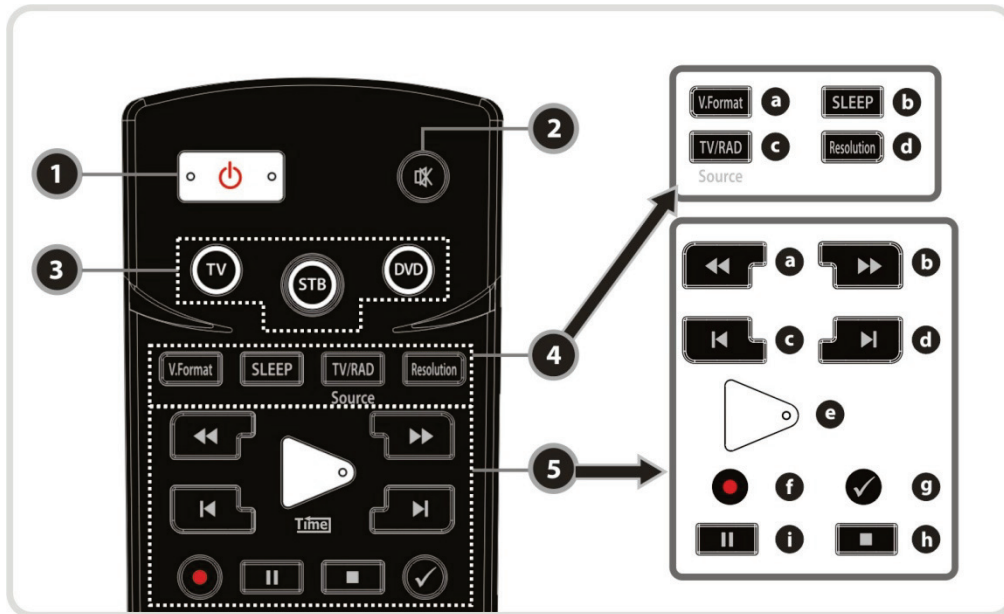
NOTE : (*) Repetition may not be available until a new firmware version is installed. Please refer to your local dealer / distributor for clarification..

3. Rear Panel Configuration



1. **LNB IN_1**
Satellite signal input socket for the first tuner. Connects to a satellite antenna cable.
2. **LNB OUT_1**
Satellite signal output socket through the first tuner. Connects to the LNB IN_2 for loop-through.
3. **LNB IN_2** :
Satellite signal input socket for the second tuner. Connects to the LNB OUT_1 for loop-through.
4. **LNB OUT_2** :
Satellite signal output socket through the second tuner. Connects to another STB (optional).
5. **SPDIF** : Connects to the audio system using a S/PDIF cable. (digital audio)
6. **VIDEO** : Connects to the TV or VCR using a RCA cable. (Composite video output / Yellow)
7. **AUDIO L/R** : Connects to the TV or VCR using a RCA cable. (Stereo audio output / White, Red)
8. **Component** : Connects to the TV or VCR using a component cable. (YPbPr)
9. **VCR SCART** : Connects to the VCR or DVD using a SCART cable.
10. **TV SCART** : Connects to the TV using a SCART cable.
11. **USB** : Used to connect an external USB storage device.
12. **HDMI** : Connects to the TV using an HDMI cable, use this connection to obtain the best quality picture and audio possible.
13. **Ethernet** : Local area network port.
14. **RS-232C** : Serial port for firmware update and data transfer.
15. **A/C Switch** : Power switch

4. Remote Control Unit



1. **POWER** : Turns the STB On/Off.

2. **MUTE** : Turns the sound On/Off.

3. Universal Buttons

a. **Universal TV** : Change the mode of the remote to allow it to control the TV.

b. **STB** : Change the mode of the remote to allow it to control the Ultraplus F-9000HD.

c. **Universal DVD** : Change the mode of the remote to allow it to control the DVD player.

4. MODE

a. **V.Format** : To select the video format.(PAL/NTSC)

b. **Sleep** : To adjust sleep timer.

c. **TV/RADIO** : Switches between TV and Radio.

d. **Resolution** : To select the resolution. Each time you press the **Resolution** button, the resolution changes in the following sequence: **576i > 576p > 720p > 1080i**

5. Playback Control Buttons

a. **Rewind** : Rewinds at high speed. Each time you press this button the rewind speed is increased.

b. **Fast Forward** : Fast forward at high speed. Each time you press this button the fast forward speed is increased.

c. **Previous File** : To play the previous MP3 file in MP3 play mode. This button is also used to jump back to beginning of the recording during playback.

d. **Next File** : To play the next file. This button is also used to jump to end of recording during playback.

e. **Play / Time shift** : Displays the progress bar during playback, when no progress bar is displayed it starts playback at normal speed. It also returns to normal speed from trick mode.

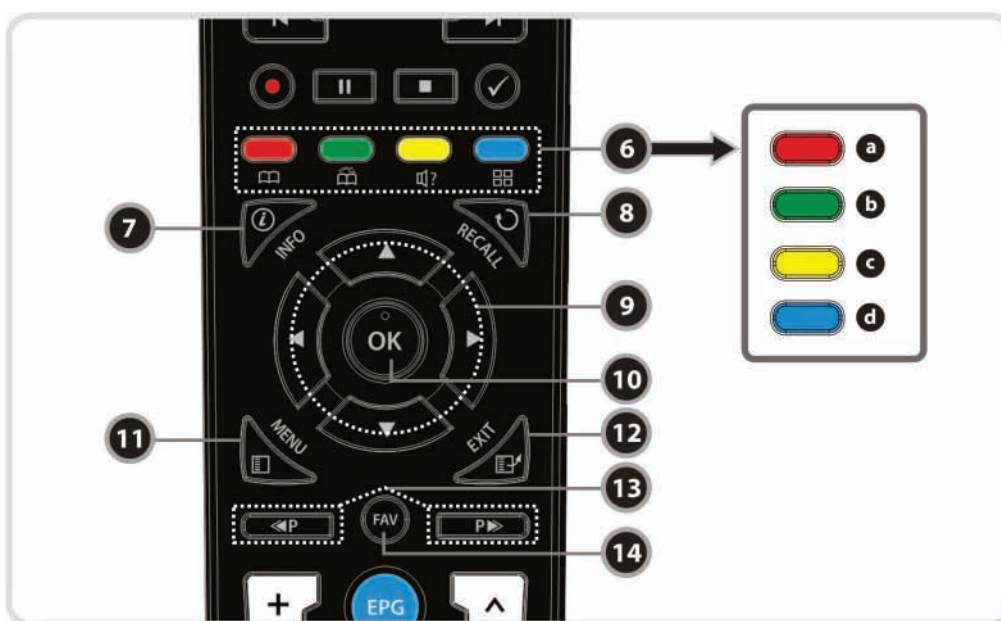
f. **Recording** : To start Recording.

g. **Repetition (*)**: This key is used to play back a recording repeatedly.

h. **Pause** : This key is used to pause the video. Press once more to resume the video.

i. **STOP** : To stop time shifting, playback or recording.

NOTE : (*) *Repetition may not be available until a new firmware version is installed. Please refer to your local dealer / distributor for clarification.*



6. Color Buttons

- a. RED** : Used for special functions in the menu. The RED key is used to sort lists in the service list or go to previous day search in EPG or make/delete the current position as a bookmark.
- b. GREEN** : Used for special functions in the menu. The Green key is used to set the favorites setting in the service list or go to the next bookmark position.
- c. YELLOW** : Used for special functions in the menu. The Yellow key is used to find a service in the service list or change the audio track.
- d. BLUE** : Used for special functions in the menu. The Blue key is used to set service list options in the service list or display **Multi-Picture.(*)**

7. Information : Shows information about the current program. If you press it twice the detailed information box will be shown.

8. Recall : Moves to the previous service.

9. ARROW Buttons

- a. Up & Down Key** : To change the value of a selected item with preprogrammed values in the menu.
- b. Left & Right Buttons** : To move the cursor left and right in the menu.

10. OK or Service List : Show the service list in non-menu mode and select an item or confirm in menu mode.

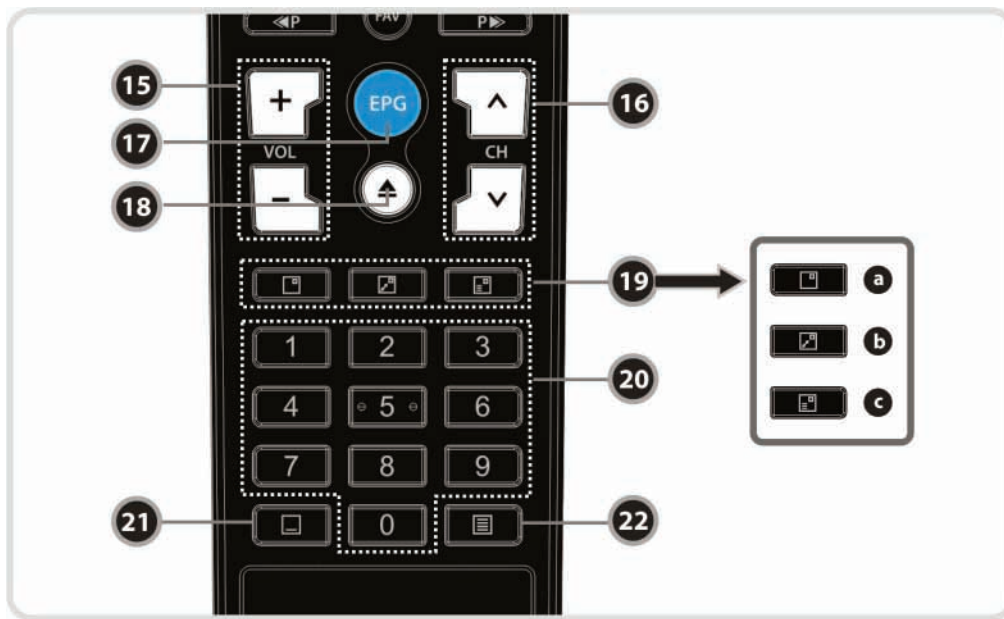
11. Menu : To enter the main menu or to move to the previous menu.

12. EXIT : Exit from the menu or pop-up window.

13. Page Up & Down : Move to the next or previous page if more than one page is available. This button also changes the location of the sub picture in PIP.

14. Favorite : To display the satellite group and the favorite groups.

NOTE : (*) This Feature(Multi-Picture) may not be available until a new firmware version is installed. Please refer to your local dealer / distributor for clarification.



15. Volume Up & Down : To change the Volume.

16. Channel Up & Down: To change the channel.

17. EPG(Electronic Program Guide) : Show the TV/Radio program guide.

18. Play List : To show the file list for the SATA HDD or USB Storage Device.

19. PIP Buttons

a. PIP(Picture in Picture) : To activate the PIP window.

b. PIP Swap : Switches between main-picture and sub-picture

c. PIP(Picture in Picture) Service List : To show the sub-picture service list.

20. Numeric : Allows numerical data entry and changing of services directly.

21. Subtitle: To show subtitles.

22. Teletext: To show digital teletext.

5. Multi-Brand IR Remote Controller Setting

NOTE : If there is no input during the first 10 seconds of set mode, set mode is canceled.

1. Direct Code Entry

Step 1 : Turn on the **DEVICE** what you want to set up(TV / DVD / VCR)

Step 2 : Press **DEVICE** and **OK** buttons for about 2 seconds simultaneously.

✓ **The DEVICE LED will blink twice.**

Step 3 : Input the 3 digit code number for your device. (Refer to '**Code Table for Universal Remote Control Unit**')
✓ **The DEVICE LED will blink twice and the DEVICE turns off.**

✓ **If you enter wrong DEVICE code, DEVICE will blink once**

Step 4 : If your DEVICE turns off, press **OK** button.

