High Definition DIGITAL VIDEO RECORDER

OWNER'S MANUAL

MODELS: LST-5402P
LST-5403P

Before connecting, operating or adjusting this product, please read this owner's manual carefully and completely.

Safety Precautions







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



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC 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 APPLIANCE.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT AND FULLY INSERT.

CAUTION

DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY WITHOUT WRITTEN AUTHORIZATION FROM LG ELECTRONICS CORPORATION. UNAUTHORIZED MODIFICATION COULD VOID THE USER'S AUTHORITY TO OPERATE THIS PRODUCT.
THIS EQUIPMENT IS INTENDED TO RECEIVE AND DECODE SIGNALS TRANSMITTED ACCORDING TO DVB AND IS INTENDED TO BE USED WITH AN APPROPRIATE ANTENNA AND DISPLAY DEVICE THAT YOU MUST PROVIDE.

CAUTION:

- The appliance is not intended for use by young children or infirm persons without supervision.
- Young Children should be supervised to ensure that they do not play with appliance.
- If the appliance is supplied from a cord extension set or an electrical portable outlet device, the cord extension set on electrical portable outlet device must be positioned so that it is not subject to splashing or ingress of moisture.

About the internal hard disk drive

The internal hard disk drive (HDD) is a fragile piece of equipment. Please use the recorder following the guidelines below to protect against possible HDD failure or to protect against accidental loss.

- Do not move the recorder while it is on.
- Install and use the recorder on a stable, level surface.
- Do not block the rear vent/cooling fan.
- Do not use the recorder in excessively hot or humid places, or in places that may be subject to sudden changes in temperature. Sudden changes in temperature can cause condensation to form inside the recorder. This can be a cause of HDD failure.
- While the recorder is switched on, do not unplug from the wall socket or switch the electricity off from the breaker switch.
- Do not move the recorder immediately after switching it off. If you need to move the recorder, please follow the steps below:
  1. After the message POWER OFF is shown in the display, wait at least two minutes.
  2. Unplug from the wall socket.
  3. Move the recorder.
- If there's a power failure while the recorder is on there is a chance that some data on the HDD will be lost.
- The HDD is very delicate. If used improperly or in an unsuitable environment, it is possible that the HDD will fail after a few years of use. Signs of problems include playback unexpectedly freezing and noticeable block noise (mosaic) in the picture. However, sometimes there will be no warning signs of HDD failure.
  If the HDD fails, no playback of recorded material will be possible. In this case it will be necessary to replace the HDD unit.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS INSTALLATION AND OPERATING GUIDE AND THOSE MARKED ON THE UNIT. RETAIN THIS GUIDE FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.
This unit does not contain any parts that can be repaired by the user.

DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. **Read these instructions.** - All these safety and operating instructions should be read before the product is operated.

2. **Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.

3. **Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.

4. **Follow all instructions.** - All operating and use instructions should be followed.

5. **Do not use this apparatus near water. –** For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; near a swimming pool; etc.

6. **Clean only with dry cloth. –** Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.

7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** - Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product, and to protect it from over- heating. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided and the manufacturer's instructions have been adhered to.

8. **Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**

9. **Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.**

10. **Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**

11. **Only use attachments/accessories specified by the manufacturer.**



12. **Use only the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.**

13. **Unplug this apparatus during lightning storms or when unused for long periods of time.**

14. **Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**

Table of Contents

INTRODUCTION

Safety Precautions 2
IMPORTANT SAFETY INSTRUCTIONS 3
Table of Contents 4
Front Panel Controls 5
and Display Window 6
Remote Control Key Functions 7
Unpacking the unit and
Accessories/Connection Overview. 8
Connection Panel Overview 9

INSTALLATION

Connections 10-16
Antenna Connections. 10
Analogue Monitor Connections. 11
HD Monitor Component (YPbPr) Connections . . 12
HD Monitor RGB Connections 13
HD Monitor HDMI-HDTV Connections 14
VCR Connections 15
Amplifier (Receiver) Connections 16
Setting the Display Format 17

MENU OPERATION

Initial Settings 18
General Operation 18
Setup Menu Options. 19-20
Auto Programming. 19
Program Edit 19
Signal Strength 20
HDD Format 20
Audio Menu Options 21
Audio Option 21
Digital Audio Output. 21
Special Menu Options 22-23
Screen Type 22
Aspect Ratio 22
Clock Set. 23
Caption 23
Lock (Parental Control) Menu Options 24-26
Lock System 24
Change PIN. 24
Channel Block 25
Parental Guidance 26
HDR Menu Options. 27-29
Program List 27
Timer Record List. 28
Timer Record List Settings, General Operation . . 28
Timer Record. 29

NORMAL OPERATION

Information Displays 30-31
Program Banner Display 30
Program Information Display 31
Program Guide 32
Normal Operation 33
Program Selection 33
Volume Adjustment 33
Recording Setup Options. 34-35
Normal Recording 34
Recording Reservation using
TIMER RECORD button. 35
Dual Recording features. 35
Playback Options 36
Timeshift (Pause, Live TV/Playback) Setup
and Operation 37
To start timeshift playback 37
To stop timeshift playback 37
Editing a recorded program. 38-41
Naming a Program. 38
Moving a Program to Another Folder 38
Deleting a Program 39
Saving a Part. 40
Divide One Title Into Two 40
Editing folder 41
Teletext Operation 42
Special Features 43

REFERENCE

Programming the Remote Control to Operate
the TV. 44
Remote Control Codes for TVs 45-46
Troubleshooting 47
Specifications 48

About the symbols for instructions

⚠ Indicates hazards likely to cause harm to the unit itself or other material damage.

Indicates special operating features of this unit.

Indicates tips and hints for making the task easier.

Manufactured under license from Dolby Laboratories. Dolby, and the double-D symbol are trademarks of Dolby Laboratories. Confidential unpublished works. Copyright 1992-1997 Dolby Laboratories. All rights reserved.

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

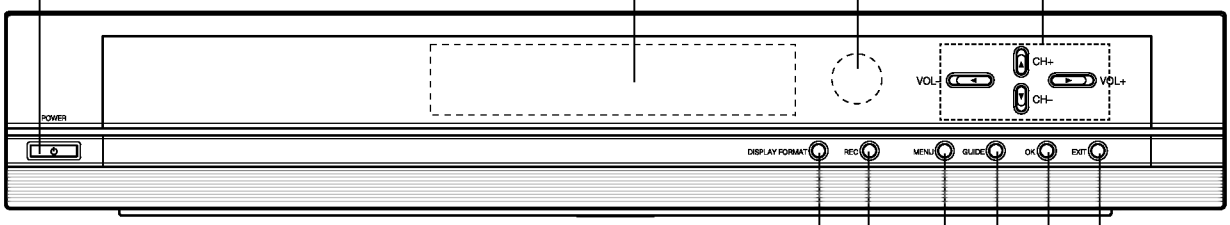
Front Panel Controls

Arrow Buttons (▲ / ▼ / ◄ / ►)
Allows you to navigate on-screen menus and to adjust the system settings and preferences. Use the arrow keys to move to a menu option and then use the ◉ (OK) button to access it.
If no menu is displayed,the LEFT/RIGHT arrows control the volume setting and the
UP/DOWN arrows select programs.

POWER
Turns the unit on or off.

Remote Control Sensor
Receives signals from the remote control.

Display Window



DISPLAY FORMAT
Sets the output resolution to 1080i, 720p, 576p, or 576i formats and chooses the correct display format for your TV or monitor. (Refer to page 17.)

RECORD
Records the viewing program.

MENU
Shows the main menu on the screen. You can return to normal viewing by pressing the EXIT button.

GUIDE
Shows the Program Guide on the screen.
You can return to normal viewing by pressing the EXIT button.

OK
If the main menu is displayed, pressing the OK button will activate the highlighted MENU option. If the OK button is pressed while you are in normal viewing, the channel banner will be displayed.

EXIT
Clears all on-screen displays and returns to normal viewing from any menu.

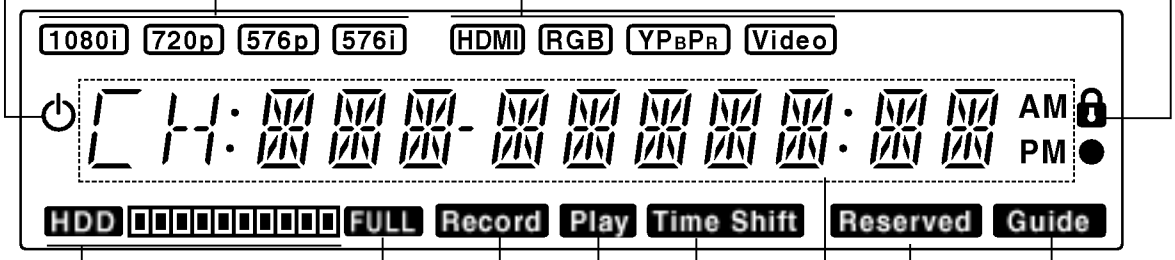
Display Window

Standby indicator
Lights when the unit is turned off.

Resolution indicators
Indicates the output resolution.

Connection indicators
Indicates the output connection.

Lock Indicator
Lights if the current channel or program is locked.



Hard Disk Indicator
Indicates hard disk space used.

Disk Full Indicator
Lights when all the disk space is used.

Record Indicator
Lights when the unit is recording.

Play Indicator
Lights during playback.

Time Shift Indicator
Lights when the unit is timeshifting.

Status Indicators
Indicate channel number, program name, etc.

Reserved Indicator
Lights when the unit is in timer recording or a timer recording is programmed.

Guide Indicator
Lights when the unit shows the Program Guide.

Remote Control Key Functions

STB
Selects STB (this unit) operational mode on remote control.

INPUT
Selects the TV signal source (Tuner or AUX A/V input). Only relevant when controlling other device.

PIP
Shows PIP and Move PIP positions.

PIP PR+/-
Selects the PIP program.

SLEEP
Set up sleep timer.

SWAP
Change from Main program to PIP program.

TV/RADIO
Switches between TV and Radio modes.

AUDIO
Selects program's audio language options if available.

MUTE
Pauses the audio temporarily. That is, volumes on/off temporarily.

VOL (Volume) (+/-)
Increases / decreases sound level.

PR (Program) (+/–)
Selects a memorized program.

INFO
Shows current station and program information on screen.

FAV
Tunes to your favorite program.

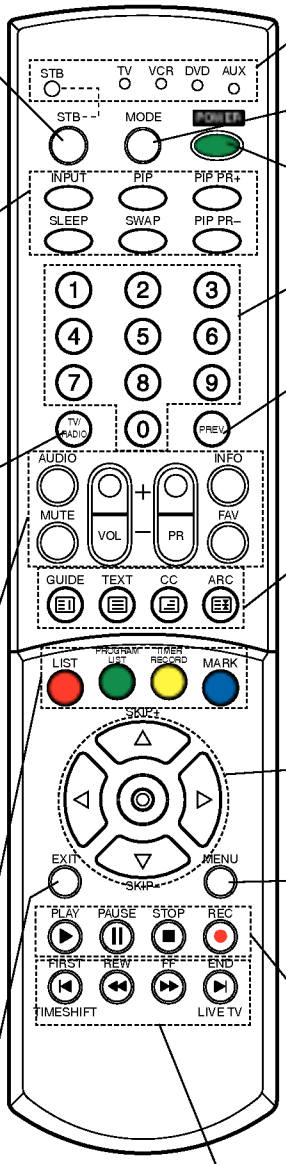
LIST
Displays the program list.

PROGRAM LIST
Displays the recorded program list.

TIMER RECORD
Display the timer record.

MARK
Choose the part of recorded program.

EXIT
Removes all on-screen displays and returns to TV viewing from any menu.



Mode indicator
Indicates operational mode of remote control.

MODE
Selects operational mode for remote control.

POWER
Turns the unit ON and OFF.

Numbers
Chooses channels and enters programming information.

PREV.
Returns to the last channel viewed.

GUIDE
Displays the Program Guide.

TEXT
Switches between teletext mode and normal TV viewing.

CC
Selects Closed Caption mode if available.

