LG

Life's Good

LCD TV | PLASMA TV
OWNER'S MANUAL

LCD TV MODEL

42LG70ER

PLASMA TV MODELS

42PG30TR
50PG30TR

Please read this manual carefully before operating your set.
Retain it for future reference.
Record model number and serial number of the set.
See the label attached on the back cover and quote this information to your dealer
when you require service.

FOR LCD TV

■ If the TV feels cold to the touch, there may be a small "flicker" when it is turned on. This is normal, there is nothing wrong with TV.

■ Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor's performance.

■ Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

On Disposal

a. The fluorescent lamp used in this product contains a small amount of mercury.

b. Do not dispose of this product with general household waste.

c. Disposal of this product must be carried out in accordance to the regulations of your local authority.

WARNING / CAUTION

WARNING / CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

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/CAUTION

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

SAFETY INSTRUCTIONS

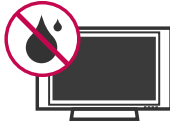## IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.
Keep these instructions.
Heed all warnings.
Follow all instructions.

1   Do not use this apparatus near water.

2   Clean only with dry cloth.

3   Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

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

5   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.

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

7   Only use attachments/accessories specified by the manufacturer.

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

S3125A

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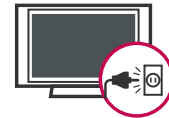
10 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate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

11 Never touch this apparatus or antenna during a thunder or lighting storm.

12 When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

13 Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.

14 CAUTION concerning the Power Cord :

It is recommend that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain.

Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock.

Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not make the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.

15 WARNING - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.

16 Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).

17 GROUNDING

Ensure that you connect the earth ground wire to prevent possible electric shock. (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grouned AC outlet) If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.

Short-circuit Breaker

Power Supply
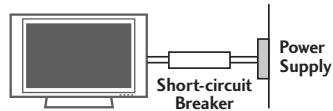
18 DISCONNECTING DEVICE FROM MAINS

Mains plug is the disconnecting device. The plug must remain readily operable.
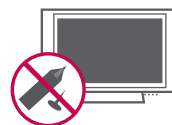
19 Keep the product away from direct sunlight.

20 Cleaning

When cleaning, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

21 Moving

Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

22 Ventilation

Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g.) plastic while plugged in. Do not install in excessively dusty places.

23 If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord contact an authorized service center.

24 Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.

CONTENTS

SOUND & LANGUAGE CONTROL

TIME SETTING

APPENDIX

PREPARATION

ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

The accessories included may differ from the images below.

Owner's Manual

Remote Control

**Batteries
(Some models)**

Power Cord

RF Adapter
You must connect it to the antenna wire after fixing in Antenna Input.
This adapter is only supplied in **Argentina**.
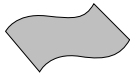
Polishing Cloth
(This feature is not available for all models.)

* Wipe spots on the exterior only with the polishing cloth.

* Do not wipe roughly when removing stain. Please be cautions of that excessive pressure may cause scratch or discoloration.

For Plasma TV models

x 4

**Bolts for stand assembly
(Refer to P.12)**
(Only 42PG30TR)

**Protection Cover
(Refer to P.16)**

**Cable Holder
42PG30TR: 1EA,
50PG30TR: 2EA**
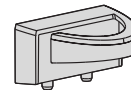
Cable Management Clip

For LCD TV models

x 4   x 4

**Bolts for stand assembly
(Refer to P.13)**
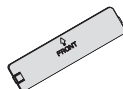
**Protection Cover
(Refer to P.16)**

TIME MACHINE HOME MENU

This menu is a contents guide.

In Home Menu, you enter the Recorded list of TIME MACHINE, Manual Record of TIME MACHINE, Schedule List, Photo List, Music List, Movie List or TV Menu.