✓ **The DEVICE LED will blink twice.**

2. Auto Code Search

Step 1 : Turn on the DEVICE what you want to set up(TV, DVD)

Step 2 : Press **DEVICE** and **OK** buttons for about 2 seconds simultaneously.

✓ **The DEVICE LED will blink twice.**

Step 3 : Press the **UP** or **Down** button to enter the Search mode.

Step 4 : Press the **UP** or **Down** button until the DEVICE turns off.

Step 5 : If your DEVICE turns off, press **OK** button.

✓ **The DEVICE LED will blink twice.**

3. Code No. Checking (Number Call)

Step 1 : Press **DEVICE** and **OK** buttons for about 2 seconds simultaneously.

✓ **The DEVICE LED will blink twice.**

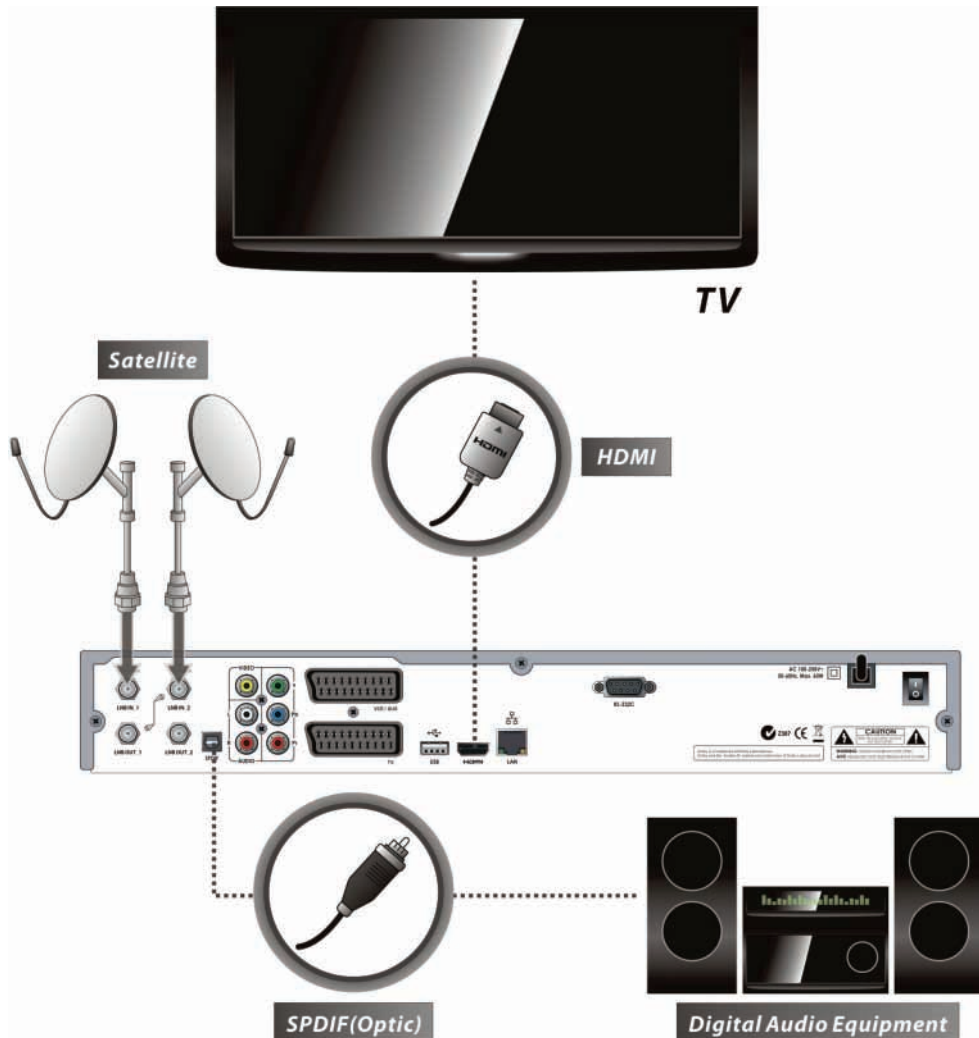
Step 2 : Press **INFO** button within 3 seconds.

✓ **The LED will blink according to mode number the remote is set to.**
(In the case of digit '0', it blinks 10 times.)

Connections Diagram

1. Receiver to TV with Digital A/V Output

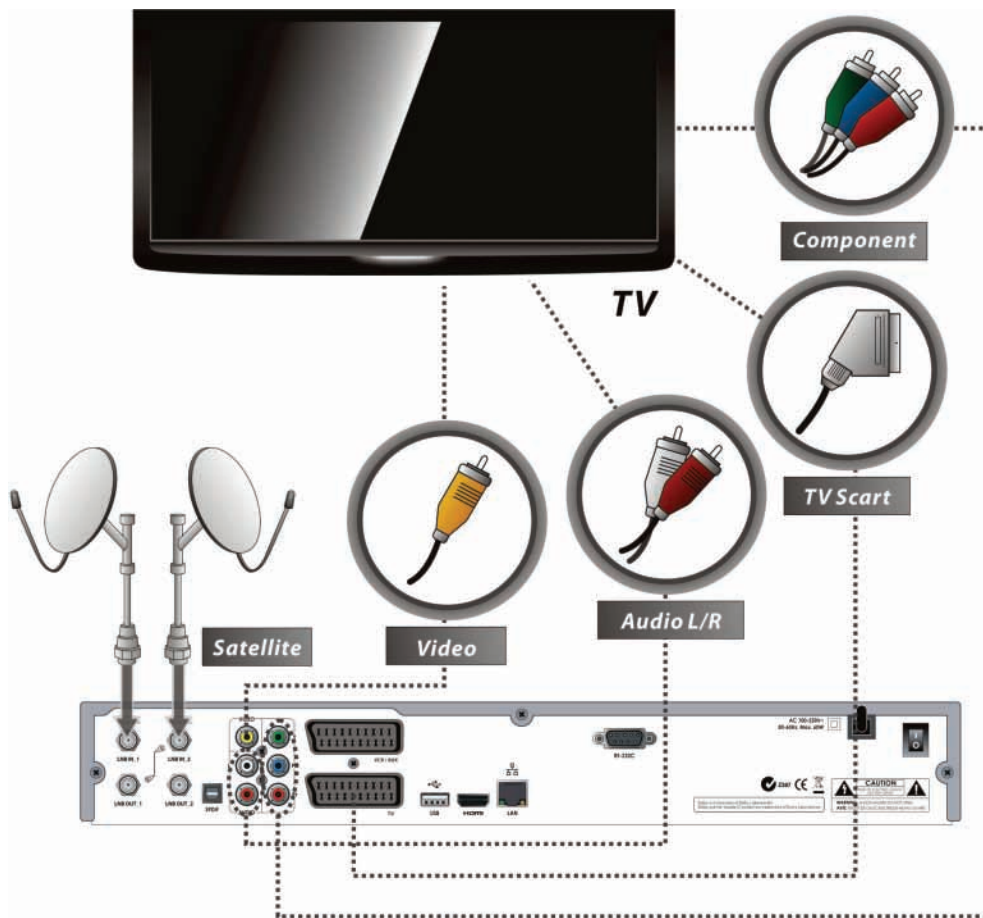
- Connect the satellite antenna cable to LNB IN.
- Connect the HDMI Cable to HDMI Connector of TV.
- Connect SPDIF to Digital audio input of the equipment(Digital Audio)



NOTE : Depending on the A/V equipment you own, there are various ways you can connect the STB. To choose the best connection option, please refer to the manual of equipment you would like to connect to. To get High Definition playback of High Definition content, we recommend that you connect your high definition display with a HDMI cable. HDMI supports standard, enhanced or high-definition video and multichannel audio in a single cable.

2. Receiver to TV With Analog A/V Output

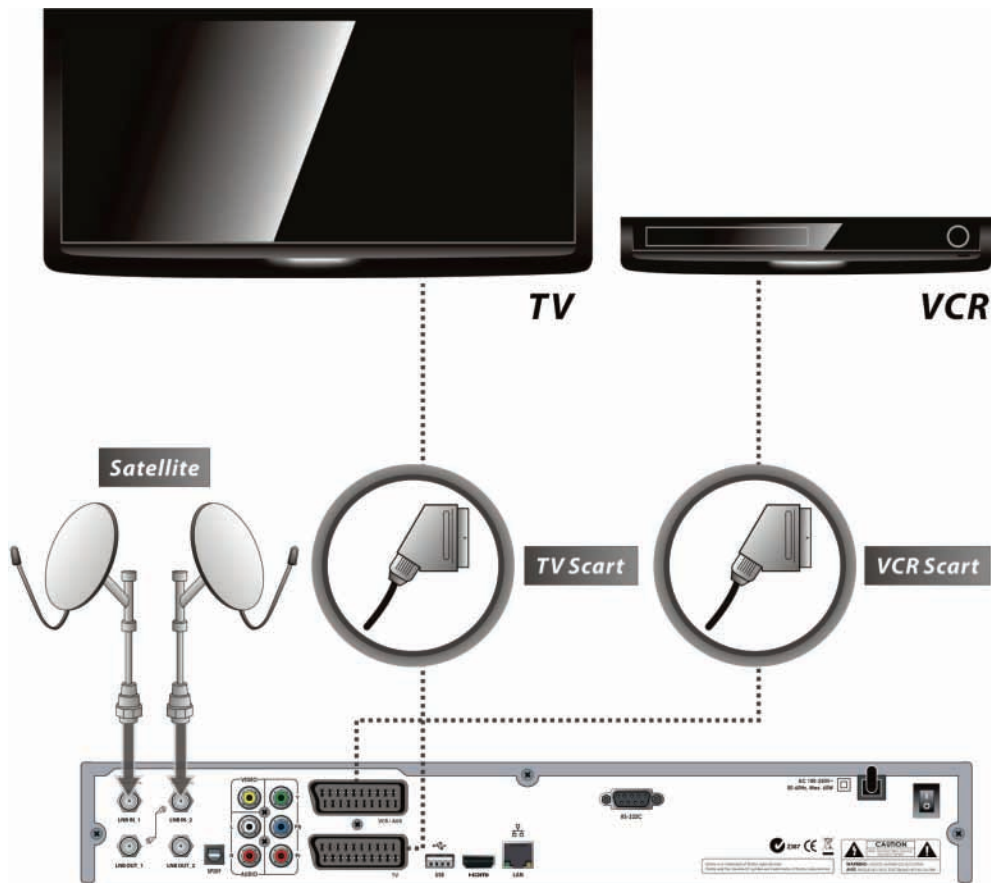
- Connect the satellite antenna cable to LNB IN.
- Connect the TV SCART to SCART of TV.
- Connect the VCR SCART to SCART of VCR.
- Connect the Component to Component of TV.
- Connect the RCA to RCA of TV.



NOTE : The component connection(YPbPr) is recommended if your TV supports component.
The SCART cable connection is recommended for analogue TVs or VCRs
The composite connection(RCA cable) is recommended for analogue TVs
You cannot view high definition video with the SCART or the composite video connector.

3. Receiver to TV and VCR

- Connect the satellite antenna cable to LNB IN.
- Connect the TV SCART to SCART of TV.
- Connect the VCR SCART to SCART of VCR.