ARC
Changes the picture aspect ratio.

Arrow Buttons (▲ / ▼ / ◄ / ►), SKIP + / -
Selects options in a menu.
Smart skip in trick play mode.

◉ (OK)
Acknowledges menu selection.

MENU
Accesses or closes main menu.

PLAY
Starts playback.

PAUSE
Pauses playback.

STOP
Stops playback or recording.

REC
Instant record in viewing program.

FIRST / TIMESHIFT
Returns to the first position of current playback.
Activates pause live tv/playback (timeshift) for live TV and marks any point during timeshift and playback.

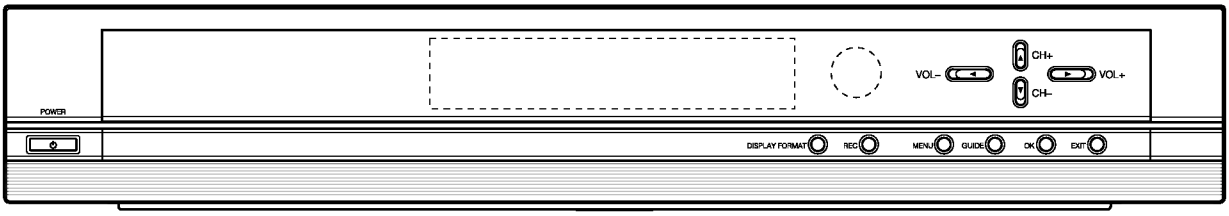
END / LIVE TV
Moves to the end point of a program during playback or returns to the current TV program live broadcast during pause timeshift.

REW
Rewinds at 5 different speeds up to 300 times the speed of normal playback.

FF
Fast Forwards at 5 different speeds up to 300 times the speed of normal playback.

Unpacking the unit and Accessories/Connection Overview

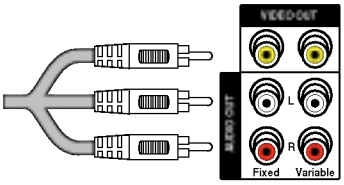
Make sure you have received all the accessories listed below with the High Definition DIGITAL VIDEO RECORDER

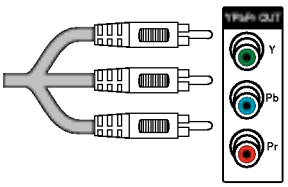


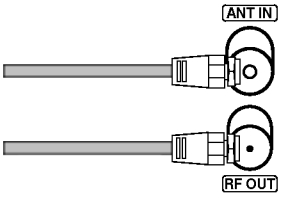
High Definition DIGITAL VIDEO RECORDER
The High Definition DIGITAL VIDEO RECORDER is capable of receiving signals from over-the-air antenna sources and sending the signals to your TV.

Included with the unit are the following accessories.

Audio Cable	Video Cable
Component (YPbPr) Cable	RF Cable
Remote Control	2 AA Batteries





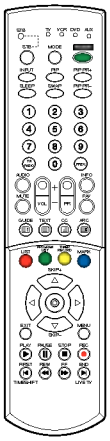


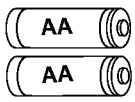
Audio/Video Jacks and Cables
The Audio/Video jacks provide excellent picture and sound quality. They are used for making most Audio/Video connections between components. The Audio/Video jacks may be color coded (yellow for video, red for right audio, and white for left audio). If your component has only one input for audio (mono), connect it to the left (white L/mono) audio jack on the unit.

Component Out Jacks and Cables
Component Cables are used to connect the unit to an industry standard YPbPr compatible HD Monitor (green for Y, blue for Pb, and red for Pr). Remember to connect the left and right audio cables. The YPbPr Component jacks carry only the picture signals, not the sound.

RF OUT Jack, and RF Cable
RF OUT provides an RF connection between the unit and the TV and provides the signal of ANT IN jack to TV.

Remote Control
In addition to the unit, the remote control can be programmed to control many other devices.





Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.
- **Distance:** About 7 m from the front of the remote sensor.
- **Angle:** About 30° in each direction of the front of the remote sensor.

Remote Control Battery Installation

Remove the battery cover on the rear of the remote control, and insert two batteries (size AA) with
⊕ and ⊖ aligned correctly. Reinstall cover.

⚠Caution
Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).

Connection Panel Overview

ANT IN
Connect to HDTV signal source; external/internal antenna.

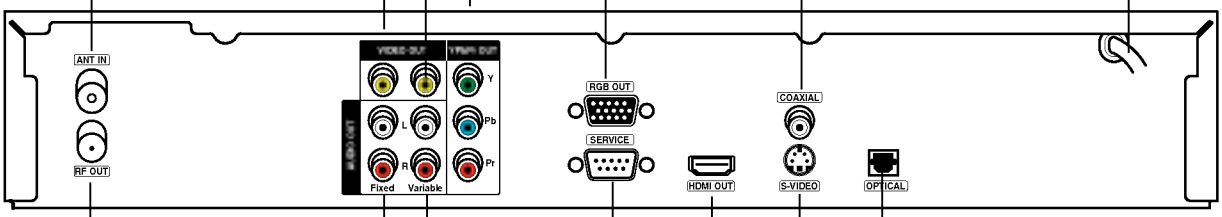
VIDEO OUT
Connect to a TV with video inputs.

YPbPr OUT
Connect to a TV with YPbPr inputs.

RGB OUT
Connect to a TV with RGB-DTV inputs.

COAXIAL (Digital audio out jack)
Connect to digital (coaxial) audio equipment.

AC Power Cord
Plug into the power source.



OPTICAL (Digital audio out jack)
Connect to digital (optical) audio equipment.

S-VIDEO OUT
Connect to a TV with S-Video inputs.

HDMI OUT
Connect to a TV with HDMI connector.

AUTHORIZED SERVICE ONLY
Is used only for authorized service purposes.

Variable "volume" AUDIO OUT (Left/Right)
Connect to a TV, amplifier, receiver or stereo system.
You can adjust the volume of this audio out on HD DVR.

Fixed "volume" AUDIO OUT (Left/Right)
Connect to a TV, amplifier, receiver or stereo system.
You cannot adjust the volume of this audio out on HD DVR.

RF OUT (Analogue only)
RF output to TV 's "Antenna In" jack or other devices.

⚠

Do not touch the inner pins of the jacks on the rear panel.
Electrostatic discharge may cause permanent damage to the unit.

Connections

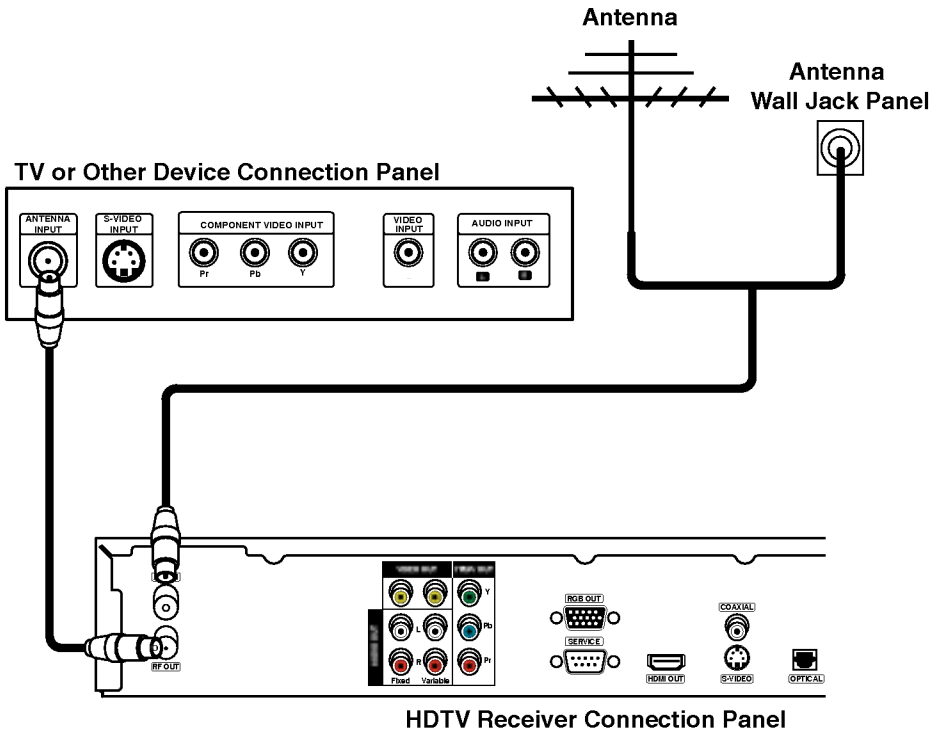
Antenna Connections

1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack.
Contact local Antenna Installer if signal is too strong.

2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable.



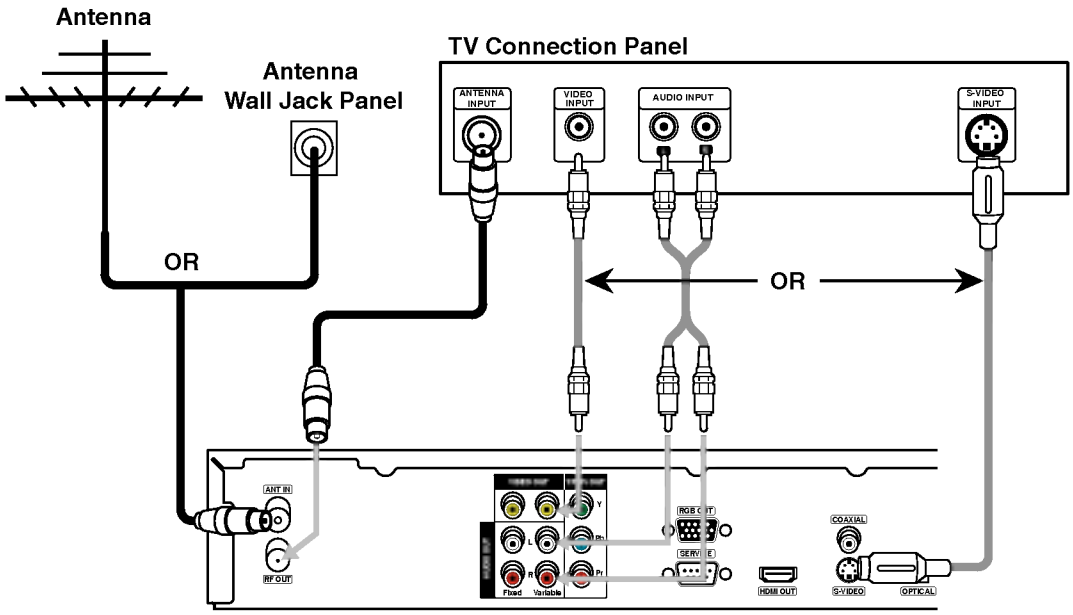
HDTV Receiver Connection Panel

Connections (Continued)

Display Formats Overview

- The unit offers various display formats and multiple video outputs.When the HDTV Tuner is connected to A/V systems, the HDTV Tuner can provide video signal formats 1080i, 720p, 576p, and 576i.
- 1080i, 720p, 576p, and 576i modes are available for Component video (YPbPr)outputs.
- 1080i, 720p, and 576p modes are available for RGB and HDMI outputs.
- 576i mode is available for VIDEO, S-VIDEO, and COMPONENT VIDEO outputs.
- The HDTV Tuner has two digital audio outputs;Dolby Digital 5.1 and PCM.The HDTV Tuner sends out a digital audio signal to OPTICAL and COAXIAL audio outputs when digital broadcasts are being received by the HDTV Tuner.