TIME MACHINE
Home

Free Space
HIGH 19h 03m
NORMAL 32h 36m

Recorded TV ▶p.50

Manual Record

Schedule List

Photo List ▶p.66~74

Music List

Movie List

TV Menu
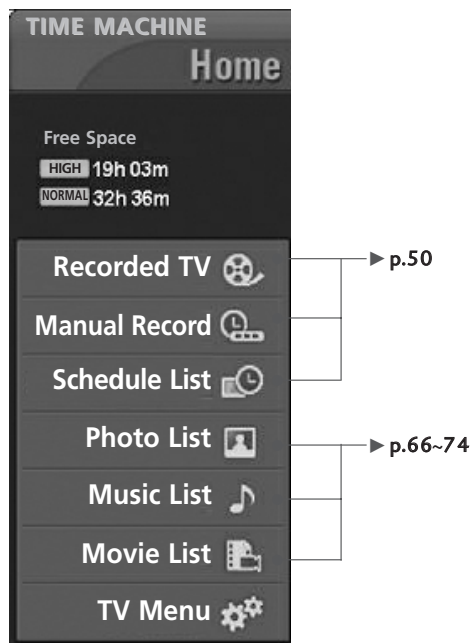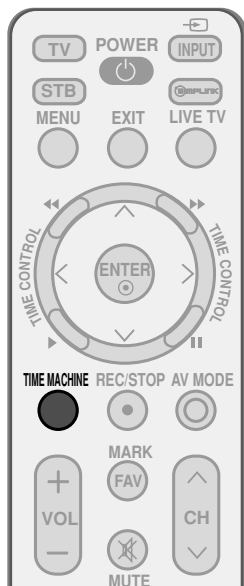
FRONT PANEL INFORMATION

- ▪ Image shown may differ from your TV.

- ▪ **NOTE**: If your TV has a protection tape attached, remove the tape.
  And then wipe the TV with a cloth (If a polishing cloth is included with your TV, use it).

Plasma TV Model

Remote Control Sensor

POWER Button

Power/Standby Indicator
Illuminates red in standby mode.
Illuminates green when the set is switched on.

INPUT	MENU	ENTER ◉	— VOL ＋	▼ CH ▲
INPUT Button	MENU Button	ENTER Button	VOLUME (-, +) Buttons	CHANNEL (▼,▲)Buttons

LCD TV Model

Intelligent Sensor
Adjusts picture according to the surrounding conditions

Power/Standby Indicator
Illuminates red in standby mode.
Illuminates blue when the set is switched on.
(Can be adjusted using **Power Indicator** in the OPTION menu. ▶ **p.91**)