4. Connecting to Dish

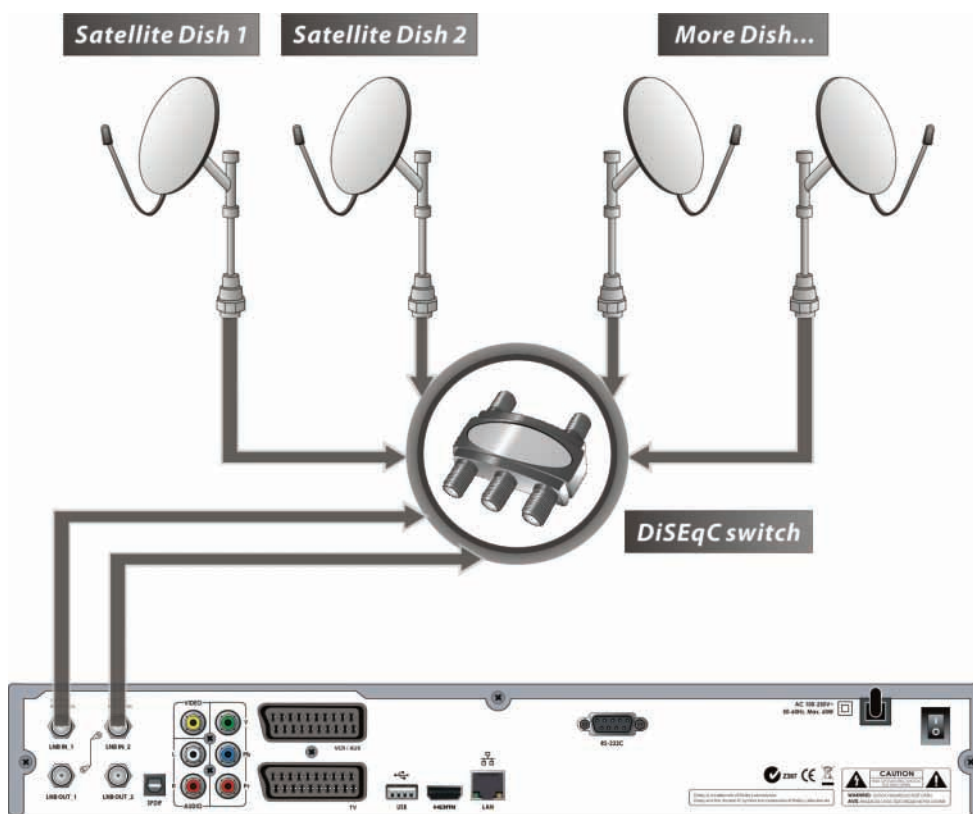
4.1 Connecting by Loop through



4.2 Connecting each Dish to each Tuner



4.3 Connecting Antenna cable to each Tuner using a DiSEqC Switch (Recommend)



Guide of Functions

1. Selecting a Service

To select the desired service (channel), please refer to below instructions.

1.1 Using CH UP/DOWN buttons

You can navigate between services by pressing **CH UP/DOWN** buttons. Whenever you press the **CH UP(DOWN)** button, the current service will be changed to next/previous service. Please press **CH UP** or **CH DOWN** button until you find the service you want to watch.

1.2 Using Service List

To select the desired service in the service list, you should firstly display the service list by pressing **OK**.

Use the **ARROW** buttons to select a desired service and press the **OK** button.

You will see the service you have changed to in the small window at the top-right.

To watch the service, press the **OK** button once more.

To watch the previous service, press the **EXIT** button.

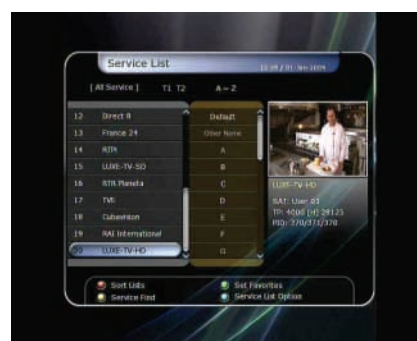
In the Service List window, you can also use additional functions by pressing the **COLOUR** buttons.

Pressing the **RED** button, lets you sort the services alphabetically, or by Transponder(TP), Group, Tuner and CAS (Conditional Access System).

Pressing the **GREEN** button, allows you to add the services to one of 10 favorites Lists.

Pressing the **YELLOW** button, lets you search & find services with virtual keyboard.

Pressing the **BLUE** button, allows you to adjust service list options.



NOTE : If you connect the tuners with a loop-through cable, you cannot use the sort list option.

1.3 Using Instant Service List

- If you press **NUMERIC** buttons or the **UP/DOWN ARROWS** the instant service list will be displayed.
- Select the desired service by using the **ARROW** button, and press **OK** button to watch.
- You can also enter the service number directly by using the **NUMERIC** buttons.



1.4 Using the Recent Service List

- To return to the previous service that you were watching, press the **RECALL** button for a short time.
- To display recent service list, press the **RECALL** button for a little bit longer.
- To choose a service from the Recent Service List, use the **ARROW** button to select it, then press **OK** button.
- Press **EXIT** button to exit from the recent service list.



2. Information Window

If you want to view the information about the current service that you are watching, press **INFO** button, the Information window for the service will be displayed.

This Information window is automatically displayed when changing services. This window contains a lot of useful information such as service number, service name, encryption type, teletext availability, subtitle availability, Audio indication for Dolby Digital, Duration of service and so on.

By pressing the **INFO** button once again, you can get more detailed information about the service.



3. Multi-Picture Display. (*)

Press the **BLUE** button to display multiple pictures and use **RED** button to choose the display options for 9 or 12 multiple pictures.

NOTE : () This feature may not be available until a new firmware version is installed. Please refer to your local dealer / distributor for clarification.*



4. Electronic Program Guide (EPG)

The Electronic Program Guide (EPG) helps you to navigate through all the possible viewing options. And the EPG supplies additional information about each channel, such as program listings, start/end times and detailed information about the program listings for all available services.

The availability and size of information of these program details can vary, depending on the particular broadcasters, individual services. E.g. Freeview provides a full 7 day EPG, with full descriptions of programs broadcast.



- Press the **EPG** button, the EPG menu will be displayed.
- Use the **ARROW** buttons to move to other services or to see previous/next guide.
- Press the **EPG** button once to view the full EPG service list, and press it twice to view the additional EPG information of the channel. Pressing the EPG button again will toggle between the full and detailed views of the EPG.
- Press the **GREEN** button to view the next days EPG information and the **RED** button to view EPG for the previous day.
- Select the program by using the **ARROW** buttons then set the event timer by pressing **OK**.
- You can make a reservation for recording on EPG menu.
 - Press **RECORD** button to reserve the event. This reservation can be checked in the Timer Manager, which is accessible from the System tool menu.
 - To cancel the reservation for recording, press the **OK** button with the program selected.
 - To edit the reservation for recording, press the **RECORD** button the program selected.

5. Favorite Group

Press the **FAV** (Favorite) button to view all favorite groups such as sports, movie, drama, satellite group and so on. Scroll through the various favorite groups using the **ARROW** buttons, and select the desired favorite group by pressing **OK**.



6. Volume Control

- To adjust the audio volume, press the **VOL UP/ DOWN** buttons.
- The audio volume control bar will be displayed in the top left hand corner of the screen and will disappear after 4 seconds.
- When necessary, press **MUTE** button to turn on/off the sound.

NOTE : The mute function remains set while you change services.



7. Pause

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

8. Subtitle

You can select the language for Subtitles, if the program provides subtitle information.

- Press the **SUBTITLE** button on your remote control unit.
- Select the desired subtitle language then press **OK** button.
- The subtitles will be displayed in the selected language at the bottom of the screen.

- To turn OFF the subtitles, Select '**Off**' from the subtitle language list.

NOTE : When program does not provide subtitle information, SUBTITLE are not available.

9. Audio Track

The user can select the audio language list by pressing the **AUDIO** button. Use the **ARROW** buttons are used to choose the preferred audio track from the list, then pressing **OK** changes audio tracks.



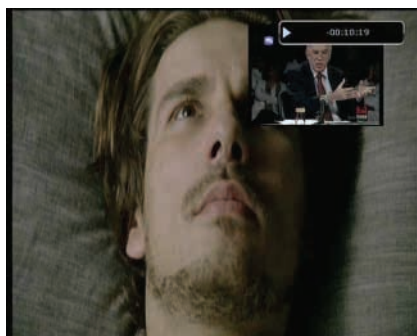
10. Teletext

If there is a **TELETEXT** icon on the INFO Banner is on, Press the **TELETEXT** button to view the teletext information.



11. PIP (Picture in Picture)

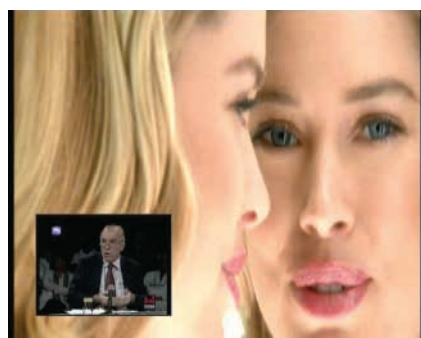
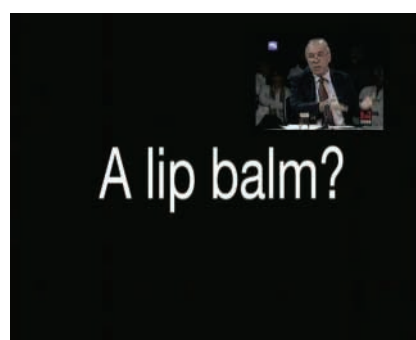
- When you press the **PIP** button, a sub picture screen will appear on the main screen. If you press the **PIP** button one more time, primary picture and sub picture will appear together at the same size. The picture to the left is the primary and that of right side is the sub picture. If you press the **PIP** button one more time, the sub picture will disappear.



- In the PIP mode, you can change primary and sub with **PIP SWAP** button.

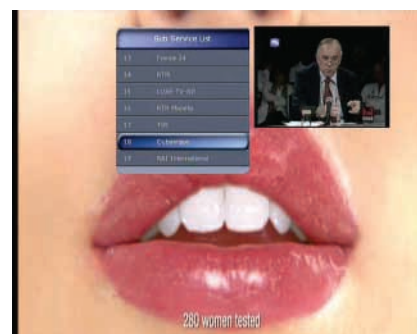


- If you press **PAGE UP/DOWN** button, the location of sub picture will be changed.



- If you press the **PIP SERVICE LIST** button, you can see the list of services for the sub picture. You can change the service displayed in the sub picture from the list.

NOTE : Changing services of sub picture could be limited by the tuner connection or recording.



PVR (Personal Video Recorder) Functions

1. Recording

You can select a recording storage device by navigating to the record device as follows:

Menu > Configuration > Recording Option > Record Device.

Default is set to '**Hard Disk**'.

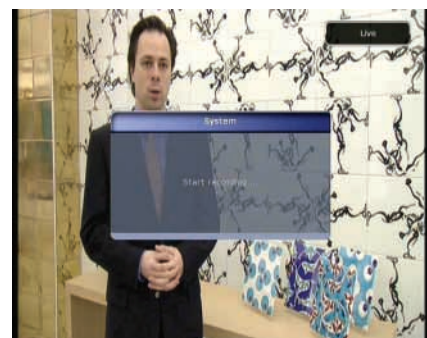
1.1 Recording methods

There are 3 types of recording method.

(Instant Recording / Time Reserved Recording / Event Reserved Recording).

- **Instant Recording :**

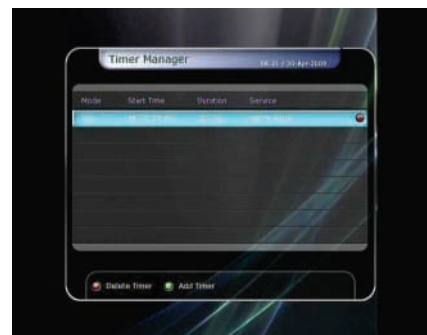
At anytime, you may press **RECORD** button to start your recording instantly.



- **Time Reserved Recording :**

- In the Timer Manager menu, you may set the time & service to be recorded.

(Main Menu > System Tools > Timer Manager)



- Press **GREEN** button to activate a new timer.