Analogue Monitor Connections



HDTV Receiver Connection Panel

1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

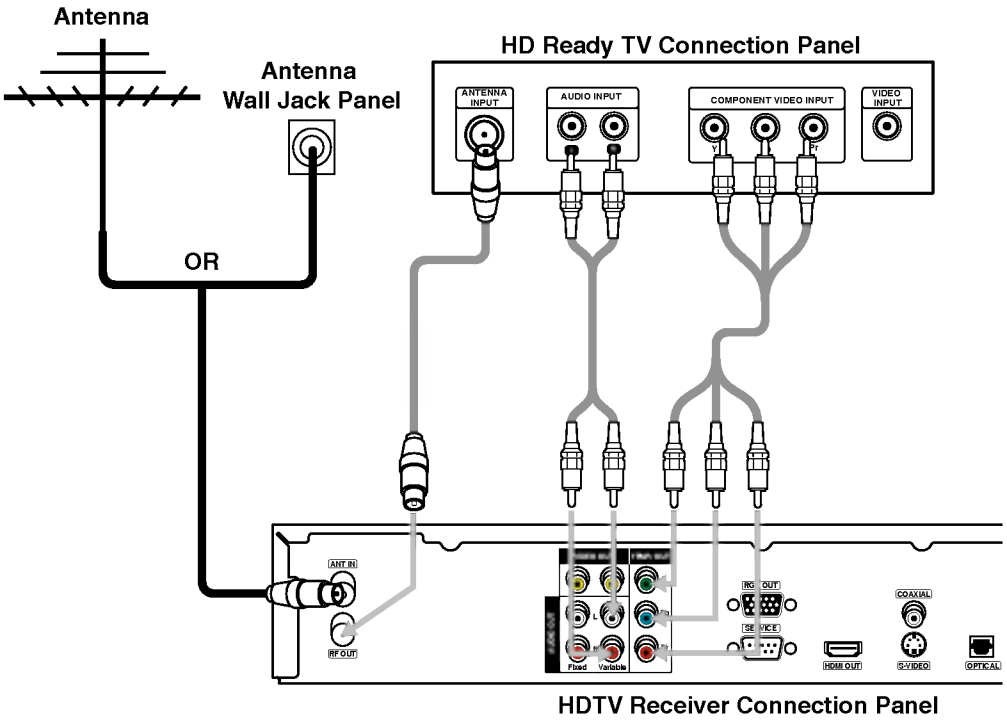
Note
There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack. (Refer to page 10.)

2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

3 Connect the “AUDIO OUT” and “VIDEO OUT” jacks on the unit to the “A/V IN” jacks on your TV using RCA-type cables. If your TV is equipped with an S-Video jack, use the S-VIDEO OUT jack. (The Output Selection must be set to YPbPr, refer to Display Format Setup on page 17.)

Note
When using Composite VIDEO OUT (yellow connector) or S-video outputs from the unit, MENU will only appear and operate if 576i format is selected.

HD Monitor Component (YPbPr) Connections



HDTV Receiver Connection Panel

1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

Note
There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack. (Refer to page 10.)

2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

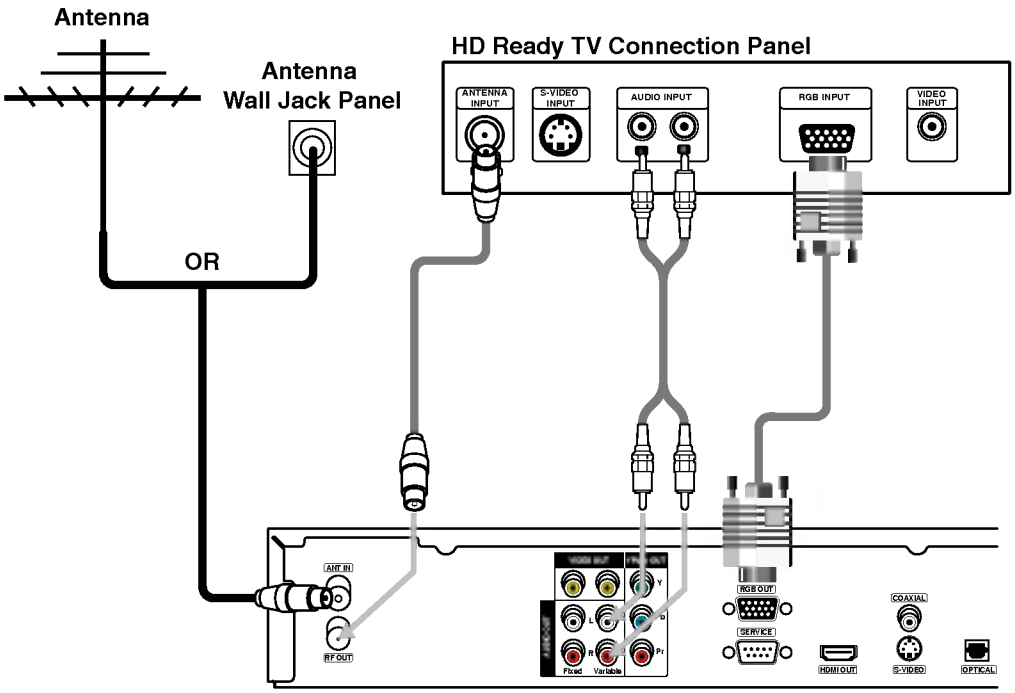
3 Connect the “COMPONENT OUT” jacks on the unit to the “COMPONENT IN” jacks of your TV using RCA-type cables. (The Output Selection must be set to YPbPr, refer to Display Format Setup on page 17.)

4 Connect the L/R “AUDIO OUT” jacks on the unit to the L/R “AUDIO IN” jacks on your TV using RCA-type cables.

Note
1080i, 720p, 576p, and 576i modes are available for component video (YPbPr) outputs.

Connections (Continued)

HD Monitor RGB Connections



HDTV Receiver Connection Panel

1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack. (Refer to page 10.)

2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

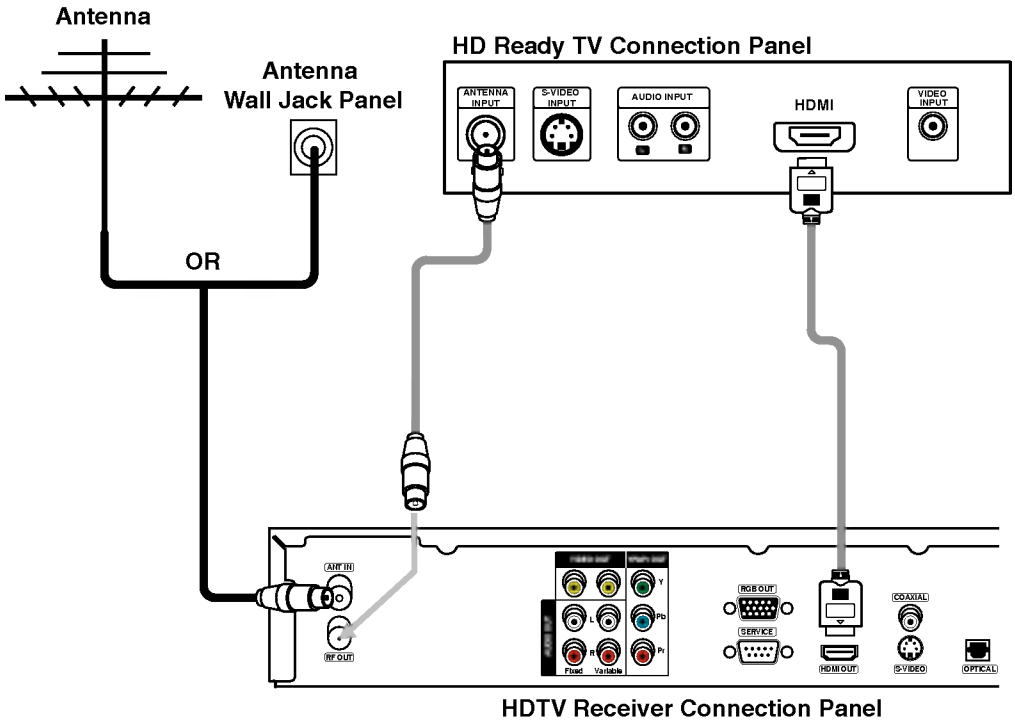
3 Connect the “RGB OUT” jack on the unit to the “RGB IN for DTV” jack of your TV using VGA-type connector. (The Output Selection must be set to RGB, refer to Display Format Setup on page 17.)

4 Connect the L/R “AUDIO OUT” jacks on the unit to the L/R “AUDIO IN” jacks on your TV using RCA-type cables.

Note

1080i, 720p, and 576p modes are available for RGB outputs.

HD Monitor HDMI Connections



HDTV Receiver Connection Panel

1 Connect the “Antenna” to the “ANT IN” jack on the unit using a coaxial RF cable.

Note

There might be some areas where the signal strength could be too high. If so, you may need to connect the antenna to an attenuator. Screw the attenuator onto the “ANT IN” jack. (Refer to page 10.)

2 Connect the “RF OUT” jack on the unit to the “Antenna In” jack on your TV using a coaxial RF cable. (Note: Analogue stations available only)

3 Connect the “HDMI” jack on the unit to the “HDMI IN for DTV” jack of your TV using HDMI connector. (The Output Selection must be set to HDMI, refer to Display Format Setup on page 17.)

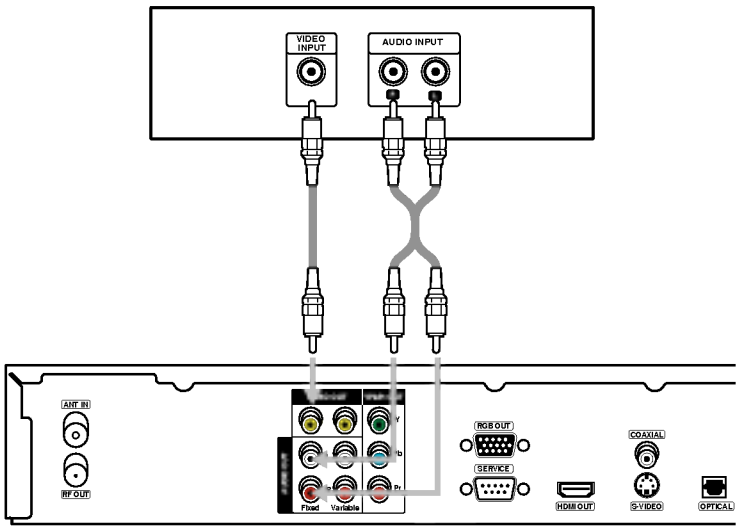
Note

- 1080i, 720p, and 576p modes are available on HDMI outputs.
- A HDMI-HDTV input is one that is compliant with EIA-861B specifications. Check your TV or monitor's user manual to find out if the TV or monitor's HDMI input is compliant with these specifications.
- Some HD Monitors designed for PC applications using HDMI may not work with this connection.

Connections (Continued)

VCR Connections

VCR Connection Panel



HDTV Receiver Connection Panel

Connect the L/R “AUDIO OUT” jacks and “VIDEO OUT” jack on the unit to the “A/V in” jacks on your VCR using RCA-type cables. (If your VCR is equipped with an S-Video jack, use the “S-Video” jack.)

⚠ **Caution**

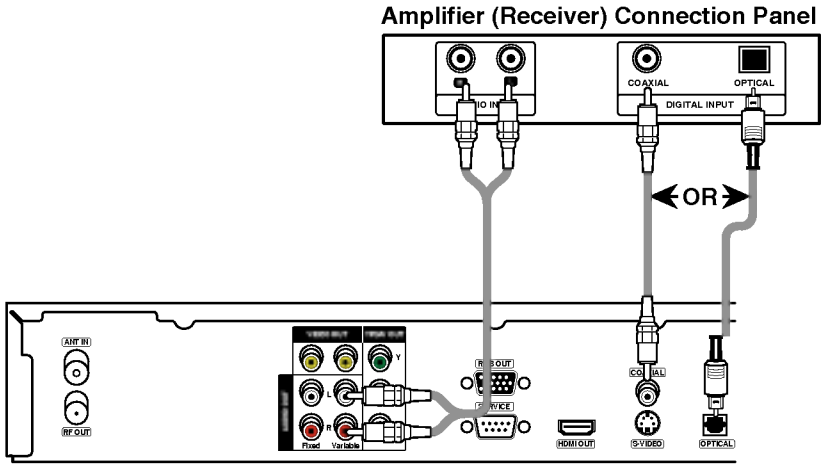
If the Output Selection is set to YPbPr and 576i display format is selected, the VCR will record an onscreen display onto the tape during recording if:

the program is changed with PR (+/–)

Note

The caption signal is recorded when the display format settings are set to 576i. (Refer to page 17.)