Remote Control Sensor

POWER Button

CH — **CHANNEL (∧ , ∨) Buttons**

VOL — **VOLUME (+, -) Buttons**

ENTER ◉ — **ENTER Button**

MENU — **MENU Button**

INPUT — **INPUT Button**

9

PREPARATION

BACK PANEL INFORMATION

■ Image shown may differ from your TV

Plasma TV Model

LCD TV Model

10
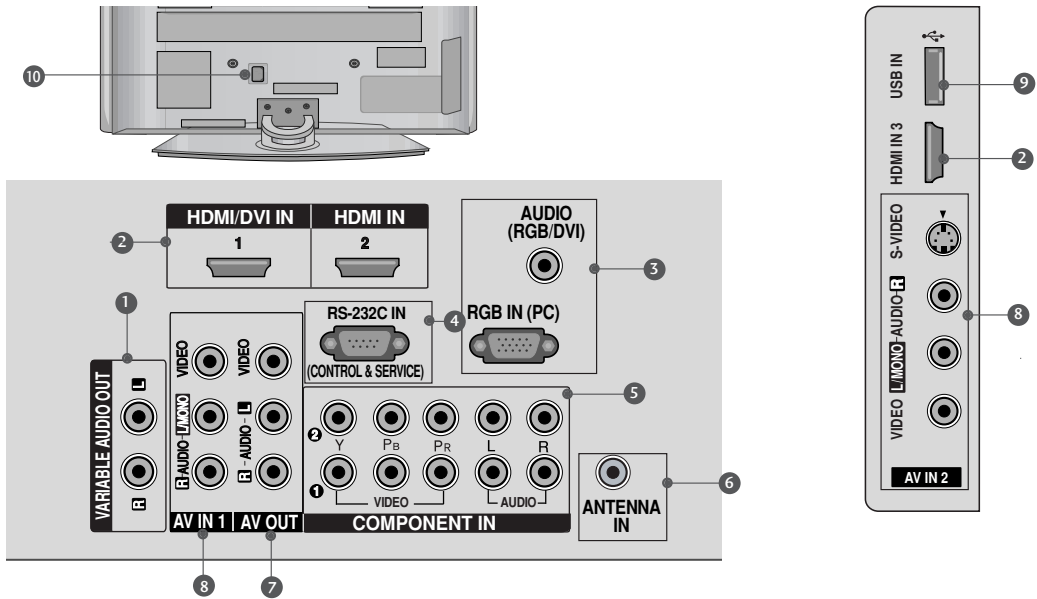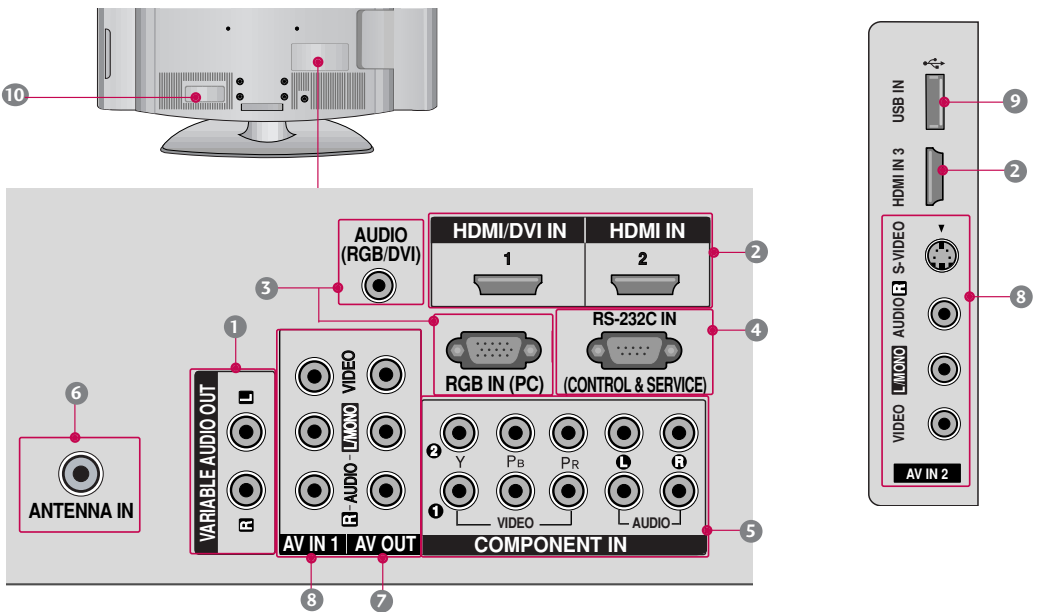
❶ VARIABLE AUDIO OUT

Connect an external amplifier or add a subwoofer to your surround sound system.

❷ HDMI/DVI IN, HDMI IN

Digital Connection.

Supports HD video and Digital audio. Doesn't support 480i.

Accepts DVI video using an adapter or HDMI to DVI cable (not included)

❸ RGB IN (PC)

Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).

AUDIO (RGB/DVI)

1/8" headphone jack for analog PC audio input.

❹ RS-232C IN (CONTROL & SERVICE) PORT

Used by third party devices.

❺ COMPONENT IN

Analog Connection.

Supports HD.

Uses a red, green, and blue cable for video & red and white for audio.

❻ ANTENNA IN

Connect over-the-air signals to this jack.

❼ AV OUT

Connect second TV or monitor to the AV OUT socket on the set.

❽ AV (Audio/Video) IN

Analog composite connection. Supports standard definition video only (480i).

S-VIDEO

Better quality than standard composition. Supports standard definition video only (480i).

❾ USB INPUT

Used for viewing photos, listening to MP3s.

❿ Power Cord Socket

For operation with AC power.

Caution: Never attempt to operate the TV on DC power.

STAND INSTALLATION

▪ Image shown may differ from your TV.

▪ While assembling, do not overtighten the screws. But, do make sure the screws are tight. Loose screws may allow the TV to lean forward to far and tip over.

Plasma TV Model (Only 42PG30TR)

① Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.
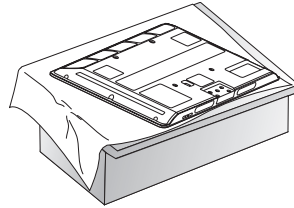
② Insert the stand as shown.
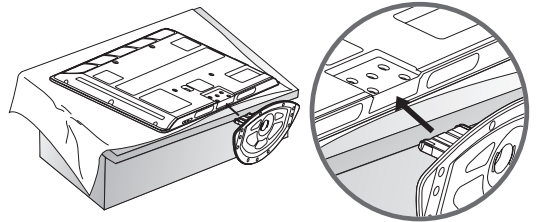
③ Attach the 4 screws supplied with the TV.
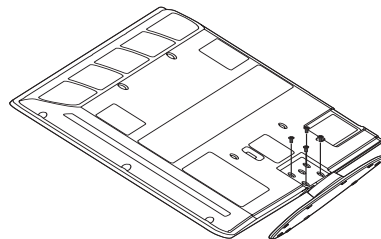
LCD TV Model