- In the Timer Edit dialog, you may choose a start date/time, duration, service, type (Recording/Play), Tuner (Auto/1/2) then simply press 'Yes' button to make a reservation. Please note that a minimum gap of 3 minutes is required from the current time to the recording start time to allow the recording process to take place.



- **Event Reserved Recording :**

In the EPG menu screen, you can choose the event you wish to reserve or record.

- While watching LIVE TV, press the **EPG** button to access EPG menu screen.



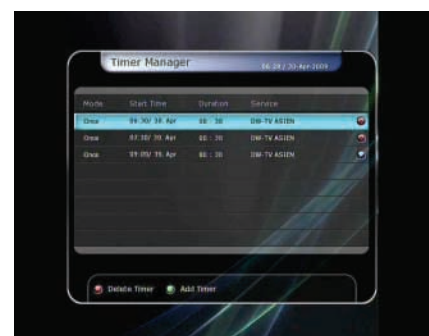
- Go to the event which you wish to reserve or view, then press **OK**. The event that has been reserved will be shown with a **BLUE play icon**. This BLUE play icon indicates that the set top box will change channel to allow you to watch the event at the reserved time.



- If the **OK** button is pressed once more, then the event that has been reserved will be shown with **RED dot icon**. This RED dot icon means that the event will be recorded at the reserved time.



- When you reserve an event in the EPG menu the set top box automatically sets a Timer Event in **Main Menu > System Tools > Timer Manager**.



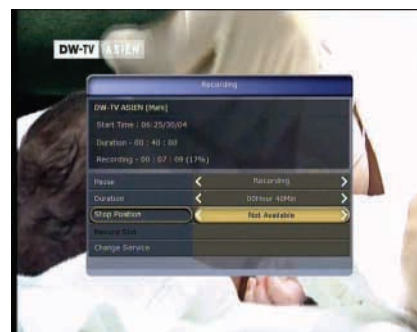
1.2 Recording Edit

Press **REC** button while recording to see the recording message window.

- **Pause** : Select **Pause Recording** then press **OK** to pause the current recording process.
- **Duration** : Press the **LEFT/RIGHT ARROW** button to change the recording duration.
- **Stop Position** :

You can select the finishing time of recording.

- **End of current event** : finish recording at the end of current event
- **End of next event** : finish recording at the end of next event.
- **Not Available** : EPG is not available.



- **Record Slot** : When you are recording 2 services, you can set Primary/Secondary with the **LEFT/RIGHT ARROW** button. Press **OK** button to go to the recording service.



1.3 Long Time recording

During recordings of 4GB(Giga Byte) or more, additional files will be created every 4GB. (For example; aaa.ts, aaa.ts1, aaa.ts2... and so on).

You must remember not to erase any of these files.

1.4 Pause during recording

- When the **PAUSE** button is pressed during recording, only the live video is paused, the recording will continue.
(Menu > Configuration > Recording Option > Record Device)

- Press **PAUSE** button once again and event will resume from the pause time.



- During recording, press the **PLAY/TIMESHIFT** button to show the Play bar.

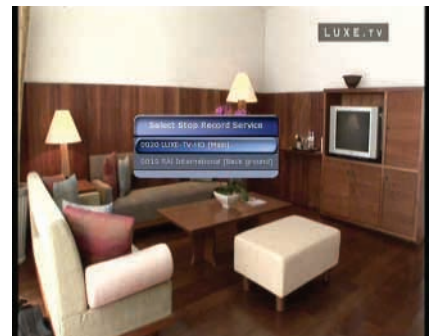


- While the Play bar is shown on your screen, you may use the **LEFT/RIGHT ARROW** buttons to move (forward & backward) freely within recorded time.



- If you press the **STOP** button, the STB will go to LIVE and you may press the **PREV FILE** button to view recorded file from the beginning.

- When recording 2 services at the same time, Pressing the **STOP** button will display a message window showing current recording status / information.
If you select one of the 2 recordings and press the **OK** button, that recording will be stopped.
If you press the **STOP** button while recording 1 service, the recording will be stopped.



NOTE : Dual Recording

STB can record up to two different services simultaneously. Time shifting is also a recording, so Time shifting will be possible on one of the two recordings during dual recording.

2. Time Shifting

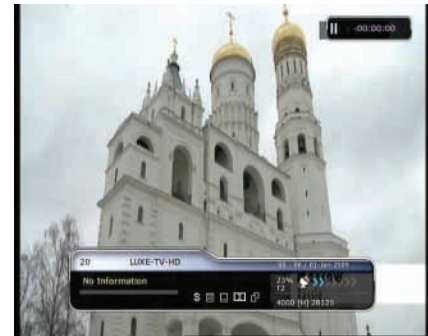
You can select a storage device for the temporary file that is created for Time shifting as follows:

Menu > Configuration > Recording Option > TimeShift Device.

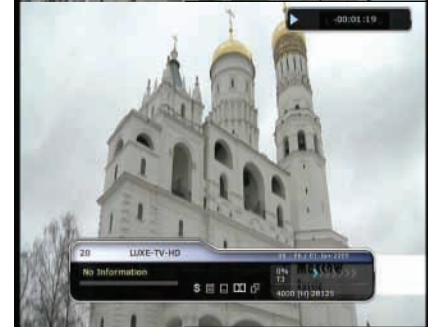
Default storage device is set to '**Hard Disk(SATA)**'



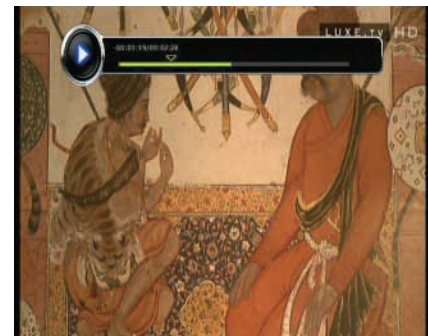
- If pressed **PAUSE** button during Time shift, live video is paused but temporary recording for time shift is continued.



- Pressing the **PAUSE** button once again, will then resume playback from the paused time.



- While watching live TV, press the **PLAY/TIMESHIFT** button to show the play bar on your screen.



- When the play bar is displayed on your screen, you may use the **LEFT/RIGHT ARROW** buttons to move freely through the recorded time.



- If you press the **STOP** button while time-shifting, you will be returned to LIVE. You can also use the **PREV FILE** button to move to the start of the Time-shift file.

3. Playback (Play List)

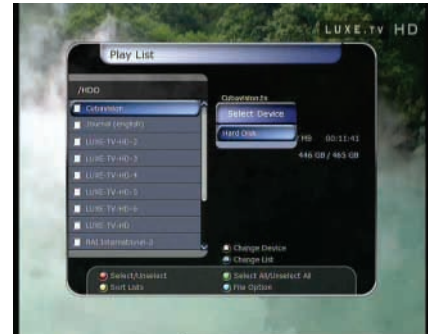
You can playback files in the Playlist.

In the Playlist, you can check and playback multimedia files i.e. movies, music, and images. Use the **LEFT/RIGHT ARROW** buttons to go to the movie, music, and image categories and check & playback files in the category. Press the **RIGHT ARROW** button once to go to the MP3 Play list and press the **RIGHT ARROW** button one more time to go to the Image Viewer.

3.1 Play List

- **Select Device** : Press the **PLAYLIST** button one more time in Play list mode to see the "Select Device" window, and select the device which has the file you want to play.

NOTE : The "Select Device" window shows devices which are currently connected to the STB.



- **Sorting** : If you press the **YELLOW** button, you can sort the files by Time/Name/Size.



- **File Option** : If you press the **BLUE** button, You can delete or move files, make a folder, or rename it. You can select multiple files together and delete or move all of them at once.



3.2 MP3 Player

- If you press the **RIGHT ARROW** button in the Play list, you can go to the MP3 Player menu.
- If you press the **RECALL** button, you can Shuffle playback and repeat.
- You can use the same 'Sorting' and 'File Option' features as in the Playlist menu.



3.3 Image Viewer

- If you press the **RIGHT ARROW** button in the MP3 Player, you can go to the Image Viewer menu.
- If you press the **RED** button or the **OK** button, you can start a slide show of image files.
- If you press **GREEN** button, you can adjust the following: Slide Time, Repetition, Title, Down-scale.
- You can use the same 'Sorting' and 'File Option' features as in the Playlist menu.



4. Bookmark

- When Play bar is displayed, you may move to desired time and book mark it by pressing the **RED** button. Bookmark(s) are indicated with Green lines on the play bar. Also, you may press the **RED** button to activate the play bar to mark your bookmark(s).



- When the play bar is on, a user can jump between the bookmarks by pressing the **GREEN** button.



- If you wish to delete any Bookmarks, go to that bookmark by pressing the green button or using the arrow keys, then press **RED** button to delete the current bookmark.



5. Trick mode

- User can change the speed of a fast forward play with the **FF**(Fast Forward) button. Press the **FF** button to change the speed to x2, x3, x4, x5. If you press the **FF** button in x5 mode, playback returns to normal(x1) speed.
- You can also change rewind speed with the **REWIND** button. Press the **REWIND** button to change the speed to x2, x3, x4, x5. If you press the **REWIND** button in x5 mode, playback returns to normal speed.
- You may press the **PAUSE** button at any time to pause a pre-recorded event. Press the **PAUSE** button once again to resume play of the recorded event.



The Main Menu

To display the menu, press the **MENU** button at any time. You can select the sub menus by using the **ARROW** buttons.

The selected sub menu becomes highlighted. After selecting the sub menu you want to access, press the **OK** button. If you want to return to a previous menu, press the **MENU** button. If you want to exit from the menu, press the **EXIT** button.



1. System Tools

1.1 Storage Manager

The items in this menu allow you to access and control the storage devices that you want.

- **Current Device:** Select the storage device you want to access with the **ARROW/OK** buttons.
- **Status :** You can see information about connected devices, such as '*Mounted*', '*Not Available*'
- **File System:** Shows the file system of current device. You can also select the desired file system that you want when you format the device.

NOTE : You must select the FAT32 file system, if you want to access USB storage devices in Windows



- **Total :** Displays the total size of current device.
- **Free :** Displays the free space available on the current device.
- **Format :** If you press the **OK** button to format current device, the device will be formatted with the file system selected above.

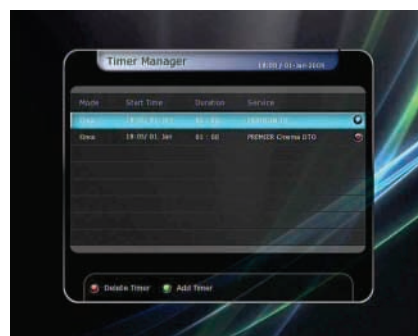
NOTE : When the file system is 'Unknown', the device will be formatted as 'Journaled'.

- **Play List :** Press the **OK** button to move to the '**Play List**' menu directly.

1.2 Timer Manager

Allows new timer entry and modification of existing timers.

- **To add a new timer entry :** Press the **GREEN** button. The Timer Edit window will popup. You can set the specific start date, time, duration and service. And you can choose the Timer Mode i.e. '*Once*' or '*Daily*' or '*Weekly*'. You can choose timer operation type as '*Recording*' or '*Play*'.
 - If you choose '*Recording*', the STB will start recording at that time.
 - If you choose '*Play*', the STB will change to the service that you wish to watch.
- **To modify existing timer entries:** Choose the timer entry which you wish to modify and press the **OK** button.
- **To delete existing timer entries:** Choose the timer entry that you want to delete and press the **RED** button.



NOTE : If you reserve one or more events through the EPG menu, the reserved event(s) will be added to the Timer Manager automatically.

1.3 Service List manager

The Service List Manager menu will appear when the **OK** button is pressed. You can select Edit Mode by pressing the **YELLOW** button.