Amplifier (Receiver) Connections



Connecting to an amplifier equipped with two channel analog stereo or Dolby Surround

Connect the Left and Right AUDIO OUT jacks on the unit to the audio left and right in jacks on your amplifier, receiver, or stereo system, using the supplied audio cables.

Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™)

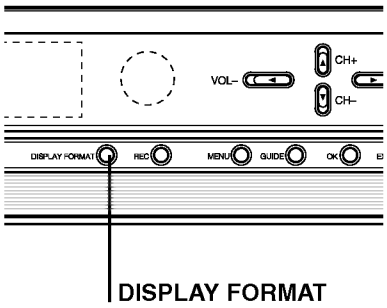
Connect one of the unit's DIGITAL AUDIO OUT jacks (OPTICAL or COAXIAL) to the corresponding input jack on your amplifier. Use an optional digital (optical or coaxial) audio cable.

Digital Multi-channel sound

A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your unit (Dolby Digital). Check the receiver manual and the logos on the front of the receiver.

Setting the Display Format

The unit provides several display formats. The DISPLAY FORMAT button on the front panel changes the output resolution. The output resolution may be converted from the original broadcast format.



Display Format Setup

1. **Press DISPLAY FORMAT once on the front panel.**
   The current output signal will appear in the display window.
2. **Depending on the type of Monitor that the unit is connected to, press DISPLAY FORMAT repeatedly on the front panel to select desired output connector. (YPbPr, RGB, or HDMI.)**
   Press MENU button if you wish to exit the display format setting.
3. **Use OK on the front panel to confirm your output connector selection.**
   The current output resolution will appear in the display window.
4. **Depending on the type of Monitor that the unit is connected to, press DISPLAY FORMAT repeatedly on the front panel to select desired output resolution. (1080i, 720p, 576p, 576i)**
   Press MENU button if you wish to return to the output connector setting mode.
5. **Press OK on the front panel to confirm your output resolution selection.**
   Display Format setup is finished.

Notes

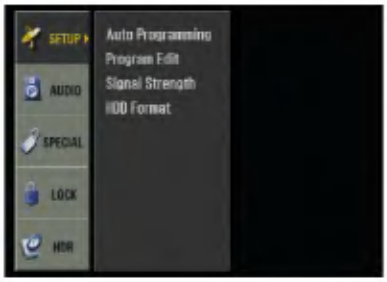
- You can exit Display Format Setup mode by pressing EXIT on the front panel.
- The S-VIDEO and VIDEO OUT jacks' signals are converted from all formats to 576i format.
- When using Composite video or S-video outputs from the unit, on-screen display will only appear and operate if 576i format is selected.

Display Format modes	Input Signal format	Output Signal format
1080i	all formats	1080i
720p	all formats	720p
576p	all formats	576p
576i	all formats	576i

OUTPUT CONNECTION	AVAILABLE FORMATS
COMPONENT VIDEO OUT	1080i/720p/576p/576i
RGB OUT	1080i/720p/576p
HDMI OUT	1080i/720p/576p
VIDEO OUT	All formats converted to 576i
S-VIDEO OUT	All formats converted to 576i

Initial Settings

In this menu system, there are several ways to customize the settings provided. Most menus consist of three levels to set up the options, but some require greater depth for the variety of settings. If you press the MENU button, only the first and second level of the menu system will appear on the TV screen. The third level can be displayed by pressing ◉ (OK). If a menu has more than three levels, the pop-up dialogue box will be displayed as the fourth or fifth level. For navigating the menu levels, you will see " ▶ " on the right side of the menu label to help you go to the next level.



To show and remove the Menu:
Press the MENU button on the remote control to display the menu. A second press of the MENU button or a press of the EXIT button will take you back to TV viewing.

To go to the next level:
Press "◉ (OK)" (or " ▶ ") on the remote control.

To go back to the previous level:
Press MENU (or " ◀ ") on the remote control.

General Operation

1. **Press MENU.**
   The main menu will appear.
2. **Use ▲ / ▼ to select the desired menu option.**
3. **While the desired menu option is selected, press ▶ or ◉ (OK) to move to the second level.**
4. **Use ▲ / ▼ to select the second menu option.**
5. **Press ▶ or ◉ (OK) to move to the third level.**
   Some menu options require additional steps.
6. **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Note
If your TV is in zoom mode, the menu screen may be cut off.
In this case, set the TV's zoom mode to normal to display the menu properly.

Setup Menu Options

Note
PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

Auto Programming



Automatically finds all programs (digital), and stores all the active programs found on the program list. Inactive or weak programs may not appear on the list.

1. **Press MENU to display the on-screen menu.**
2. **Select the SETUP menu using ▲ / ▼ then press ◉ (OK) or ► to move to the second level.**
3. **Select the Auto Programming using ▲ / ▼ then press ◉ (OK) or ► to move to the third level.**
   The program search process begins. You can stop the process by pressing ◉ (OK), MENU or EXIT.
4. **When program search is complete, the lowest program number found appears on the TV screen.**

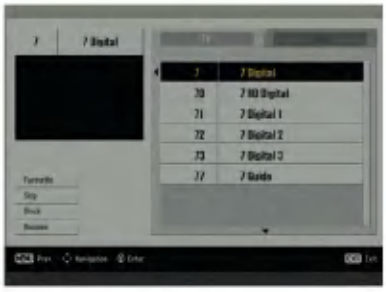
Program Edit



You can edit a channel manually (name, skip, etc.).

Note
PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

1. **Press MENU to display the on-screen menu.**
2. **Select the SETUP menu using ▲ / ▼ then press ◉ (OK) or ► to move to the second level.**
3. **Select the Program Edit using ▲ / ▼ then press ◉ (OK) or ► to move to the third level.**
   The Program Edit menu appears.
4. **Use ▲ / ▼ to select a program number then ◄ to select option.**
5. **Use ▲ / ▼ to select the program option then press ◉ (OK).**



Note: If you access this menu when resolution is set to 576p, 720p, or 1080i, the VIDEO OUT and S-VIDEO OUT jacks' signals are blocked. Press EXIT button to restore the output signals.

- **Favorite:** Selects program to be favorite.
- **Skip:** Skips the selected channel.
- **Block** Blocks the program.
- **Rename** Changes the station name. The display for entering characters appears.
  To enter characters, see page 38.

6. **Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.**

Setup Menu Options



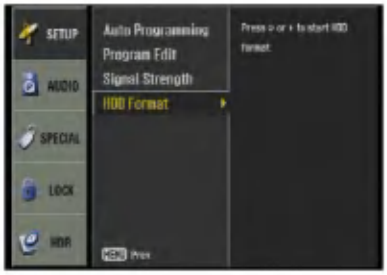
Note
PIN is needed to access the SETUP menu if [Lock System] option is set to [On].

Signal Strength

Shows the strength bar for incoming signal to help you adjust the antenna to the correct position from your location.

1. **Press MENU to display the on-screen menu.**
2. **Select the SETUP menu using ▲ / ▼ then press ◉ (OK) or ►.**
3. **Select the Signal Strength using ▲ / ▼.**
   The signal strength bar will be displayed.
4. **Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.**

HDD Format



Formats the HDD (Hard Disk Drive): everything recorded on the HDD will be erased.

1. **Press MENU to display the on-screen menu.**
2. **Select the SETUP menu using ▲ / ▼ then press ◉ (OK) or ►.**
3. **Select the HDD Format using ▲ / ▼ then press ◉ (OK) or ► to move to the third level.**
   The confirm message will appear.
4. **Use ◄ / ► to select 'Yes' or 'No' then press ENTER.**
   It takes a few moments to format the HDD.
5. **Press MENU to return to the previous screen or press EXIT on the remote control to return to TV viewing.**

⚠Caution
If you want to format the HDD, everything recorded on the HDD will be erased.

Audio Menu Options



Audio Option

The Audio Option allows you to select an audio stream for the TV program being received.

1 **Press MENU to display the on-screen menu.**

2 **Select the Audio Option using ▲ / ▼ then press ◉ (OK) or ►.**

3 **Select the desired mode using ▲ / ▼.**

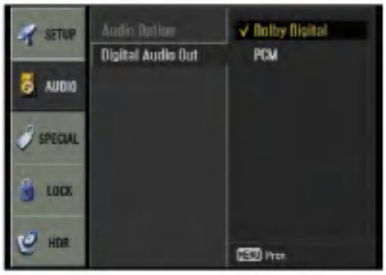
Dolby Digital: Dolby Digital audio stream is received.

MPEG: MPEG audio stream is received.

4 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Digital Audio Output

Sets the unit's digital Audio Output according to the type of audio system you use.



1 **Press MENU to display the on-screen menu.**

2 **Select the AUDIO menu using ▲ / ▼ then press ◉ (OK) or ►.**

3 **Select the Digital Audio Out option using ▲ / ▼ then press ◉ (OK) or ►.**

4 **Select the desired audio output using ▲ / ▼.**

Dolby Digital: Select "Dolby Digital" if you connected the unit's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).

PCM: Select when the unit's DIGITAL OUT jack is connected to a 2-channel digital stereo amplifier.

5 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Notes

- If you select the "Dolby Digital" and current audio stream is not "Dolby Digital", the unit outputs the "PCM" signal from DIGITAL AUDIO OUT jacks (OPTICAL and COAXIAL).
- The "Digital Audio Out" is fixed to "PCM" when the "Audio Option" is set to "MPEG",

Special Menu Options

Screen Type

You can choose your TV type.



1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the OPTION menu then press ► or OK to move to the second level.**

3 **Use ▲ / ▼ to select the Screen Type option.**

4 **Press ▲ or OK to move to the third level.**

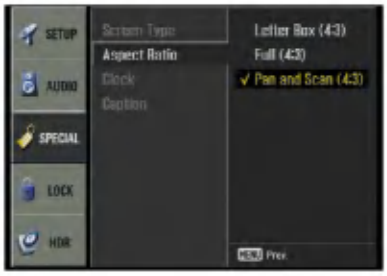
5 **Use ▲ / ▼ to select an option (16:9 or 4:3).**
16:9: Select if a 16:9 wide TV is connected.
4:3: Select if a standard 4:3 TV is connected.

Note
When changing the screen type, the TV screen will be blanked for a short while.

6 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Aspect Ratio

Lets you choose the screen format according the screen ratio.



1 **Follow steps 1-2 as shown above (Screen Type).**

2 **Use ▲ / ▼ to select the Aspect Ratio option.**

3 **Press ► or OK to move to the third level.**

4 **Use ▲ / ▼ to select an option.**

5 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing**

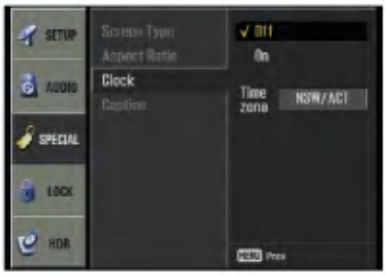
Notes

- If the Screen Type selected is 16:9, the Aspect Ratio is set to "Letter Box (16:9)", "Full (16:9)", or "Pan and Scan (16:9)".
- If the Screen Type selected is 4:3, the Aspect Ratio is set to "Letter Box (4:3)", " Full (4:3)", or "Pan and Scan (4:3)".

Tip

- While watching TV, you can change the picture aspect ratio using **ARC** on the remote control. To view a high definition picture with 4:3 normal TV, use the ARC button on the remote control to change the wide mode (Letter Box, Full or Pan and Scan).
- To view a high definition picture with wide (16:9) TV, use the **ARC** button on the remote control to change the wide mode in the cycle (Letter Box, Full or Pan and Scan).
- To view a standard definition picture with wide (16:9) TV, use the **ARC** button on the remote control to change the wide mode in the cycle (Letter Box, Full or Pan and Scan).

Special Menu Options



Clock Set

Enables the user to adjust the time zone. Normally, your clock is set using signals transmitted by DTV stations. Choosing your time zone sets the current time automatically.