1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.
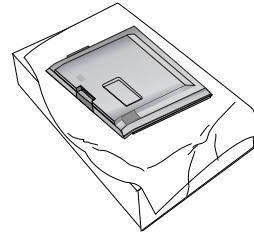
2 Attach the **STAND BODY** to the **COVER BASE** of the TV. Only use the screws supplied with the TV.

STAND BODY

COVER BASE
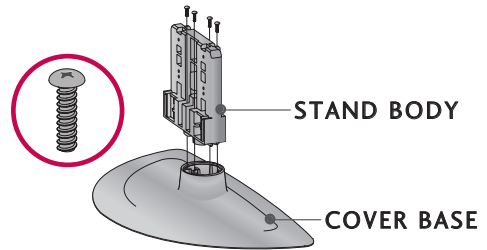
3 Insert the stand as shown.
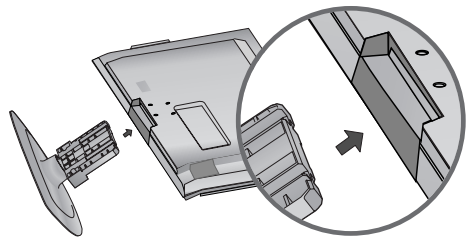
4 Attach the 4 screws supplied with the TV.
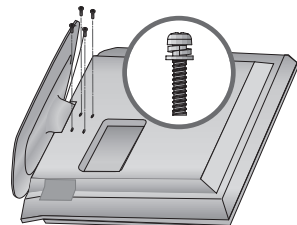
BACK COVER FOR WIRE ARRANGEMENT

■ Image shown may differ from your TV

Plasma TV Model

1 Connect the cables as necessary.
To connect an additional equipment, see the
EXTERNAL EQUIPMENT SETUP section.
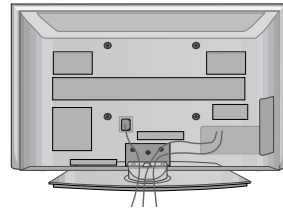
2 Install the **CABLE MANAGEMENT CLIP** as
shown.
If your TV has CABLE HOLDER, fix it as shown
and bundle the cables.

42PG30TR   **50PG30TR**

CABLE MANAGEMENT CLIP   CABLE MANAGEMENT CLIP

CABLE HOLDER

CABLE HOLDER
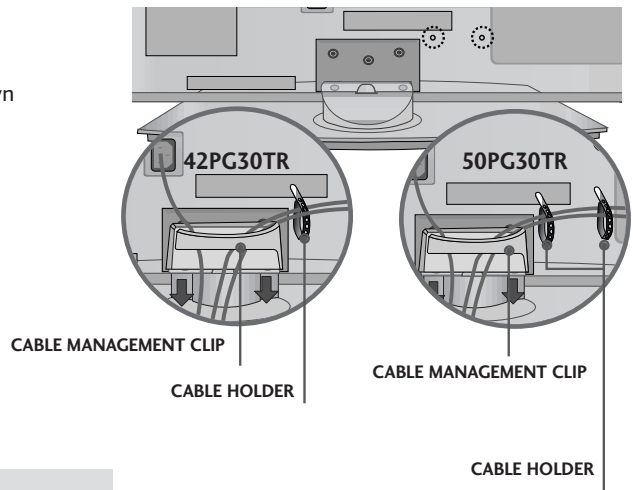
❶ NOTE

▶ Do not hold the **CABLE MANAGEMENT** when moving
the TV.
- If the product is dropped, you may be injured or the
TV may be broken.