- **Lock Services:** All lists will be shown on the left side of the window, the right side will show the list of services to be locked. By using the **ARROW** and **OK** buttons, you may move services to the right side of the window to lock the services.



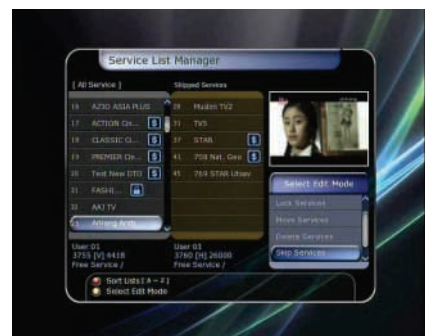
- **Move Services :** All Lists will be shown on left side of the window, Services for moving will be shown on right side of the window. Move the services to be moved to the right side of the window using the **ARROW** and **OK** buttons, then services on the right side can be moved to a specified location on the left side by pressing the **GREEN** button.



- **Delete Services** : All Lists will be shown on left side of the window. By using the **ARROW** and **OK** buttons you may select services to be deleted. Pressing the **GREEN** button deletes the selected services.



- **Skip Services** : All services will be shown on left side of window, right side will only show the services that are chosen to be skipped. By using the **ARROW** and **OK** buttons you may move the selected service from the left to right side in order to skip them.



- **Set Favorite Services** : Use the **ARROW** and **OK** buttons to select your desired favorite group. Once a favorite group is chosen, the left side of the window will show the all services list and the right side of the window will only show the selected services of the favorite group chosen. By using the **ARROW** and **OK** buttons, you may ADD the desired services to a favorite group or DELETE any from the favorite group.



- **Edit Services** : The all services list will be shown on the left side of the window. Move the selection bar to the service which you want to edit and press the **OK** button. The virtual keyboard will be displayed. Using the **ARROW** and **OK** buttons, you can edit the services name with the virtual keyboard.

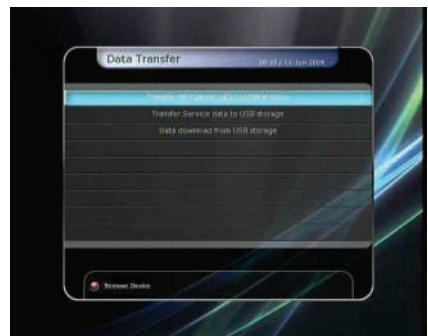


1.4 Data Transfer

When the data transfer task is in process, the Front USB slot is the default device slot. But, if no USB device is connected to the front USB slot, then the Rear USB slot is used for the data transfer process.

NOTE : If no USB device is connected to either (Front or Rear) USB slot, then the Menu item will not be available.

- **Transfer all System data to USB storage**: If you want to transfer and BOTH the current system parameters and service data, this menu will allow you to store both sets of data to your USB device. Press the **OK** button to store the current data to your external USB storage.
- **Transfer Service data to USB storage**: If you want to transfer ONLY the service data, this menu allows you to store current service data. Press the **OK** button to store the current service data to your external USB storage.
- **Data download from USB storage device** : This menu allows you to download the data stored on the external USB storage to your STB. Press the **OK** button to download the data.



2. Configuration

2.1 Recording Option

- Recording Stop Message confirming 'stopping' of the recording process :
 - **Set to 'On'** : When you press the **STOP** button while recording, a confirmation window is displayed.
 - **Set to 'Off'** : When you press the **STOP** button while recording, the STB will stop the recording process immediately without a confirmation message.
- **Extra Event Recording** :
 You can adjust the extra recording time. (1 Min/2 Min/3 Min/4 Min/5 Min/10 Min/15 Min/off)
 If you set an extra recording time by using the **ARROW** and **OK** buttons, additional recording time will be added to the 'Start' and 'End' time of that event being recorded..
- **Time-Shift** :
 You can adjust the amount of timeshift. (30 Min/60 Min/90 Min/120 Min)
 Time shifting works automatically up to the limit of time that you set, as long as the Time-Shift storage device has enough free space.
 If you set this option to 'OFF', time shifting is disabled.
- **Time-Shift Device** :
 You can choose the Time-Shift Device you want to use, i.e. Hard Disk / USB1(Front) / USB2(Rear).
- **Record Device** :
 You can also set the Record Device which you want to use, i.e. Hard Disk / USB1(Front) / USB2(Rear).
 Recorded files are stored on the device you set.



2.2 Parental Control

Access rights to services and programs are controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access the parental control menu, a pop-up window will ask you to input a PIN code. (If necessary, you can change it.)

NOTE : The default PIN code is '0000'

- **Censorship** : Set the censorship level. The censorship level is given as age-based numbers.
- **Change Pin code** : To change your PIN code, input a new PIN code using the Numerical buttons. To verify the new PIN code, input the new PIN code again.
- **System** : Set the access rights to the system menu.
- **Installation** : Set the access rights to the Installation menu.
- **Configuration** : Set the access rights to the Configuration menu.
- **Edit Service** : Set the access rights to the Edit menu.



2.3 UI (User Interface) Setting

- **Info Box position** : Set the position of the information window.
- **Info Box Display Time** : Set the duration the information window should be displayed for after changing services.
- **Volume Bar Display Time** : Set the duration the volume bar should be displayed for after changing the volume.
- **EPG Time Range** : You can set the time range which is displayed in a single view in the EPG window.
- **Zapping Mode** : You can set the zapping mode.
 - **Black screen** : Display the black screen when changing between services.
 - **Freeze** : Display the last still picture when changing between services.
- **Front Display Scroll** : You can set VFD Display Scroll Preferences.
 - **On** : Continually scroll the service name, if the service name is over 12 characters long.
 - **Off** : Scroll service name once, if the service name is over 12 characters long.
- **LED Lighting Time** : You can adjust the lighting time of front LED.
- **LED Brightness** : You can adjust brightness of front LED in 4 steps. By setting '**off**' this option, will turn OFF the front LED lighting.



2.4 Time Setting

- **Time Setting** : To set the current time, you can use two modes; **Auto** and **Manual**.
 - **Auto Time Setting**
 - Local Offset** : Enter the GMT offset e.g. GMT+12
 - Daylight Saving** : If you want to apply daylight saving, select this using the **ARROW** buttons.
 - **Manual Time Setting**
 - Date** : Enter the calendar date using the **ARROW** buttons then press the **OK** button to finish.
 - Time** : Enter the time by using the **NUMERICAL** buttons.
- **Clock Mode** : Select the type of clock display(12 Hours or 24 Hours) using the **ARROW** buttons.
- **Wake Up Mode** : Enter the time for the receiver to automatically power **ON**. You can choose the following Wake Up Modes '**off**' , '**Once**' , '**Daily**' or '**Weekly**'.
 - **Wake Up Date** : Set the date when STB should turn on. Press the **OK** button to display the calendar.
 - **Wake Up Days** : Select a day of the week when the STB should turn on.
 - **Wake Up Time** : Enter the wake up time of the STB using **NUMERICAL** buttons.
 - **Wake Up Service** : Select the service to show when the STB turns on. Press the **OK** button to display the service list.
- **Sleep Mode** : Enter the time for the receiver to automatically switch **OFF** and go to standby mode. You can choose the following Wake Up Modes '**off**' , '**Once**' , '**Daily**' or '**Weekly**'.
 - **Sleep Date** : Select the date when the STB should turn off. Press the **OK** button to display the calendar.
 - **Sleep Days** : Select a day of the week when the STB should turn off.
 - **Sleep Time** : Enter the turn-off time of the STB using the **NUMERICAL** buttons.



2.5 Language Setting

- **Menu Language** : Select the desired menu language using the **ARROW** buttons.

NOTE : Languages may be changed depending on the country the unit is sold in. Available languages are subject to change without prior notice.

- **Audio Language** : Select the default language for audio when changing services. If no other language is provided, then the default language of current channel will be automatically selected.
- **Subtitle Language** : Select the default language for subtitles when changing services.



2.6 A/V Output Setting

- **TV Type** : Select the TV type.(PAL/NTSC/Auto) In Auto mode, the STB automatically selects NTSC or PAL according to the service being displayed.
- **TV Aspect Ratio** : Select the aspect ratio of TV which is connected to STB.(4:3/16:9). This option controls the settings available in the Display Format option.
- **Display Resolution** : Select the Display Resolution you wish to use using the **ARROW** or **OK** buttons. You can also change the resolution with the **Resolution** button of the RCU. Each time you press the **Resolution** button, the resolution changes in the following sequence:

576i > 576p > 720p > 1080i



NOTE : Please note that your TV may not be able to display all Display Resolutions. In case of **HDMI**, your TV can display all resolution that your TV can support. It is possible that your TV may not display anything with 576i selected, because some HDTVs do not support 576i on HDMI.

- **Display Format** :
In the case of a 4:3 ratio TV set, You can select **Letter Box** or **Pan&Scan**. In the case of a 16:9 ratio TV set, You can select **Pillar Box** or **Full Screen**.
 - **16:9 Display format on 4:3 TV set**
Letter Box : You can see the full 16:9 video, but top and bottom edges of your TV screen display black horizontal Bars.
Pan&Scan : The picture is displayed using the full screen of your 4:3 TV screen, but the left and right sides of the original picture cannot be displayed.
 - **4:3 Display format on 16:9 TV set**
Pillar Box : You will see the full 4:3 video, but left and right sides of your TV screen display black vertical Pillars.
Full Screen : The picture is displayed in full on your 16:9 TV screen, but will be scaled to fit the screen the video will be distorted.
- **Video Output Mode** : According to Display Resolution, you can select the **Video Output Mode**.
 - **In case of More than 576p(HD)** : The 'RGB' output will be disabled automatically. You can select Video Output Mode (**CVBS, YPbPr, YC**).
 - **In case of 576i(SD)** : The 'YPbPr' output will be disabled automatically. You can select Video Output Mode (**CVBS, RGB, YC**).
- **Sound Mode** : Set the audio mode from RCA jack, optical SPDIF and HDMI.(**Stereo/Mono/Left/Right**).

3. Installation

3.1 Dish Setting

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

- **Satellite** : Select the satellite which you adjust.
 - Press the **LEFT/RIGHT ARROW** buttons to select the satellite.
 - If you press **OK** button, satellite list will be displayed.
 - Select the desired satellite.
 - If the desired satellite is not listed then select User Defined.
- **Tuner Connection** : You can set connection type used to connect the Tuner and LNB.
 - **Separate** : Set the connection type option to '**Separate**', if the each tuner is connected to a different LNB. This Separate connection is used, when each of the two tuners is connected to a different LNB. Due to the independent & separate connections between two Tuners & LNBs, users can watch all the services scanned by one tuner(1), while the other tuner(2) is used by the recording process.
 - **Loop-Through** : Set the connection type option to '**Loop-Through**', if you have connected the **LNB OUT_1** and **LNB IN_2** with a loop-through cable. This connection is used when the Loop-through output of the Tuner(1) is connected to the input of Tuner(2). This is the way to use & activate both tuners when you have only 1 LNB with on your dish. However, this will limit the possible tuning range (Satellite & Polarization) of the 2nd tuner, while the 1st tuner is being used for its recording process (because the input signal of 2nd tuner is dependent of the signal which the 1st tuner is tuned to). If using one Satellite and one Polarity only this will not cause any issue.