1 **Press MENU to display the on-screen menu.**

2 **Select the SPECIAL menu using ▲ / ▼ then press ◉ (OK) or ►.**

3 **Use ▲ / ▼ to select the Clock Set option then press ► or ◉ (OK) to move to the third level.**

4 **Use ▲ / ▼ to select On or Off then press ◉ (OK).**
If you select Off, the clock is not set.

5 **If you select On, use ▲ / ▼ to set Time Zone.**

6 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Note

- There are cases where the TV station does not send, or sends wrong date and/or time information causing the unit to set an incorrect time.
- You have no way to manually set the clock.



Caption

If the Caption option is set to On, Closed Caption is displayed when receiving TV program with Closed Caption signal.
If the Caption option is set to Off, Closed Caption is not displayed.

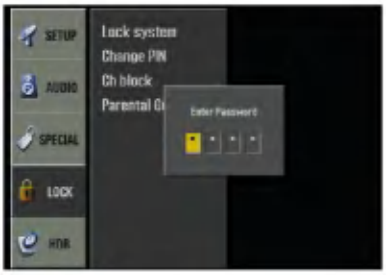
Note

Caption will appear only if provided by the broadcaster.

Tip

- If available, you can also select a closed caption while viewing TV, press CC button repeatedly on the remote control.
- If captions are available, the DTV caption icon (CC) appears on the program information display, to indicate that you can select one of those caption options with the CC button.

Lock (Parental Control) Menu Options



Lock System

Allows you to set up specific programs and ratings through blocking schemes. Also allows you to activate or disable all of the lock schemes previously set up. A PIN is required to gain access to the LOCK menus. When the Lock System is set to Off, the Program and Program Rating are not effective.

1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the LOCK then press ► or ◉ (OK) to move to the second level.**

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.



3 **Use ▲ / ▼ to select the Lock System option.**

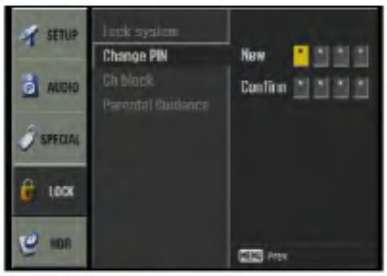
4 **Press ► or ◉ (OK) to move to the third level.**

5 **Use ▲ / ▼ to select an option (On or Off).**

6 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Change PIN

Changes the PIN.



1 **Follow steps 1-2 as shown above (Lock System).**

2 **Use ▲ / ▼ to select the Change PIN option.**

3 **Press ► or ◉ (OK) to move to the third level.**

4 **Enter the new 4-digit code.**

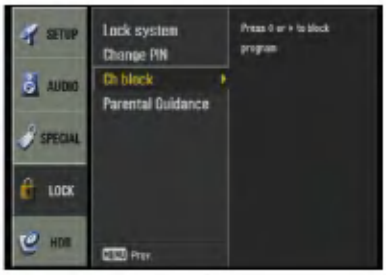
5 **Enter the same code again to verify.**

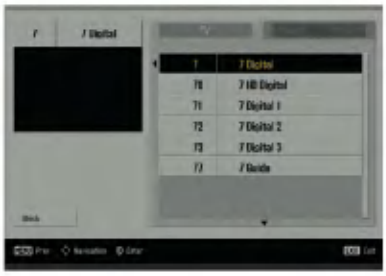
6 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Lock (Parental Control) Menu Options (Continued)

Channel Block

Blocks any program that you do not want to view or that you do not want your kids to watch. If you tune in a blocked program, a black screen with a pop-up box will appear. This menu can override Program Edit menu settings (page 19).





Note: If you access this menu when resolution is set to 576p, 720p, or 1080i, the VIDEO OUT and S-VIDEO OUT jacks' signals are blocked. Press EXIT button to restore the output signals.

1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the LOCK then press ► or ◉ (OK) to move to the second level.**

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.

3 **Use ▲ / ▼ to select the Ch Block then press ► or ◉ (OK).**
The program list screen appears.

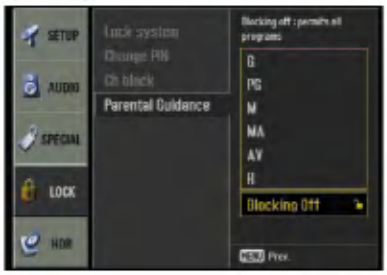
4 **Use ▲ / ▼ / ◄ / ► to a program on the block program menu.**

5 **Press ◉ (OK) to block or unblock the program on the block program menu.**
The 🔒 mark will appear to the right of the station name to indicate the blocked program.

4 **Repeat step 3 to block or unblock additional programs in the program list menu.**

5 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Lock (Parental Control) Menu Options (Continued)



Parental Guidance

You can set the ratings to block out all the programs with ratings above a specified level.

1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the LOCK then press ► or ◉ (OK) to move to the second level.**

When you have not entered a PIN yet;

Enter "0000" PIN using the numbered buttons.

When you have already entered a PIN;

Enter the 4-digit PIN using the numbered buttons to confirm the personal 4-digit security PIN.

3 **Use ▲ / ▼ to select the Parent guidance option.**

4 **Press ► or ◉ (OK) to move to the third level.**

5 **Use ▲ / ▼ to select a rating.**

G (General Audiences): Content is not offensive to most viewers.

PG (Parental Guidance Recommended): Content is such that parents may not want their children to view the program.

M (Mature Audience 15+): Mature Audience only. This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.

MA (Mature Adult Audience 15+): Mature Adult only.Mature Audience Only. This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.

AV (Adult Audience strong violence 15+)

R (Restricted 18+): Not for children under age 18. Strong elements of sex and/or violence.

Blocking Off: Cancel the blocking

6 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

HDR Menu Operations

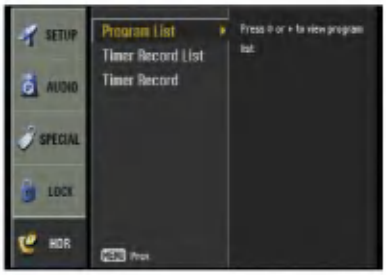
Program List

The Program List shows the recorded programs etc. that have been stored on the HDD (Hard Disk Drive).

Tip

You can also bring up the Program List by pressing the PROGRAM LIST button on the remote control.

Program List Setting, General Operation



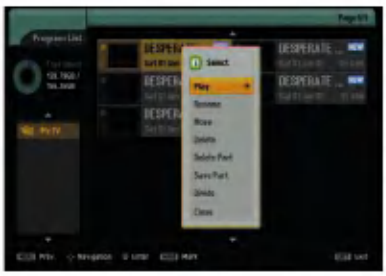
1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the HDR menu then press ► or ◉ (OK) to move to the second level.**

3 **Use ▲ / ▼ to select the Program List option.**

4 **Press ► or ◉ (OK) to display the Program List.**
The Program List shows title of the program, date, and duration.

5 **On the Program List menu, use ◄ / ► to select a program.**
A series of snapshots of the selected program appear if the program remains highlighted.



6 **Press ◉ (OK) to display the options.**
The options will be displayed as shown to the left.

- **Play:** Plays back the selected program.
- **Rename:** Rename the program title.
  You can rename a program title. Key in the title using ▲ / ▼ / ◄ / ► or ◉ (OK). Then choose "OK" then press ◉ (OK) to install the program title.
- **Move:** Moves the program to the another folder.
- **Delete:** Deletes the selected program.
- **Delete Part:** Deletes a part of the program.
- **Save Part:** Saves a part of the program.
- **Divide:** Divides a program into two.
- **Close:** Closes the menu.

7 **Press EXIT or PROGRAM LIST button to remove the Program List.**

Notes

- If the unit finds a bad sector on the hard disk, one or all programs may be deleted from Program List.
- Total number of programs on the Program List can be up to 512 per folder.

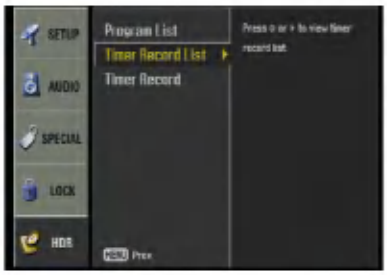
Timer Record List

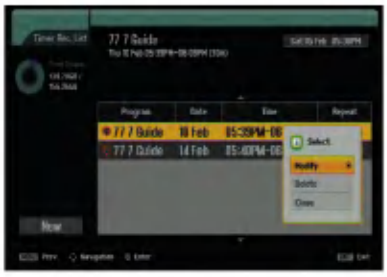
The Timer Record List shows the programs you have reserved in the Timer Record menu.

Tip

You can also bring up the Timer Record List by pressing the TIMER RECORD button on the remote control.

Timer Record List Settings, General Operation





1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the HDR menu then press ► or ◉ (OK) to move to the second level.**

3 **Use ▲ / ▼ to select the Timer Record List option.**

4 **Press ► or ◉ (OK) to display the Timer Record List menu.**
Timer Record List appears.

5 **Use ▲ / ▼ to select a program then press ◉ (OK) to to display the menu.**
The menu options will be displayed as shown to the left.

- **Modify:** Modifies the contents of entered data for reserved program. (Refer to page 29.)
- **Delete:** Deletes the selected program from the Timer Record List menu.
- **Close:** Returns to the Timer Record List menu.

6 **Press EXIT or TIMER RECORD button to remove the Timer Record List.**

Tip

To program the new Timer Record Program, select “New” icon then press ◉ (OK) in the Timer Record List menu and Timer Record menu will appear. You can create new Timer Record Program. (Refer to page 29.)

Notes

- If the disk space available is insufficient while recording, the unit will turn itself off.
- If you want to stop recording, you must press the STOP button. If you press POWER to stop recording, the program may not be recorded.

Timer Record

This unit can be programmed to record up to 20 programs within a period of 1 month. Simply enter the channel to be recorded, the starting time and duration for each recording.

Timer Record Settings, General Operation





1 **Press MENU.**
The main menu appears.

2 **Use ▲ / ▼ to select the HDR menu then press ► or ◉ (OK) to move to the second level.**

3 **Use ▲ / ▼ to select the Timer Record option.**

4 **Press ► or ◉ (OK) to display the Timer Record menu.**

5 **On the Timer Record menu, use ◄ / ► to move to next or previous column then use ▲ / ▼ to select a setting for the selected column.**

- **Program**: Selects the program number to record.
- **Date**: Selects recording date.
- **Start Time**: Selects recording start time.
- **Duration**: Selects recording duration.
- **Mode**: Selects recording repeat option.

  Once...The unit is to record a reserved program once.

  Daily...The unit is to record a reserved program daily.

  Weekly...The unit is to record a reserved program every week.

  Weekend...The unit is to record a reserved program every weekend (Saturday - Sunday).

  Weekday...The unit is to record a reserved program every weekday (Monday - Friday).

6 **Press ◉ (OK) to reserve your selection.**
The input data is stored into the unit.
If you press the EXIT button at step 6, the entered data is not memorized.

Tip

You can view the Timer Record Program information you have programmed by pressing the PROGRAM LIST button on the remote control.

Notes

- The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.
- If the disk space available is insufficient while recording, the unit will turn itself off.
- If you want to stop recording, you must press the STOP button. If you press POWER to stop recording, the program may not be recorded.
- If new timer recording entry conflicts with existing entry, new entry will not be saved.

Information Displays





Program Banner Display

The Program Banner appears whenever you tune to a new program or press the ◉ (OK) button on the remote control while viewing a program.

1 **Press ◉ (OK) while watching a program.**
The Program Banner appears on the TV screen (program number, digital picture grade, audio, station name, and current time).

- The Program Banner will be displayed on the TV screen for a moment then disappear.

a) Digital Picture Grade
Displays the digital picture grade such as HD (High Definition) or SD (Standard Definition).

b) Audio Format type (Dolby Digital, MPEG I, MPEG II)
Indicates audio track is Dolby Digital, MPEG I, or MPEG II.

c) Program number and Station name
Displays the current program number and station name.

d) Displays Program number

e) Displays progress bar for playback, live TV, or Delayed-Timeshift playback.

f) Displays elapsed time.

2 **Press ◉ (OK) again while the Program Banner is displayed.**
The Program Banner disappears from the TV screen.