How to remove the CABLE MANAGEMENT CLIP

▶ Hold the **CABLE MANAGEMENT CLIP** with both hands
and pull it backward.
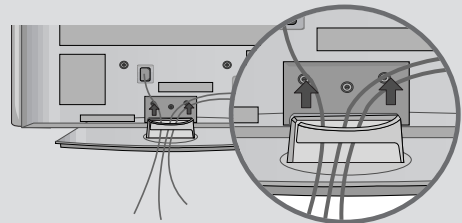
LCD TV Model

1 Connect the cables as necessary.
To connect an additional equipment, see the
EXTERNAL EQUIPMENT SETUP section.
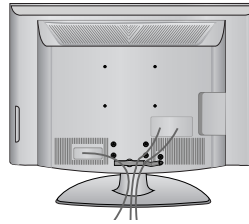
2 Install the **CABLE MANAGEMENT CLIP** as
shown and manage the cable.

CABLE MANAGEMENT CLIP
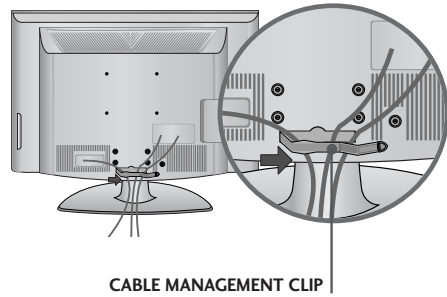
3 Fit the **CABLE MANAGEMENT CLIP** as shown.
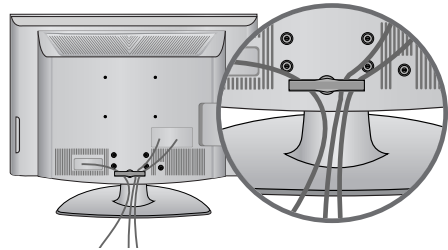
PREPARATION

SWIVEL STAND

After installing the TV, you can adjust the TV set manually to the left or right direction by 20 degrees to suit your viewing position.
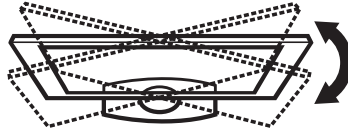
PROTECTION COVER

■ Image shown may differ from your TV

You can remove the stand before installing the TV on a wall mount by performing the previous stand instructions in reverse. After removing the stand, install the included **PROTECTION COVER** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.

Detach the protection cover after pressing the left/right buttons.
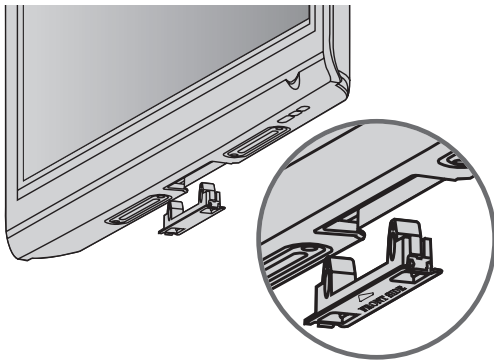
Plasma TV Model   **LCD TV Model**
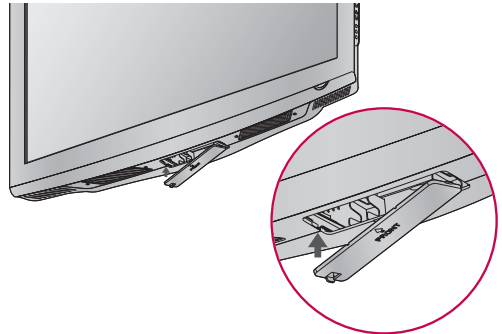
SECURING THE TV TO THE WALL TO PREVENT FALLING

■ You should purchase necessary components to prevent TV from falling off of the stand.
■ Image shown may differ from your TV.

We recommend that you set up the TV close to a wall so it cannot fall over if pushed backwards.

Additionally, we recommend that the TV be attached to a wall so it cannot be pulled in a forward direction, potentially causing injury or damaging the product.

Caution: Please make sure that children don't climb on or hang from the TV.
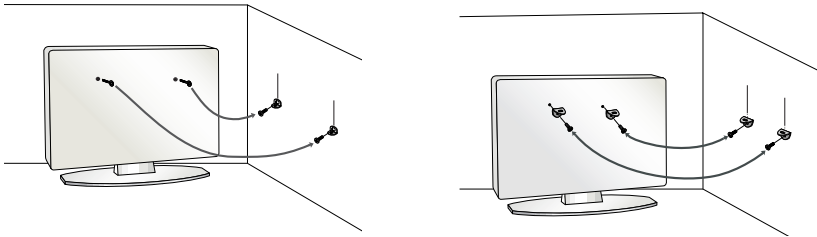
■ Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.
  *If your product has the bolts in the eye-bolts position before inserting the eye-bolts, loosen the bolts.
  * Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.
  Secure the wall brackets with the bolts (not provided as parts of the product, must purchase separately) to the wall. Match the height of the bracket that is mounted on the wall to the holes in the product.
  Ensure the eye-bolts or brackets are tightened securely.
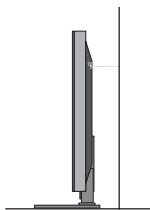
■ Use a sturdy rope (not provided as parts of the product, must purchase separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