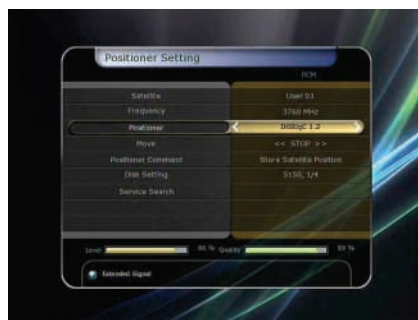


***NOTE** : Users should make the appropriate connection by choosing the right tuner connections between the Loop-Through and Separate connections. Due to the difference of these two connections, incorrect Tuner connection settings may cause the lack of signal reception. We strongly recommend consulting professional service personnel if in doubt.*

- **Tuner** : Select the tuner which you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' on the menu(Installation-Dish Setting-Tuner Connection), this menu(Tuner) will be disabled automatically.
- **Frequency** : Select frequency at which you want to check the signal.
- **LNB Power** : Select the LNB power.
- **LNB Type** : Select the LNB type.
- **LNB Frequency** : Select the L.O. frequency of the LNB that is on your dish.
 - Use the **LEFT/RIGHT ARROW** buttons to select the LNB frequency.
 - If the required LNB frequency is not listed, then enter the frequency manually using the **NUMERICAL** buttons.
 - If you select a Universal LNB type, two L.O. frequencies are supported at the same time. The LNB 22KHz setting is disabled because the 22KHz switch tone is use to switch between the two L.O. automatically.
- **LNB 22KHz** : When you use a dual LNB or two antennas connected to a 22 KHz tone switch, use the 22 KHz tone switch to the select the appropriate LNB.
- **DiSeqC SW** : If you use a **DiSeqC 1.0** or **DiSeqC 1.1** switch, select one of the DiSeqC inputs.
- **Service Search** : Press **OK** button to move to Search menu directly.

3.2 Positioner Setting

- **Satellite** : Select the satellite which you want to search.
 - Use the **LEFT/RIGHT ARROW** buttons to select the satellite.
 - If you press the **OK** button, the satellite list will be displayed.
 - Select the desired satellite.
 - If the desired satellite name is not listed then select User Defined.
- **Tuner** : Select tuner that you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' in Dish Settings (*Installation-Dish Setting-Tuner Connection*), this menu(Tuner) will be disabled automatically.
- **Frequency** : Select the frequency for which you want to check the signal.
- **Positioner** : Select the positioner.
 - **None : (No Positioner)**
 - **Using DiSEqC 1.2 :**
 - Move** : To move the dish, press **LEFT/RIGHT** button.
 - Fine Move** : To move the dish in fine increments, press **LEFT/RIGHT ARROW** button.
 - Step** : Set to positioner steps such as 1, 2, 3, 4
 - Positioner Command** : To use various positioner commands, press the **OK** button. Then, the available positioner commands will appear.
 - **Using USALS :**
 - Move** : To move the dish, press **LEFT/RIGHT** button.
 - Fine Move** : To move in fine increments, press **LEFT/RIGHT ARROW** button.
 - Step** : Set to positioner steps such as 1, 2, 3, 4
 - Dish Longitude** : Enter the longitude using the **NUMERICAL** buttons.
 - Dish Latitude** : Enter the latitude using the **NUMERICAL** buttons.
 - Go To** : Press the **OK** button to rotate the dish to the configured position.
- **Dish Setting** : Press the **OK** button to go to the *Dish Setting* menu directly.
- **Service Search** : Press the **OK** button to go to the *Service Search* menu directly.



3.3 Service Search

You can select the following search modes.

- **Auto Mode** :
 - **Satellite** : Press the **OK** button to select the target satellite for the search.
 - **Tuner** : Select tuner what you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' in the Dish Settings (*Installation-Dish Setting-Tuner Connection*), this menu(Tuner) will be disabled automatically.
 - **Search Type** : Select the search type.
 - **Network Search** : You can select Off or On. When you select 'On', you may find more transponders by referring to the NIT broadcast during the search, if there is frequency information of other transponders, it searches the other transponders in addition to the transponders already defined.
 - **Dish Setting** : Press the **OK** button to go to the Dish Setting menu directly.
 - **Positioner Setting** : Press the **OK** button to go to the Positioner Setting menu directly.
 - **Start Search** : Press **OK** button to start the search.



● **Manual Search Mode :**

- **Satellite :** Press the **OK** button to select the target satellite for the search.
- **Tuner :** Select the tuner what you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' in the Dish Settings(*Installation-Dish Setting-Tuner Connection*), this menu(Tuner) will be disabled automatically.
- **Frequency :** Select the frequency you wish to search.
- **Symbol rate :** Enter the symbol rate using the **NUMERICAL** buttons.
- **Polarity :** Select the polarity. (**Vertical/Horizontal**)
- **Search Type :** Select the search type.
- **Network Search :** You can select Off or On. When you select 'On', you may find more transponders by referring to the NIT broadcast during the search, if there is frequency information of other transponders, it searches the other transponders in addition to the transponder that the user defines.
- **Dish Setting :** Press the **OK** button to go to the Dish Setting menu directly.
- **Start Search :** Press the **OK** button to start the search.



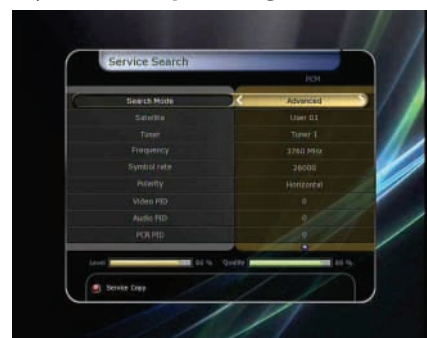
● **Blind Search Mode :**

- **Satellite :** Press the **OK** button to select multiple satellites.
- **Tuner :** Select the tuner what you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' in the Dish Settings(*Installation-Dish Setting-Tuner Connection*), this menu(Tuner) will be disabled automatically.
- **Frequency :** Set **Auto** to search the whole frequency range the LNB covers, Set **Manual** to search only a limited frequency range.
- **Polarity :** Select the polarity. (**All Polarity/Vertical/Horizontal**)
- **Search Type :** Select the search type.
- **Dish Setting :** Press the **OK** button to go to the Dish Setting menu directly.
- **Start Search :** Press the **OK** button to start the search.



● **Advanced Search Mode :**

- **Satellite :** Press the **OK** button to select the target satellite for the search.
- **Tuner :** Select tuner what you want to set (**Tuner 1/ Tuner 2**). If you set '**Loop-Through**' in the Dish Settings(*Installation-Dish Setting-Tuner Connection*), this menu(Tuner) will be disabled automatically.
- **Frequency :** Select the frequency you wish to search.
- **Symbol rate :** Enter the symbol rate by using the **NUMERICAL** buttons.
- **Polarity :** Select the polarity. (**Vertical/Horizontal**)
- **Video PID :** Enter the video PID using the **NUMERICAL** buttons.
- **Audio PID :** Enter the video PID using the **NUMERICAL** buttons.
- **PCR PID :** Enter the video PID using the **NUMERICAL** buttons.
- **Start Search :** Press the **OK** button to start the search.

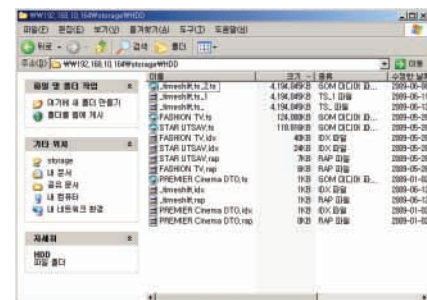
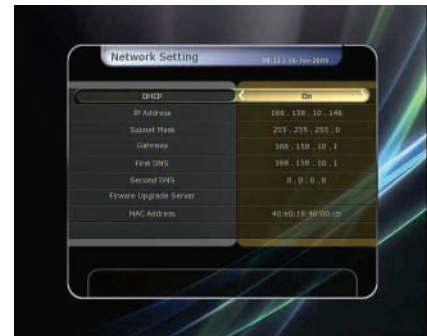


3.4 Network Setting

To use the Network, you have to set up your network configuration. When STB and PC are connected via network, you can copy and stream files from the STB and its storage devices.

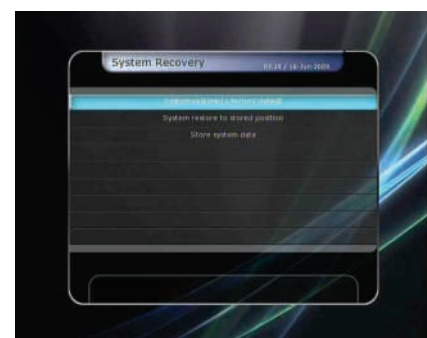
NOTE : *If you use the DHCP function of a router, you can easily set the network configuration.*

- **DHCP :** You can use dynamic host configuration protocol to get all network configuration information from the router.
 - **If you select 'On' :** You will get the network configuration from the router. In this case, the other items(**IP Address, Subnet Mask, Gateway, First DNS, Second DNS**) are set automatically and you don't have to configure them manually.
 - **If you select 'Off' :** You have to input the network configuration manually.
- **IP Address, Subnet Mask, Gateway, First DNS, Second DNS :** You can input the address with the **OK** button, **NUMERICAL** buttons and the **LEFT/RIGHT** buttons. You can move to the next item of the Subnet Mask with the **DOWN** button and you can configure the following items in the same way.
- **Firmware Upgrade Server :** This feature is not currently supported.
- **MAC Address :** This will display the MAC address of the Ethernet interface. MAC Addresses are unique hardware addresses and can not be changed.
- **Check files on you STB via the network from your PC.**
 - Check IP Address of STB in the Network Setting menu.
 - Press the Enter button on your PC, after entering the IP Address in your web browser.
Ex.) \\168.158.10.146\storage
 - You can see the drives of the STB i.e. HDD, USB1 and USB2 in the Storage folder.
HDD : SATA HDD (internal HDD or external-SATA)
USB1 : Front USB Storage Device
USB2 : Rear USB Storage Device



3.5 System Recovery

- **System restore to factory default :** This menu allows you to restore the factory set values in case the user has encountered some problems after changing service data and others settings, perhaps in error. Press the **OK** button to erase all services and restore to default settings.
- **System restore to stored position :** This menu allows you to restore the stored values including service data and system parameters. Press the **OK** button to restore all data.
- **Store system data :** If you want to use system parameters and service data in the future, this menu allows you to store current state. Press the **OK** button to store current state.



3.6 System Information

This menu displays general information about the hardware and software version of your receiver.

4. Utilities

4.1 Calculator

To use a calculator, press the **OK** button.



4.2 Calendar

To display the calendar, the press **OK** button. Use the **ARROW** buttons to choose the date. If you press the **PAGE UP/DOWN** button, you can see the past/next month in the calendar.



4.3 CAS (Conditional Access System)

- **Smart Card Slot**

- **Conax smart card menu**

To watch scrambled services, you need to have a appropriate Conax smart card from the service provider. Insert a valid smart card into smart card slot. The message 'Smart card Initializing...' will appear on the screen. After the message disappears, you can watch the service you want.

- **Smart card information**

You can view the current status of a smart card. Select the slot what you want to view the status of using the **ARROW** buttons. And press the **OK** button.

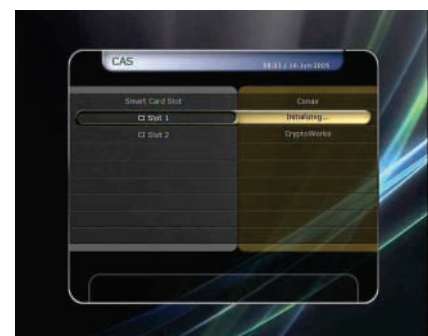


- **CAM Initializing**

To watch scrambled services, you need to have a Common Interface Conditional Access Module(CAM) and an appropriate smart card from the provider. Insert the CAM together with a valid smart card into a CI slot. The message of '**CI Initializing...**' will appear on the screen. After the message disappears, you can watch the service you want.

- **CAM information**

You can view the current status of a CAM. Select the slot you want to view using the **ARROW** buttons. And press the **OK** button. If a CAM is available, you can view it's information.



NOTE : The information displayed for each CAM may be different depending on the CAM.