Notes

- Station name and clock are displayed only if they are set up by broadcast.
- If program scrambled, may not be able to see the program.



Program Information Display

The Program Information appears whenever you press the INFO button on the remote control while viewing a program.

1 **Press INFO while watching a program**
Program Information appears on the TV screen.

a) Program title
Indicates title of current program.

b) Date
Displays the start date.

c) Start Time
Displays the start time for the current program.

d) Progress bar
Displays elapsed time.

e) End Time
Displays the end time for the current program.

f) Clock
Displays the current clock.

g) Full Information
Indicates that there is a full information available to provide detailed descriptions of the program.

h) Text Information
Indicates that there is teletext information available.

i) Digital Closed Caption Icon
Indicates that the current program contains digital closed caption data service.

j) Wide Icon (16:9) and Digital Picture Grade
Indicates that the current program is shown in wide picture format. Displays the digital picture grade such as HD (High Definition) or SD (Standard Definition).

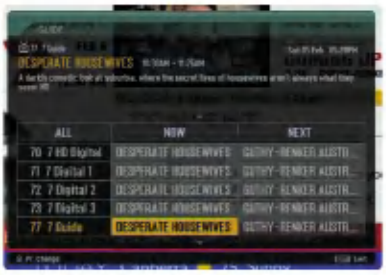
k) Content Advisory Icon
Content Advisory data is used for the parental guide control to block programs that are beyond predefined rating criteria set by users. This icon means that the current program contains content advisory data, and displays rating value of program.

l) Previous or Next selection
Indicates the information is for next or previous program. Use ◄ / ► to change between Next or Previous.

2 **Press INFO or EXIT while the Program Information is displayed.**
The Program Information disappears from the TV screen.

Note
Station name and clock are displayed only if they are set up by broadcast.

Program Guide



The Program Guide contains schedule and program information for all programs. They also provide local over-the-air programs information including conventional digital programs. Use the Program Guide to find programs easily and conveniently and to view schedule and descriptive program information for the programs.

To Display the Program Guide

Press the GUIDE button on your remote control.

To Exit the Program Guide

Press the EXIT button to return to the last program you were viewing.

To Navigate through programs on the Guides

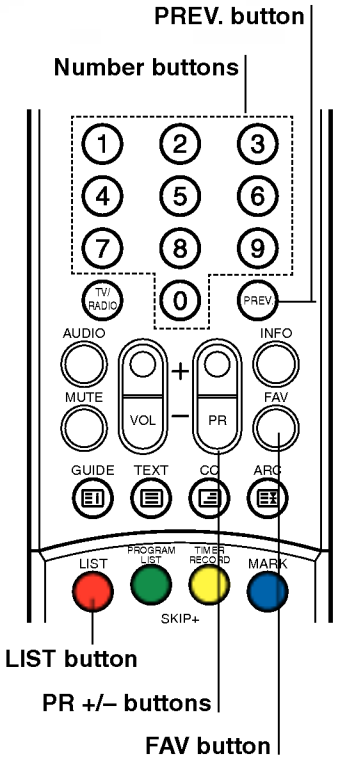
Use ◄ / ► / ▲ / ▼ on your remote control to navigate the guide screen.

To Tune to another current program

Use ◄ / ► / ▲ / ▼ to select a current program then press ◉ (OK). You can watch the program.

To Display the Full Information window

You can view detailed information of the highlighted program if available. Press INFO to display detailed information window. To exit the detailed information window, press INFO again.



Program Selection

You can select a program as shown below.

Number buttons (on the remote control)

Use **Number (0-9)** buttons to select a program directly.

PREV. button (on the remote control)

Press to return to the previous program being viewed. For example, if the unit is tuned to program 55 and then you change to program 56, pressing PREV. will return to program 55.

FAV button (on the remote control)

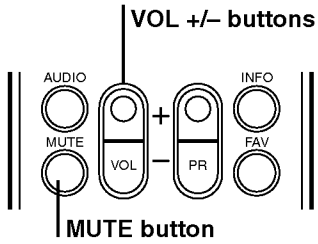
Press to scroll through your favorite programs.

PR +/– buttons (on the remote control) or ▲ / ▼ (on the front panel)

Use PR +/– on the remote control or ▲ / ▼ on the front panel to cycle the unit through the programs in memory.

LIST buttons

Press LIST on the remote control and Program List appears. Use ▲ / ▼ to select a program that you want to view. Whenever you press the TV/RADIO button while the program list is displayed, the program list will be switched between TV and Radio program list.



Volume Adjustment

Adjusts the volume of analogue audio out on unit.

VOL +/– buttons (on the remote control) or ◄ / ► (on the front panel)

Use **VOL +/–** on the remote control or ◄ / ► on the front panel to adjust the volume for analogue audio out on the unit.

MUTE (on the remote control)

Press **MUTE** to turn off the volume for analogue/digital audio out on the unit.

Notes

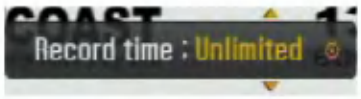
- Before setting Audio Variable to Off, make sure that you have turned down the TV's volume to the minimum. Otherwise, sudden high volume sound may cause hearing or speaker damage.
- The volume of digital audio out on unit can not be adjusted on the unit.

Note
The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.

Normal Recording

Follow the instructions below to record a TV program. Recording starts immediately and allows you to make a recording easily of a preset length without using the Time Record menu.

In live TV mode



1. **Select the desired channel with PR (+/-).**
2. **Press REC.**
   Recording will start. The menu as illustrated to the left, will appear on the TV screen.
3. **Press ▲ / ▼ repeatedly to select the recording time length.**
   Each press of ▲ / ▼ button changes the recording duration in the sequence shown below.
   Unlimited → 5 min → 10 min → 15 min → 20 min → ..... → 960 min
4. **Press ◉ (OK).**
   The elapsed recording time indicator appears on the screen.
   Press EXIT to remove indicator.
5. **Press STOP to stop recording.**

Note
During T1 (tuner 1) recording, PIP channel will be restricted to that particular channel.

In playback mode



1. **Press PIP button.**
2. **Select the desired channel with PIP PR (+/-).**
3. **Press REC.**
   Recording will start. The menu as illustrated to the left, will appear on the TV screen.
4. **Press ▲ / ▼ repeatedly to select the recording time length.**
   Each press of ▲ / ▼ button changes the recording duration in the sequence shown below.
   Unlimited → 5 min → 10 min → 15 min → 20 min → ..... → 960 min
5. **Press ◉ (OK).**
   The elapsed recording time indicator appears on the screen.
   Press EXIT to remove indicator.
6. **Press STOP to stop recording.**

Tip
You can check the current recording status by pressing ◉ (OK) button.

Note

The minimum recording time is 1 minute for TV channel and 2 minutes for radio channel. If recorded time is shorter than the minimum recording time, the file is not saved.

Recording Reservation using TIMER RECORD button



1 **Press TIMER RECORD button.**
The Timer Recording List menu appears.

2 **Follow steps 5-6 as shown for Timer Record Settings, General Operation on page 29.**

Notes

- If the disk space is insufficient while recording, the unit will stop Record.
- If you want to stop recording, you must press STOP button.
- If new timer recording entry conflicts with existing entry, new entry will not be saved.

Dual Recording features

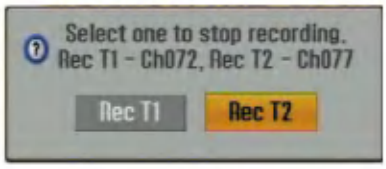
You can record two programs at the same time using the recorder's two built-in TV tuner.

Dual recording is capable when:

- pressing REC to record another channel during normal recording.
- pressing REC to record another channel during Timer Recording.
- timer recording activates during normal recording.
- timer recording activates during dual recording.
  You must stop one of two recording to start the timer recording.
  Follow steps 1 and 2 as below.

Tip

You can check the current recording status by pressing ◉ (OK) button.



To stop dual recording.

1. Press STOP.
   The channel choice menu appears on the TV screen.
2. Select a channel you want to stop recording then press ◉ (OK).
   The selected channel's recording stops.
3. If you have stopped T1 (tuner 1) recording and wish to record again, open PIP window, select a channel then press REC.
4. If you want to stop another channel's recording, press STOP.

Note

When T2 (tuner 2) is in recording mode, there are some restrictions to some of the functions.

1. Main screen's channel will be restricted to that particular Channel. (Other channels can be viewed through PIP window)
2. Timeshift function will not be available.

Playback Options



Normal Playback

Select a program in the Program List menu then start playback (Refer to "Program List" on page 27 to see more detailed information).

Scan



1. Press FF or REW during playback.
   The unit will go into SCAN mode.
2. Press FF or REW repeatedly to select the required speed:
   X2, X5, X20, X50, X300 (forward or backward).
3. To exit SCAN mode, press PLAY.

Still Picture and Frame-by-Frame Advance



1. Press PAUSE during playback.
   The unit will go into PAUSE mode.
2. You can advance the picture frame-by-frame by pressing PAUSE repeatedly on the remote control.
3. To exit PAUSE mode, press PLAY.

Slow Motion



1. Press PAUSE during playback then press FF.
   The unit will go into SLOW mode.
2. To exit SLOW mode, press PLAY.

Jump to Starting position



Press FIRST during playback.

Jump to End position



Press END during playback.

Repeat





To repeat a sequence.

1. Press MARK at your chosen starting point.
2. Press MARK again at your chosen end point.
   The repeat sequence begins.
3. To cancel the sequence, press MARK.

Stop



Press STOP during playback to see the current broadcast.

Smart Skip (+/-)





Smart Skip is a trick play mode, providing intelligent scene selection in either replay or skip forward modes. Instead of searching with fixed time methods, smart skip searches for active scene clusters then jumps to the first scene in the next or previous available cluster of scenes or back. This is more meaningful to viewers than jumping to a more static scene (anchor person scene from a news broadcast, etc).
During playback, press SKIP+ at the starting point of the section you want to watch. Press SKIP– if you want to go backward.

Note
Pressing SKIP+ afterward pressing SKIP– does not guarantee coming back to the same scene.

Timeshift (Pause, Live TV/Playback) Setup and Operation



You can use the timeshift function to pause, rewind and replay live TV program.

1 **Select a TV program to use the timeshift function.**

2 **Press TIMESHIFT or PAUSE to start timeshift playback.**

3 **Press ◉ (OK) twice to display the progress Bar as shown to the left. The Progress Bar disappears after**

1. Indicates the playback mode.
2. Indicates the Timeshift delayed time.
3. Indicates the current Timeshift position.

Notes

- If disk space is insufficient during a Timeshift operation, the oldest Timeshift section will be deleted.
- To save disk space, a program that has no signal can't be stored.
- You can only use timeshift function when T2 (tuner 2) is not in recording mode.

Tip

You can use the play functions (Slow, Scan, etc.). Refer to Playback options on previous page.



To start timeshift playback

Press TIMESHIFT whilst viewing a live TV program.



To stop timeshift playback

Press LIVE TV during timeshift playback and you can view the live TV program.

Editing a recorded program

Naming a Program

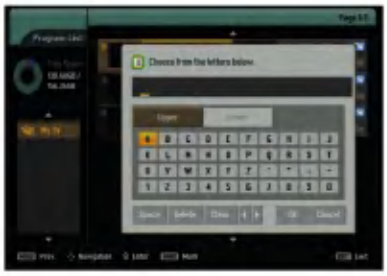
You can name programs independently. Names can be up to 32 characters long.



1 **Press the PROGRAM LIST.**
The Program List menu will appear.

2 **Use ▲ / ▼ / ◄ / ► to choose a program you want to rename on the Program List menu then press ◉ (OK).**
The menu options appears.

3 **Use ▲/▼ to select "Rename" option then press ◉ (OK).**
Keyboard menu appears.



4 **Enter a name for the title. Use ◄ / ► / ▲ / ▼ to select a character then press ◉ (OK) to confirm your selection.**

- **Space:** Inserts a space at the cursor position.
- **Delete:** Deletes the previous character at the cursor position.
- **Clear:** Clears all entered characters.
- **◄ / ►:** Moves cursor to left or right.
- **Cancel:** Returns to the previous menu screen.
- **OK:** Select to finish.