🛈 NOTE

▶ When moving the TV, undo the cords first.
▶ Use a platform or cabinet strong and large enough to support the size and weight of the TV
▶ To use the TV safely make sure that the height of the bracket on the wall and on the TV is the same.

PREPARATION

DESKTOP PEDESTAL INSTALLATION

■ This part mainly use picture for Plasma TV model.

For adequate ventilation allow a clearance of 4" (10cm) all around the TV.

4 inches

4 inches

4 inches

4 inches
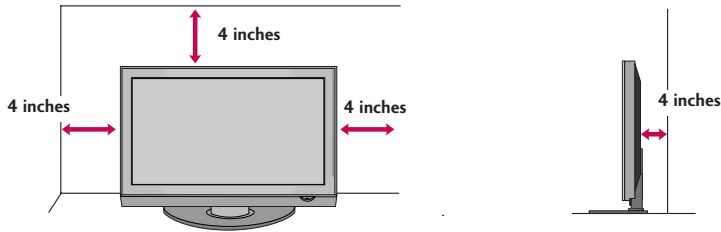
WALL MOUNT: HORIZONTAL INSTALLATION

For adequate ventilation allow a clearance of 4" (10cm) all around the TV. We recommend that you use an LG brand wall mount when mounting the TV to a wall.

4 inches

4 inches

4 inches

4 inches

4 inches
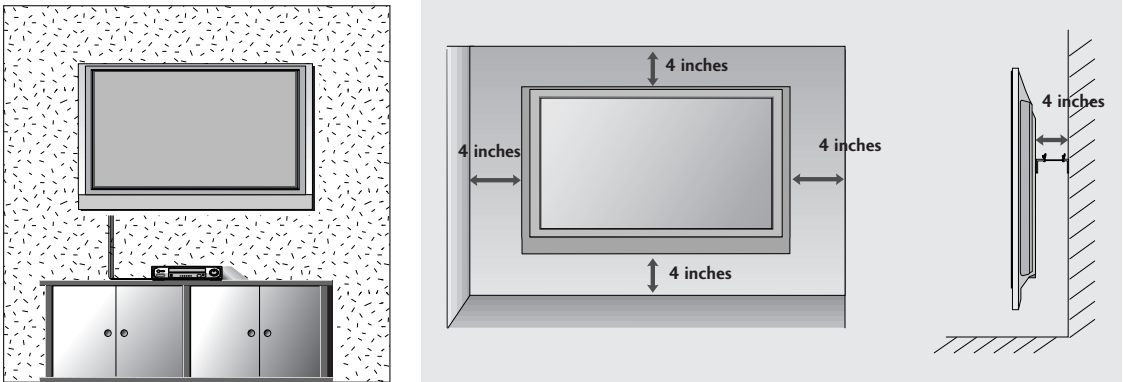
■ To prevent damage do not connect to the power outlet until all connections are made between the devices.

ANTENNA CONNECTION

Wall Antenna Socket or Outdoor Antenna without a Cable Box Connections.
For optimum picture quality, adjust antenna direction if needed.

Wall Antenna Socket

**Multi-family Dwellings/Apartments
(Connect to wall antenna socket)**

Outdoor Antenna

RF Coaxial Wire (75 ohm)

**Single-family Dwellings /Houses
(Connect to wall jack for outdoor antenna)**

ANTENNA IN

Copper Wire

Be careful not to bend the bronze wire when connecting the antenna.