Troubleshooting

Problem	Solution
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 the STB main power switch is 'ON' at the rear of the STB.
No Picture	<ul style="list-style-type: none"> ✓ See 'Does not display any message on the front panel' above. ✓ To match the STB system with your TV system(PAL/NTSC), press <i>V.Format</i> button until a picture is displayed. ✓ 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. ✓ Check the resolution that your TV supports, and set the proper resolution with RCU <i>Resolution</i> button to obtain a picture.
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.
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.
Remote Control does not operate	<ul style="list-style-type: none"> ✓ Point remote control directly towards the STB. ✓ Check and replace batteries.
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 or 22KHz 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 & Channel Decoder

Input Connector	F-type, IEC 169-24, Female
Loop through out	F-type, IEC 169-24, Female
Frequency Range	950MHz ~ 2150MHz
Input Impedance	75Ω, unbalanced
Signal Level	-65 to -25dBm
LNB Power	13/18VDC, max.400mA
22KHz Tone	(22±2)KHz, (0.6±0.2)V
DISEqC Control	V1.0/1.2/USALS Compatible
Demodulation	QPSK / 8PSK
Input Symbol Rate	2 ~ 45 Ms/s(QPSK of DVB-S) 2 ~ 45 Ms/s(QPSK of DVB-S2) 2 ~ 37 Ms/s(8PSK of DVB-S2)
FEC Decoder	1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7(DVB-S) 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9 and 9/10 (DVB-S2)

MPEG Transport Stream A/V Decoding

Transport Stream	H.264(MPEG-4 part 10, MPEG-4/AVC and H26L) MPEG-II ISO/IEC 13818-2/11172-2
Profile Level	MPEG-4/AVC MP@L4, MPEG-II MP@HL
Input Rate	Max. 15Mbit/s
Video Formats	4:3 Letter Box, 4:3 PanScan, 16 : 9
Video Resolution	720 x 576i, 720 x 576p, 720 x 480i, 720 x 480p 1280 x 720p, 1920 x 1080i
Audio Decoding	Dolby AC-3, AAC, MPEG-1 Layer 1,2 and 3
Audio Mode	Stereo/Joint stereo/Mono, Dolby AC-3
Sampling Rate	32KHz, 44.1KHz and 48KHz(According to input)

Main System

Main Processor	STi chipset
Memory	Flash-ROM : 32 Mbyte SDRAM : 192 Mbytes EEPROM : 128 bytes

Audio / Video & Data IN/OUT

TV SCART	RGB, Y/C, CVBS Video, Audio L, R Output
VCR SCART	CVBS Video, Audio L, R Output RGB Video input, CVBS Video, Audio L, R Input
RCA	CVBS Video Output, Audio L, R Output
Component	YPbPr Video Output
HDMI	Video & Audio Output
OPTICAL	AC-3 Dolby Digital (SPDIF)
RS-232C	9 pin D-SUB (Male) type, Transfer rate 115Kbps
USB	USB 2.0 Host Support (Front & Rear)

Front Panel

Slot	1 USB 2.0 Host port 2 Common interface & 1 Smart Card Slot
Display	VFD(Vacuum Fluorescent Display) - 12Digit
Buttons	7 Buttons(Standby, Menu, Select, CH UP/DOWN, Volume UP/DOWN)

Power Supply








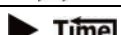
















Input Voltage	AC 100 ~ 250V, 50/60Hz
Type	SMPS
Power Consumption	Max. 60W
Standby Power	Max. 1W
Protection	Separate Internal Fuse & Lighting protection







Physical Specification

Size (W x H x D)	430mm X 60mm X 270mm
Weight (Net)	2.7 Kg (Excluding HDD)
Operating Temp.	0°C ~ +45°C
Storage Temp.	-10°C ~ +70°C

Code Table for Universal Remote Control Unit

1. Key Table

No	KEY NAME	TV	DVD	VCR
1				
2		V		
3			V	V
4		V	V	V
5		V		
6	V.Format			
7	SLEEP			
8	TV/RAD, Source	V		
9	Resolution			
10			V	V
11			V	V
12			V	V
13			V	
14			V	
15			V	V
16			V	V
17			V	V
18				
19		V		
20		V		
21		V		
22		V		
23	INFO			
24	RECALL			
25	MENU	V	V	
26	EXIT	V	V	
27		V	V	
28		V	V	
29		V	V	
30		V	V	
31	OK	V	V	
32				
33	FAV			
34				

No	KEY NAME	TV	DVD	VCR
35	VOL +	V		
36	VOL -	V		
37	CH +	V		V
38	CH -	V		V
39	EPG			
40				
41				
42				
43				
44	0	V	V	V
45	1	V	V	V
46	2	V	V	V
47	3	V	V	V
48	4	V	V	V
49	5	V	V	V
50	6	V	V	V
51	7	V	V	V
52	8	V	V	V
53	9	V	V	V
54				
55				
56	REV1			
57	REV2			
58	REV3			
59	REV4			
60	REV5			
61	REV6			

2. TV Brands

TV Brands	Code				
ADMIRAL	050	134			
AKAI	093	049	123		
ALBA	068				
ALBIRAL	116				
ALCATEL	022				
AMSTRAD	158	021			
ANAM	155	156	157		
ARC EN CIEL	028	039	043	145	081
ARISTONA	099	049	050	019	142
	149	078			
ARTHUR MARTIN	053	139	117	120	122
	123	125	128		
ASA	050	055	057	113	134
ATLANTIC	099	111			
AUDIOSONIC	054				
AUSIND	053				
AUTOVOX	099	144	055	019	057
	069				
BAIRD	083				
BASICLINE	006				
BAUR	011				
BEKO	023	049			
BLAUPUNKT	094	100	102	111	114
BRANDT	028	039	040	043	145
	081				
BRION VEGA	050				
BRUNS	048	050			
BSR	059	110	132		
BUSH	033	068	124	074	
CENTURY	098	101	050	079	136
CGE	016	101	124	079	132
	136				
CIHAN	065				
CLARIVOX	048	116			
CONDOR	099	111			
CONTEC	087				
CONTINENTAL EDITION	028	039	040	043	145
	081				
CROSLEY	101	050	109		
CROWN	147				
CTC CLATRONIC	046				

TV Brands	Code				
DAEWOO	089				
DECCA	099	060	063	115	118
DEGRAAF	036				
DIXI	049	090			
DRYNATRON	049				
DUAL	099	141			
DUAL-TEC	096	099	132		
DUMONT	046	050	057	073	
ELBE		016	116		
ELBIT	065				
ELCIT	046	097	103	050	109
	127	132			
ELMAN	046	132			
ELTA	090				
EMERSON	158	098	050		
ERRES	049	142			
EUROPHON	098	046	097	099	051
	115	132			
FERGUSON	146	040	041	150	057
	061	116	149		
FIDELITY	099	149			
FINLUX	034	046	053	055	057
	109	113	073	074	079
FISHER	015	048	050	052	109
	136				
FORGESTONE	149				
FORMENTI	099	053	109	111	125
FORTRESS	137				
FRABA	075				
FRONTECH	054				
FUJITSU	025				
FUNAI	054	059			
GBC	109	132			
GEC	099	060	109	115	134
	088				
GELOSO	103	109	132	134	090
GOLDSTAR	092	003	017	099	049
	075	076	077	090	152
GOODMANS	033	049	060	077	
GORENJE	066	136			
GREATZ	001	058	109	122	123
	128	129	130	134	

TV Brands	Code				
GRANADA	033	099	049	058	060
	142	115	125	134	
GRUNDIG	094	100	057	058	108
	112	114	082		
HANSEATIC	033	047	099	049	109
	139	111			
HANTAREX	097				
HEMMERMANN	127				
HIFIVOX	028	039	043	145	081
HINARI	158	033	045	143	090
HITACHI	014	033	034	036	099
	145	056	109	139	110
	067	117	132	134	084
	091	081	088		
HYPER	093	099			
IMPERIAL	016	101	124	079	132
	133				
INGELEN	001	058	109	122	128
	129	130	134		
INKEL	000				
INNO HIT	093	098	097	099	143
	077	090			
INTERFUNK	047	049	050	145	058
	109	142	123	128	129
	091				
IRRADIO	093	143	053	077	090
ITT	001	140	058	105	109
	122	123	128	148	129
	130	134	135	083	089
JVC	033	154			
KTV	099				
KAISUI	006				
KARCHER	006				
KENDO	098				
KENNEDY	144	019	109		
KORTING	050	059	111		
KRIESLER	099	049	050	019	142
	149	078			
LENOIR	099				
LOEWE OPTA	008	097	047	049	050
	115	072			
LOGIK	118	149			

TV Brands	Code				
LUMA	049	120	134		
LUXOR	058	139	117	120	123
	129	135	083		
McMICHAEL	088				
MEMOREX	090				
MAGNAFON	046	097	099	051	053
	115				
MARANTZ	049				
MATSUI	158	099	106	060	118
	068	134	090		
MAGNADYNE	046	097	103	050	109
	115	127	132		
METZ	094	050	114	133	
MINERVA	094	100	057	058	114
MISTRAL	149				
MITSUBISHI	033	035	047	049	050
	062	118	119	148	080
	138				
MIVAR	097	099	115	077	
MULTITECH	046	099	115	136	
MURPHY	134				
MAONIS	096	144	019	110	134
NATIONAL	042	104	109		
NEC	033	085			
NECKERMANN	099	050	139	120	136
NEI	049				
NIKKAI	060				
NOBLEX	015				
NOBLIKO	098	046	099	053	057
NOGAMATIC	028	039	043	145	081
NOKIA	001	140	058	105	109
	122	123	128	148	129
	130	134	135	083	089
NORDMENDE	028	032	039	043	145
	131	091	081		
OCEANIC	109	064	123		
ONCEAS	099				
OPTONICA	137				
ORION	158	059	118	068	127
	090				
OSAKI	060				
OSIO	077				

TV Brands	Code				
OSUME	087				
OTTO VERSAND	033	047	049	109	139
P.T ACTTRON	065				
PAEL	099	053			
PANASONIC	030	042	095	104	107
	109	121	126		
PATHE CINEMA	099	111	116	132	
PERDIO	060				
PHILCO	016	030	101	050	109
	124	079	132	136	
PHILIPS	009	010	013	018	024
	099	049	050	019	142
	148	149	078	088	
PHOENIX	099	053	109	111	125
PHONOLA	099	049	050	019	142
	149	078			
PIONEER	020	049	145	091	
PRANDONI-PRINCE	098	097	053	115	134
PREMIER	124				
PRINCE	098	097	053	134	
PROTECH	049	054			
PYE	099	049	050	019	142
	148	149	078		
QUASAR	046	097	051	053	077
QUELLE	047	099	100	049	053
	055	057	058	111	112
	113	114	118	123	073
	074	128			
RADIOLA	099	049	050	019	142
	149	078			
RADIOMARELLI	046	097	103	050	109
	062	127	132		
RANK	074				
RBM	074				
REDIFFUSION	062	123	134		
REX	096	144	019	141	110
	069	134			
ROBOTRON	048	050			
RTF	048	050			
SABA	028	031	032	037	039
	040	043	097	050	145
	115	120	086	091	081

TV Brands	Code				
SAISHO	158	099	118	119	068
	090				
SALORA	053	139	117	120	122
	123	125	128	135	083
SAMBERS	046	097	051	053	115
	077				
SAMPO	121				
SEG	046				
SEI	158	059			
SAMSUNG	015	026	099	054	077
	136	090	151	153	
SANYO	001	002	005	033	044
	048	060	113	118	071
	054		136		
SBR	049	142	148	149	088
SCHAUB LORENZ	001	058	109	122	123
	128	129	130	134	
SCHNEIDER	096	099	049	050	052
	019	141	109	142	125
	149	078	132		
SELECO	016	096	144	019	141
	110	069	134		
SHARP	033	087	137		
SIAREM	046	097	050	109	115
SICATEL	116				
SIEMENS	005	094	036	100	111
	114	087			
SIERA	099	049	050	019	142
	149	078			
SILVER	054				
SINGER	016	046	050	109	
SINUDYNE	158	046	050	059	109
	127				
SONOKO	049	090			
SONY	146	007	027	033	038
	118				
STERN	096	144	019	110	069
	134				
TANDBERG	133				
TANDY	099	060	137		
TASHIKO	002	033			