5 **Choose OK then press ◉ (OK) to fix the name and return to the previous menu screen.**

6 **Press EXIT to exit the menu.**

Moving a Program to Another Folder

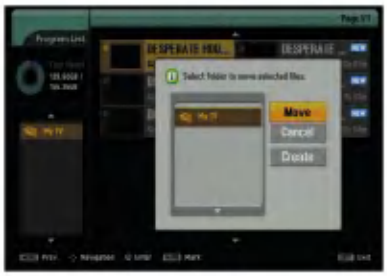
You can move a program(s) to another folder. After moving, the program(s) will be deleted from the current location.



1 **Press the PROGRAM LIST.**
The Program List menu will appear.

2 **Use ▲ / ▼ / ◄ / ► to choose a program you want to move on the Program List menu then press ◉ (OK).**
The menu options appears.

3 **Use ▲/▼ to select "Move" option then press ◉ (OK).**
Move menu will appear.

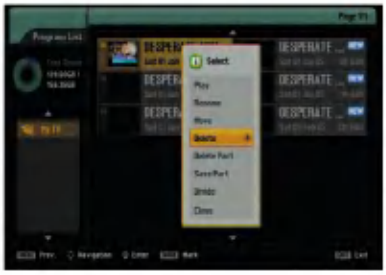


4 **You can select a folder to move.**
Also, you can create new folder. Select "Create" option on the Move menu then press ◉ (OK). Keyboard menu appears. To enter characters, see above.

5 **Select "Move" option then press ◉ (OK) to begin moving.**

Deleting a Program

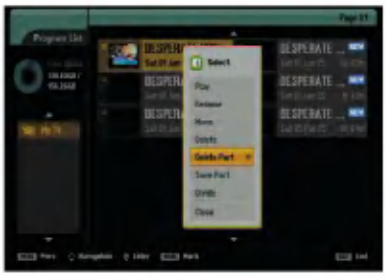
When you erase a program from the Program List menu, the program is actually deleted from the HDD and the remaining time available for recording increases.



1. **Press the PROGRAM LIST.**
   The Program List menu will appear.
2. **Use ▲ / ▼ / ◀ / ▶ to choose a program you want to delete on the Program List menu then press ◉ (OK).**
   The menu options appears.
3. **Select "Delete" option from the options on the menu.**
4. **Press ◉ (OK) to confirm.**
   The confirm message for deleting will appear.
5. **Use ◀ / ▶ to select "YES" then press ◉ (OK).**
   The selected program is deleted.
   After pressing ◉ (OK), the new, updated menu is displayed.
6. **Repeat steps 2 - 5 to continue to delete from the menu.**
7. **Press EXIT to exit the menu.**

Deleting a Part

You can delete a part which you do not want in the title.

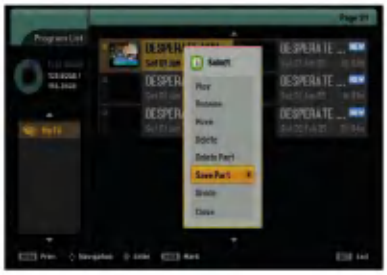




1. **Press the PROGRAM LIST.**
   The Program List menu will appear.
2. **Use ▲ / ▼ / ◀ / ▶ to choose a program you want to delete on the Program List menu then press ◉ (OK).**
   The menu options appears.
3. **Select "Delete Part" option then press ◉ (OK).**
   Starts playback and use pause step, search and slow-motion to find the starting point.
4. **Press MARK at the starting point of the section you want to delete.**
   The part is indicated on the Progress Bar.
5. **Use pause step, search and slow-motion to find the ending point.**
6. **Press MARK at the ending point of the section you want to delete.**
7. **If you want to proceed editing, press STOP.**
   The confirm message for deleting will appear.
   Use ◀ / ▶ to select [Yes] then press ◉ (OK).
   The selected part is deleted from the program.

Saving a Part

You can save a part which you want in the title.





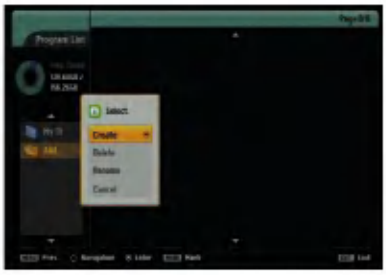
1. **Press the PROGRAM LIST.**
   The Program List menu will appear.
2. **Use ▲ / ▼ / ◀ / ▶ to choose a program you want to save on the Program List menu then press ◉ (OK).**
   The menu options appears.
3. **Select "Save Part" option then press ◉ (OK).**
   Starts playback and use pause step, search and slow-motion to find the starting point.
4. **Press MARK at the starting point of the section you want to save.**
   The part is indicated on the Progress Bar.
5. **Use pause step, search and slow-motion to find the ending point.**
6. **Press MARK at the ending point of the section you want to save.**
7. **If you want to proceed editing, press STOP.**
   The confirm message for deleting will appear.
   Use ◀ / ▶ to select [Yes] then press ◉ (OK).
   The selected part is saved from the program.

Divide One Title Into Two





1. **Press the PROGRAM LIST.**
   The Program List menu will appear.
2. **Use ▲ / ▼ / ◀ / ▶ to choose a program you want to divide on the Program List menu then press ◉ (OK).**
   The menu options appears.
3. **Select "Divide" option then press ◉ (OK).**
   Starts playback.
4. **Use play, pause step, search and slow-motion to find the point you want to divide the program.**
5. **Press MARK at the point you want to divide.**
6. **If you want to proceed editing, press STOP.**
   The confirm message for dividing will appear.
   Use ◀ / ▶ to select "Yes" then press ◉ (OK).
   The program is divided into two new programs.



Editing folder

You can create, delete, or rename a folder.

1 **Press the PROGRAM LIST.**
The Program List menu will appear.

2 **Use ▲ / ▼ / ◄ / ► to choose a folder you want to edit on the Program List menu then press ◉ (OK).**
The options appears.

3 **Use ▲ / ▼ to choose an option then press ◉ (OK).**

- **Create:** Creates a new folder
  You can name the folder. Key in the folder name using ▲ / ▼ / ◄ / ► and ◉ (OK). Then choose "OK" then press ◉ (OK) to install the folder name.
- **Delete:** Deletes the selected folder.
- **Rename:** Rename the folder.
  You can rename the folder. Key in the folder name using ▲ / ▼ / ◄ / ► and ◉ (OK). Then choose "OK" then press ◉ (OK) to install the folder name.
- **Cancel:** Closes the options.

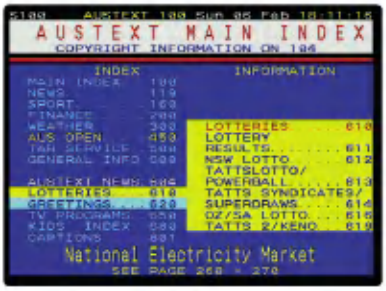
4 **Press MENU to return to the previous menu or press EXIT on the remote control to return to TV viewing.**

Teletext Operation

Teletext is an optional function, therefore only those with the teletext system can receive the teletext broadcast.

Teletext is a free service broadcast by some TV stations which gives up-to-the-minute information on news, weather, television programs, share prices and many other topics.

The teletext decoder can support the SIMPLE systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number.



Note: If you access this menu when resolution is set to 576p, 720p, or 1080i, the VIDEO OUT and S-VIDEO OUT jacks' signals are blocked. Press EXIT button to restore the output signals.

Teletext in Service

The unit gives you access to teletext which is greatly improved in various aspects such as text and graphics.
This teletext can be accessed by special teletext services and specific services which broadcast teletext.

1. **Press number or PR+/- buttons to select a service which broadcasts teletext.**
2. **Press TEXT to access on the teletext.**
3. **Follow the indications on teletext and move onto the next step by pressing RED and GREEN buttons and so on.**
4. **Press TEXT or EXIT to switch off teletext and return to TV viewing.**

Teletext on/off

TEXT

1. Press TEXT to switch to teletext.
   The initial page or last page appears on the screen.
   Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indicates your selection, while the second shows the current page displayed.
2. Press TEXT or EXIT to switch off teletext.

Note
If your TV is in zoom mode, the Teletext menu screen may be cut off.
In this case, set the TV's zoom mode to normal to display the menu screen properly.

Page selection

1. Enter the desired page number as a three digit number with the numbered buttons.
   If during selection you press a wrong number, you must complete the three digit number and then reenter the correct page number.
2. Use PR (+/-) buttons to select the previous or next page.
3. Use RED/GREEN buttons to move up and down pages.

Special Teletext Functions

CC

MIX button
Displays the teletext pages superimposed on the TV picture. To switch the TV picture off press this button again.

GUIDE

INDEX button
Selects the index page.

ARC

FREEZE button
Stops the automatic page change which will occur if a teletext page consists of 2 or more sub pages. When this button is pressed the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inhibited. To continue press this button again.



PIP (Picture in Picture)

This function enables you to view the stored stations in sub picture during TV viewing or playback.

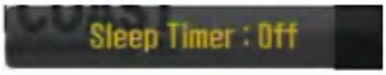
On and off
Press PIP to switch on the sub picture, press EXIT to switch it off.

Program selection for sub picture
Use PIP PR+ or PIP PR- to change the program when sub picture's input is set to tuner.

Sub picture position change
Press PIP repeatedly until desired position is achieved. The sub picture moves clockwise.

Swap main and sub picture
You can swap the main and sub picture during TV viewing. Press SWAP.

Note
Picture swap is not available during playback or recording.



Sleep Timer Setting

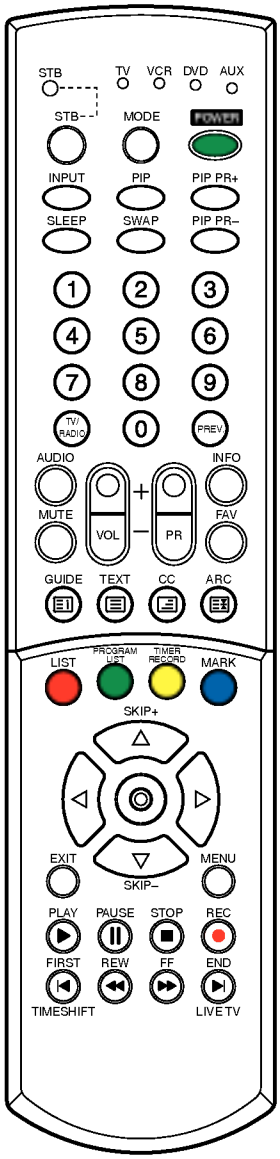
You can set the unit to turn off automatically at a specified time.

1 Press SLEEP to set the desired sleep time.
The sleep time appears on the TV screen.

2 Each time you press SLEEP, it changes in the following order.
Sleep Timer : Off → 10 minutes → 20 minutes → .... → 240 minutes

Tip
You can check the time remaining before the unit turns off.
Press SLEEP. The remaining time appears on the TV screen

Programming the Remote Control to Operate the TV



This remote control is a multi-brand universal remote control that can be programmed to operate most remote-controllable devices from other manufacturers.

Note
The remote control may not be able to control all models of other brands.

1 **Test your remote control.**
To find out whether your remote control can operate a device without programming, turn on the device such as a VCR and select the corresponding mode (VCR) using MODE on the remote control while pointing at the device. Use POWER and PR +/– buttons to see if the device responds properly. If not, the remote control mode needs to be programmed to operate the device.

2 **Turn on the device to be programmed. Then select the corresponding mode (VCR, AUX, TV, DVD or STB) with the MODE button on the remote control.**

3 **Press POWER and MUTE buttons simultaneously.**
The remote control is now ready to program a code for the device.

4 **There are two ways to find the correct code for the device.**
First, if you press **PR +** buttons repeatedly, the codes will change one at a time. If the right code is found, the device will turn off.
Second, enter the code number using the number buttons on the remote control. Code numbers for various device can be found on the following pages. If the code is correct, the device will turn off.

5 **Press EXIT button to store the programming code.**

6 **Test the remote control functions to see if the device responds properly. If not, repeat from step 2 to step 6 above.**

Remote Control Codes for TVs

TV Codes

Brand	Code
Akai	146 006
Amark	112 143
Ampro	167 073
Blaupunkt	088
Candle	002 003 004 006
Capehart	058
Citizen	002 003 004 043 101 103 006 143
Classic	043
Concerto	004
Contec	039 043 050 051
Coronado	143
Craig	043 054
Crown	043 143
Daewoo	004 016 017 043 044 055 071 076 103 107 111 114 117 120 123 125 127 128 136 143
Daytron	116 143 004
Dynasty	043
Electrohome	077 143 024
Emerson	028 048 043 155 005 096 047 116 153 151 050 004 006 051 143 154
Fisher	007 057
Funai	028 043
Futuretech	043
General Electric	160 144 165 073 130 008 009 034 056 074 116 155 091 004 006 161
Hall Mark	116 004
Hitachi	011 163 166 158 143 004 010 012 023 075 006 009 041
Inifinity	164
Inkel	129
JBL	164
J.C Penny	008 030 065 160 004 024 143 009 156 006 101
Jensen	013
JVC	038 083 145 034 070
KEC	043
Kloss	002 059
KMC	143
KTV	043 006 143 154
LG (Goldstar)	102 106 110 112 113 116 119 122 127 137 143 001 004
Lodgenet	072
Logik	072
Luxman	004
LXI	166 007 015 164 160 081 052
Magnavox	164 059 003 060 061 063 064 160 004 143 127 006 022
Marantz	006 164 077
Matsui	004 164
Memorex	007 072 116 004
Metz	088
MGA	004 028 042 006 049 077 116 024
Minerva	088
Mitsubishi	109 024 124 006 004 040 116 146 028 042
MTC	101 002 004 006
Nikei	043
OnKing	043
Onwa	043
Optonica	019 081
Panasonic	034 080 092 056 164
Philco	003 024 056 059 060 063 064 164 004 143 006 127 143
Philips	164 038 070 093 003 004 143 059 160 005 006
Pioneer	135 025 023 006 018 116 027 176
Portand	004 143
Proscan	144 160 161 165 167
Proton	116 131 143 058 171 004 173
Quasar	034 092 056
Radio Shack	019 043 047 116 127 143
RCA	160 161 165 065 156 144 006 004 023 024 056 074 152
Realistic	007 019 043 047
Runco	168 169
Sampo	058 116 004 006
Samsung	050 089 101 105 113 116 127 133 137 143 160 004
Sanyo	166 007 057 082 020 053 021 033 039
Scott	028 043 116 004 048 143
Sears	015 030 004 007 028 057 143 094 160 116 082 101
Siemens	088
Singnature	072
Sony	070 147 126 085 139 041 079 185
Soundesign	028 003 043 116 004
Spectricon	112
SSS	004 043
Super Macy	002
Sylvania	003 059 060 063 064 164 044 160 116 127 140 004 006
Tandy	081
Tatung	056 062
Technics	084 034 080
Techwood	004
Teknika	002 003 004 024 028 043 072 101 143 031 077 103 006
Telefunken	037 046 086 087
Telerent	072
TMK	004 116
Toshiba	015 138 030 007 040 062 101 051
Totevision	143
Universal	008 009
Video Concepts	146
Vidtech	004 116
Wards	004 008 009 019 028 060 061 063 064 072 074 116 143 164
Yamaha	004 006
York	116 004
Yupiteru	043
Zenith	001 072 073 095 157 103 102 106 110 112 113 116 119 122 127 137 143 001 004
Zonda	112

VCR Codes

Brand	Code
Aiwa	034
Akai	146 043 046 124 125 016
Ampro	072
Audio dynamics	012 023 039 043
Broksonic	035 037 129
Canon	028 031 033
Capehart	108
Craig	003 040 135
Curtis Mathes	031 033 041
Daewoo	005 007 010 064 065 108 110 111 112 116 117 119
Daytron	108
DBX	012 023 039 043
Dynatech	034 053
Electrohome	059
Emerson	006 029 035 025 027 034 036 037 046 101 129 131 138 017 031 153
Fisher	003 008 009 010
Funai	034
General Electric	031 072 144 147 033 063 107 109
Go Video	132 136
Harman Kardon	012 045
Hitachi	004 026 034 043 150 063 137 018
Instant Replay	031 033
JCL	031 033
J.C Penny	012 013 015 066 040 033 101
Jensen	043
LG(Goldstar)	001 012 013 020 101 106 114 123

Remote Control Codes for TVs (Continued)

VCR Codes

Brand	Code
JVC	048 043 130 150 050 055 060 012 031 033 152
Kenwood	014 043 048 039 034 047
Lloyd	034
LXI	034 101 013 014 003 009 017 106
Magin	040
Magnavox	067 031 034 041 033 068
Marantz	031 067 012 033 069
Marta	101
Matsui	027 030
MEI	031 033
Memorex	101 003 010 014 031 034 053 072 139 134 033 102
MGA	045 046 059
Minolta	013 020
Mitsubishi	059 061 151 046 013 020 045 049
MTC	034 040
Multi Tech	024 034
NEC	012 023 043 048 039
Nordmende	043
Optonica	053 054
Panasonic	066 070 083 145 133 140 074
Pentax	013 020 031 033 063
Philco	031 034 067
Philips	031 067 034 101 054 033 071
Pilot	101
Pioneer	021 048 013
Portland	108
Pulsar	072
Quartz	011 014
Quasar	033 066 075 145
RCA	013 020 033 041 034 062 063 107 109 140 144 145 147 040
Realistic	003 008 010 014 031 033 034 040 053 054 101
Rico	058
Runco	148
Salora	014
Samsung	032 040 102 104 105 107 109 112 113 115 120 122 125
Sansui	022 043 048 135
Sanyo	003 010 014 134 007 102
Scott	017 037 129 112 131
Sears	003 008 010 013 014 081 101 009 020 031 042 017 073
Sharp	149 031 054
Shintom	024
Sony	009 056 057 058 077 003 149 052 076 031 078
Soundesign	034
STS	013
Sylvania	031 059 033 034 067
Symphonic	034
Tandy	010 034
Teac	034 039 043
Technics	031 033 070
Teknika	031 019 033 034 101
Thomas	034
TMK	006
Toshiba	112 131 008 047 059 082 042 013
Totevision	040 101
Unitech	040
Video Research	012
Video Concepts	012 046 034
Videonsonic	040
Wards	013 024 031 034 040 053 054 003 017 033 131
Yamaha	012 043 034 039
Zenith	001 072 080 056 048 034 101 058 012 013 020 106 114 123

DVD Codes

Brand	Code
JVC	012
LG (Goldstar)	001 010 016 025
Mitsubishi	002
Pioneer	004 026
Sony	007
Toshiba	019 008
Zenith	010 016 025 001

AUX (AUDIO) Codes

Brand	Code
Hitachi	010
JVC	006 039 049 050
KENWOOD	001 013 029 031 044
LG (Goldstar)	005
Luxman	017
Marantz	002 021 028 030 032 035
NAD	014
ONKYO	008 009 025 040 041
Optimus	011 013 022
Panasonic	003 015 036 046
Quasar	003 036
RCA	004
Sharp	013 029 043 045
Sherwood	012 019
Sony	027 034 038 048 053
Toshia	042
Victor	006 039

AUX (CD) Codes

Brand	Code
Adc	104
Aiwa	149 178 189 202 212
Akai	134 165 200
Denon	101 190 221 222 223
Emerson	133 136 152 166 175
Marantz	129 135 141 159 224 225 226
Fisher	113 122 138 140 168
GE	209
Hitachi	133 166
JVC	117 196 227 228
KENWOOD	105 110 113 118 144 154 155 198 200 216 217
Luxman	108 123 153 173
Magnavox	127 135 172 179 180
Mcs	111 147 156 169
Mitsubishi	120 179 229 230 231
Onkyo	125 126 130 131 213 215 232
Optimus	100 107 110 124 139 140 145 146 162 164 165 170 163
Panasonic	106 151 176 184 203 219 233
Philips	127 135 195 199 237
Pioneer	107 124 167 171 179 187 191 205 206 207
Quasar	106 176
Radio shack	186 188
Sanyo	121 140 158 168
Sears	147
Sharp	110 141 150 181 200 204 210 150 217
Sherwood	102 115 116 128 141 193
Sony	100 142 168 174 182 183 192 208 234 235 236
Technics	106 148 151 176 184 203 214 218
Teac	103 112 132 141 160 161 177 185 161 197 201
Yamaha	109 119 137 143 194 211

STB Codes

Brand	Code
LG	**001 (LST-3410A Code)**
Zenith	002, 001

Troubleshooting

Check the following guide for the possible cause of a problem before contacting a Service Centre.

Symptom	Solution(s)
The unit does not turn on.	• Plug the power cord into a wall power outlet securely.
Fragmented picture and unclear sound.	• Check your antenna input, location, and signal strength.
No picture.	• Make sure the correct video display format is selected. • Make sure that the right component type is selected. • If the unit is connected to your monitor or TV via the COMPONENT VIDEO jacks on the back panel, the Output Selection must be set to YPbPr (refer to Display Format Setup on page 17.). Otherwise, you will probably see an abnormal picture. • If the unit is connected to your monitor or TV via the RGB port on the back panel,Output Selection must be set to RGB (refer to Display Format Setup on page 17.). Otherwise, you may not be able to see a picture. • Select the Auto Program or Program Edit functions if you have not already done so. • Check to make sure all the cables are installed correctly and that the proper source is selected on your TV. For example, Video 1 or 2. • The antenna signal strength may be low. Check the signal strength and adjust the antenna location and direction. • Due to copyright restrictions, you may not be able to view some high definition programs in the high definition format. • For more information about connections, please refer to connections on pages 9-14.
Normal picture but no sound.	• Check volume levels. • Make sure the TV is not muted. • Check that the unit is connected properly.
Picture is distorted.	• Make sure the proper format is selected. • Make sure the proper aspect ratio is selected. • Make sure the video output is connected to the TV.
The remote control does not work properly.	• Point the remote control on the remote sensor on the unit. • Operate the remote control within 7 m. • Remove possible obstacles blocking the signal. • Replace exhausted batteries with new ones.

Specifications

	Television System	DVB-T Australian Standard Compliant
	Frequency Range	VHF : 177.5 to 226.5 MHz UHF : 529.5 to 816.5 MHz
Input/Output	**RF Inputs**	ANT IN (1) 75 ohm unbalanced
	RF OUT	Out To TV (1)
	HDMI Output	HDMI Out (1), 19 pin (HDMI standard, Type A) 1080i, 720p, 576p digital RGB
	Component Video Output	Component Out (1 Set), Typical RCA type Jack connectors 1080i, 720p, 576p, 576i YPbPr
	RGB Output	RGB Out (1), 15-pin connector 1080i, 720p, 576p RGB
	S-Video Output	S-Video Out (1), 4-pin Mini-DIN 576i Y/C
	Video Output	Video Out (1), Typical RCA type Jack connector 576i Composite
	Digital Audio Output	Coaxial, Optical (Dolby Digital, PCM output)
	Analog Audio Output	Audio Out (2) (Variable Output Level)
	Authorized Service Port	9-pin Serial Port (1)
	Hard Disk Drive	160G Bytes (LST-5402P), 250G Bytes (LST-5403P)
	Dimension (W x H X D)	430 x 76.5 x 326 mm
	Weight	4.4 kg
	Power Requirements	AC 110-240V, 50/60Hz
	Power Consumption	35W
Environment	**Humidity**	0 to 99 percent non condensing
	Storage Temperature	-20 to 60 degrees Celsius
	Operating Temperature	0 to 40 degrees Celsius
Accessories	RF cable . . . . . .1 Video and Audio (L/R) cable . . . . .1 Component (YPbPr) cable . . . . . .1 Remote Control . . . . . .1 Batteries (size AA) 2	

- Design and specifications are subject to change without prior notice.



LG Electronics Inc.

P/NO : 3834RB0001Z