TV Brands	Code				
TATUNG	099	060	063	065	115
	118				
TEC	096	099	132		
TELEAVIA	028	039	040	043	145
	091	081			
TELEFUNKEN	028	041	145	150	086
	091				
TELETECH	090				
TELEVIDEON	099	053	109	111	125
TENSAI	049				
TOSHIBA	004	016	033	070	074
TRANS CONTINENTS	098	097	053	134	
THOMSON	012	028	032	039	040
	043	145	091	081	
THORN-FERGUSON	014	040	041	054	150
	057	061	116	149	086
TOCOM	029				
TRIUMPH	158				
UHER	052	111	125		
ULTRA VOX	098	046	099	050	109
	120				
UNIVERSUM	092	034	054	077	
UNIVOX	116				
VEGAVOX	079				
VOXSON	050	134			
WATSON	111				
WATT RADIO	046	099	051	109	116
	127				
WEGA	033				
WHITE WESTINGHOUSE	099	111			
YOKO	099				
ZANUSSI	096	144	019	110	069
	134				
ZOPPAS	096	144	019	110	134

3. VCR Brands

<i>VCR Brands</i>	<i>Code</i>				
AKAI	122	133	142	152	132
ALBA	108	120			
AMSTRAD	111				
ANITSCH	109				
ARC EN CIEL	142	156	152		
ARISTONA	145	131			
ASA	118				
AWIA	111	142			
BAIRD	142	133			
BAUER. BOSCH	114	143			
BRIONVEGA	141				
BUSH	108	120			
BLAUPUNKT	114	143	155	131	154
	140				
BRANDT ELECTRONIQUE	142	156	152		
C.EDISON	141				
CANON	114				
CAPEHART	120				
CGE	111	142	152		
CONTINENTAL EDISON	142	156	152		
CRAIG	100	113			
CURTIS MATHES	119				
DAEWOO	101	120	121		
DAYTRON	120				
DECCA	111	142			
DEGRAAF	103	106	111	145	118
DUAL	142	152			
DUMONT	103	111	118		
DYNATECH	111				
EMERSON	102	110	111	119	125
FERGUSON	142	159	130	152	134
	136				
FIDELITY	111				
FINLANDIA	103	118			
FINLUX	103	106	111	118	
FISHER	100	103	105		

VCR Brands	Code				
<i>FUNAI</i>	111				
<i>GE</i>	119				
<i>GENERAL</i>	114				
<i>GOLDSTAR</i>	104	162			
<i>GOODMANS</i>	108	111	146		
<i>GRAETZ</i>	141	142	156	150	152
	138				
<i>GRANADA</i>	103	105	118		
<i>GRUNDIG</i>	114	143	118	155	131
	153	154			
<i>HANSEATIC</i>	143				
<i>HARMAN-KARDON</i>	104				
<i>HIFIVOX</i>	142	156	152		
<i>HINARI</i>	102	108	124	127	
<i>HITACHI</i>	106	107	111	142	157
<i>IMPERIAL</i>	111				
<i>INGELEN</i>	142	156	152	138	
<i>INGERSOL</i>	127				
<i>ITT</i>	105	141	142	156	150
	152	133	138		
<i>JENSEN</i>	142				
<i>JVC</i>	142	156	160	130	152
	163				
<i>KENWOOD</i>	105	142	160		
<i>KRIESLER</i>	145	131			
<i>KUBA</i>	143				
<i>LLOYD</i>	111				
<i>LOEWE OPTA</i>	114	118	129	131	
<i>LOGIK</i>	108	127			
<i>LUXOR</i>	133	138			
<i>MAGNADYNE</i>	141				
<i>MAGNASONIC</i>	138				
<i>MAGNAVOX</i>	119				
<i>MARANTZ</i>	104	114	146	118	131
<i>MATUI</i>	110	125	127		
<i>MEMOREX</i>	100	103	105	111	145
<i>METZ</i>	114	143	131	154	137

VCR Brands	Code				
MGA	117				
MINERVA	155	154			
MINOLTA	106	107			
MITSUBISHI	160	117	149		
MTC	111	113			
MULTITECH	108	111			
MURPHY	111				
NAONIS	142	156	152		
NATIONAL	140				
NEC	104	142	160	152	
NECKERMANN	102	141	114	142	152
NOGAMATIC	142	156	152		
NOKIA	103	105	141	142	156
	150	152	133	138	
NORDMENDE	139	142	156	152	153
	135				
OPTONICA	145	146			
ORION	102	110	125	127	
OSAKI	111				
OTTO VERAND	143				
P. CINEMA	114				
PALLADIUM	141	114			
PANASONIC	123	151	140		
PATHE MARCONI	142	156	152		
PENTAX	106	107			
PERDIO	111				
PHILIPS	112	114	145	146	118
	129	131			
PHONOLA	114	145	118	129	131
PIONEER	160				
PORTLAND	120				
PROLINE	111				
PYE	114	145	118	129	131
QUARTZ	105				
QUELLE	102	144	154		
RADIOLA	145	131			
RADIOMARELLI	141				

VCR Brands	Code				
RCA	119				
REALISTIC	100	103	105	111	113
	145	146			
REX	142	156	152		
SABA	139	142	156	152	135
SAISHO	102	110	125	127	
SALORA	105	117			
SAMSUNG	113	119	132	161	
SANSUI	142	160			
SANYO	100	103	105	125	138
SBR	118	129			
SCHAUB LORENZ	141	142	156	150	152
	138				
SCHNEIDER	108	111	145	131	
SEI-SINUDYNE	127				
SELECO	142	156	152		
SENTRA	120				
SHARP	145	146	1105	148	
SHINTOM	108				
SIEMENS	114	143	155	131	154
	138				
SIERA	145	131			
SINUDYNE	127				
SONY	144	115	116	126	128
STERN	142	156	152		
STS	106				
SUNKAI	125				
SYLVANIA	111	117			
SYMPHONIC	111	117			
TASHIKO	111				
TATUNG	111	142			
TEAC	111	142			
TEKNIKA	111				
TELEAVIA	142	156	152		
TELEFUNKEN	142	156	152		
TENOSAL	108				
THOMSON	142	156	152		

VCR Brands	Code				
THORN-FERGUSON	139	142	159	130	152
	134	136			
TOSHIBA	101	142	156	117	158
	152				
TOTELEVISION	113				
UHER	142				
ULTRA VOX	141				
UNITECH	113				
UNIVERSUM	141	114	143		
URANYA	141				
VECTOR	104				
VICTOR	142	160			
VIDITAL	141				
WESTING HOUSE	141				
WARDS	119				
YAMAHA	104	142			
ZANUSSI	142	156	152		
ZENDER	152				
ZOPPAS	142	156			

4. DVD Brands





<i>DVD Brands</i>	<i>Code</i>				
AIWA	002				
AKAI	007	044			
ALBA	036				
ANAM	074				
ANSONIC	152				
AMES	051				
APEX	003	011	025	037	039
	044	047	048	054	040
AUDIOSONIC	044				
A-TREMD	061				
BROKSONIC	000				
BULE SKY	158	036			
BUSH	067	044	000	152	
CAT	036				
CLASSIC	051				
CELESTIAL	158				
CENTREX	158				
CINEULTRA	036				
CONIA	158				
COMBRIDGE AUDIO	088				
CROWN	044				
CYBERCOM	152				
CYBERRHOME	061				
DAEWOO	005	045	052		
DAEWOO INTERNATIONAL	036				
DEC	036				
DENON	041	050			
DENVER	036				
DENZEL	083				
DIGITREX	011	158			
DIK	152				
DK DIGITAL	152				
DRAGON	152				
DUAL	083	152			
ELTA	004	010	044		
ENZER	083				
EMERSON	013	019	032	067	
FISHER	015				
FUNAI	019	032			
GE	044	062			
GOLDSTAR	013	067			
GOLEMANS	044				
GO-VIDEO	012	016	021		

DVD Brands	Code				
GRADIENTE	008				
HARMAN/KARDON	023				
HITEKER	011	158			
HOHER	152				
HITACHI	001	035	004	070	067
	083				
INTEGRA	057				
JEKEN	036				
JVC	014	028	067		
KENWOOD	036	041			
KENDO	036				
KISS	083				
KLH	044				
KONKA	042	049	056	063	
KOSS	008				
LASONIC	006				
LECSON	088				
LENCO	036	152			
LENOXX	044				
NEXIA	036				
LIFETEC	152				
LG	013	072	067	059	
LUXMAN	004	070			
MAGNAVOX	026	027			
MARANTZ	013	026	027		
MDS	036				
MEDION	152				
MEMOREX	018				
MICROSOFT	020				
MICROSTAR	152				
MINTEK	044				
MITAUBISHI	055				
MONYKA	083				
MUSTEK	051				
NAD	013	065			
NAKAMICHI	058				
NORDMENDE	152				
MBO	044				
NEUFUNK	083				
ONKYO	056				
OMNI	044	036			
OPTIMUS	001				
ORITRON	008				
PALSONIC	158	067			
PANASONIC	041	068			

DVD Brands	Code				
PACIFIC	018	152			
PHILIPS	026	027	064	045	
PHONOTREND	036				
PIONEER	001				
PROLINE	008	158	085		
PROSCAN	062				
PROSONIC	036				
RADIOSHACK	038	066	067		
RAITE	083				
REC	067				
REOC	053				
REVOY	036				
RCA	038	044	062	066	067
ROADSTAR	067	044	036		
ROTEL	067				
SAMSUNG	012	021	070	071	
SAMPO	022				
SANSUI	000				
SANYO	015				
SCOTT	158				
SEG	029	083			
SILVASCHNEIDER	152				
SHARP	020	067			
SHANGHAI	158				
SHERWOOD	009	073			
SHINCO	044				
SINGER	044				
SM ELECTRONIC	044				
SONY	033	034	004	070	
SOUNDWORKS	088				
SYLVANIA	019	032			
SYLMPHONIC	019	032			
SVA	158				
TEAC	001	067			
TECHNICS	041	068			
TEASAI	044				
TEVION	018	031	046	053	060
THETA DIGITAL	001				
TOSHIBA	000	017	024	026	
TOKAI	083				
UMAX	044				
UNITED	035				
UNIVERSUM	067				
VOXSON	152				
WELKIN	152				

<i>DVD Brands</i>	<i>Code</i>				
<i>WESDER</i>	036				
<i>WHARFEDALE</i>	059	085	088		
<i>WINDY SAM</i>	040	070			
<i>XMS</i>	067				
<i>YAMAHA</i>	041	043			
<i>YAMAKAWA</i>	030	083			
<i>ZENITH</i>	068	013	069	067	

Menu Map

Main Menu	
 <p>System Tools</p>	<ol style="list-style-type: none"> 1. Storage Manager 2. Timer Manager 3. Service List Manager 4. Data Transfer
 <p>Configuration</p>	<ol style="list-style-type: none"> 1. Recording Option 2. Parental Control 3. UI Setting 4. Time Setting 5. Language Setting 6. A/V Output Setting
 <p>Installation</p>	<ol style="list-style-type: none"> 1. Dish Setting 2. Positioner Setting 3. Service Search 4. Network Setting 5. System Recovery 6. System Information
 <p>Utilities</p>	<ol style="list-style-type: none"> 1. Calculator 2. Calendar 3. CAS