Antenna

UHF

Signal Amplifier

VHF
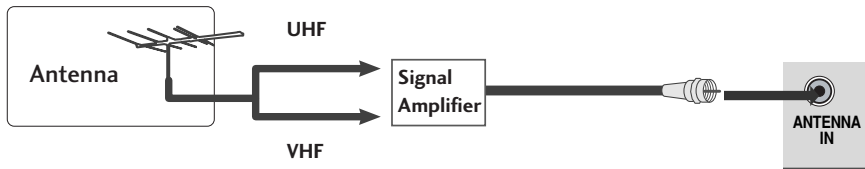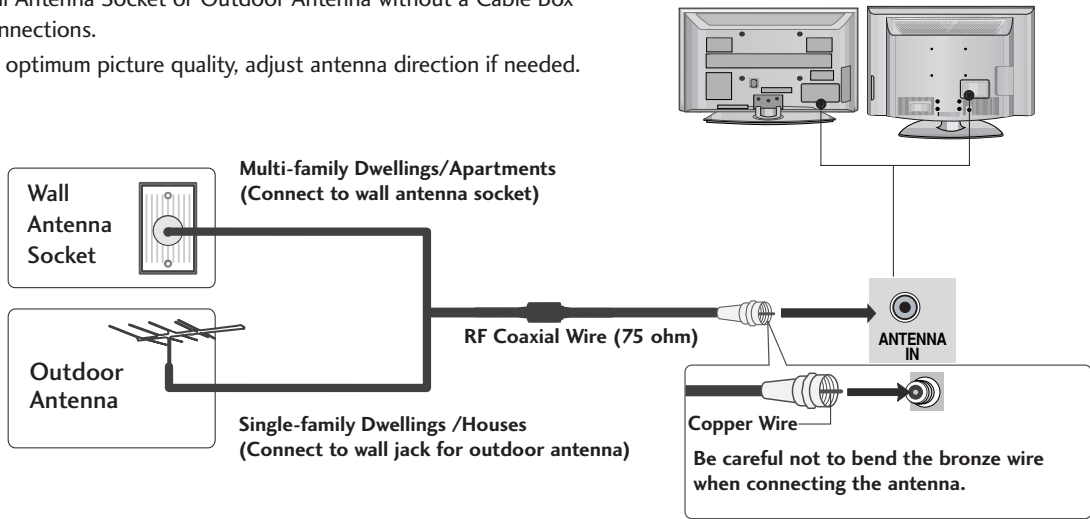
ANTENNA IN

■ To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
■ If the antenna needs to be split for two TV's, install a 2-Way Signal Splitter.
■ If the antenna is not installed properly, contact your dealer for assistance.

EXTERNAL EQUIPMENT SETUP

■ To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
■ This part of EXTERNAL EQUIPMENT SETUP mainly use picture for Plasma TV models.

HD RECEIVER SETUP

Component Connection

1. How to connect

1 Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO 1** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).

2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO 1** jacks on the TV.
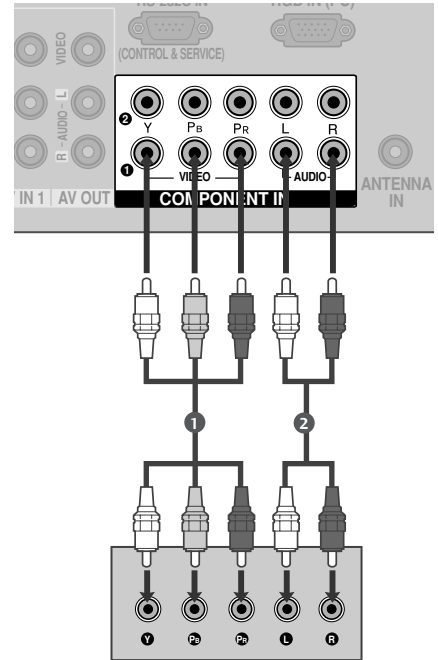
2. How to use

■ Turn on the digital set-top box.
  (Refer to the owner's manual for the digital set-top box. operation)
■ Select the **Component 1** input source on the TV using the **INPUT** button on the remote control.
■ If connected to **COMPONENT IN2** input, select the **Component 2** input source on the TV.

Supported Resolutions

Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p (50/60Hz)	Yes	Yes

Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73 15.75	59.94 60.00
720x480p	31.47 31.50	59.94 60.00
1280x720p	37.50 44.96 45.00	50.00 59.94 60.00
1920x1080i	28.125 33.72 33.75	50.00 59.94 60.00
1920x1080p	56.25 67.50	50.00 60.00

HDMI Connection

1. How to connect

1 Connect the digital set-top box to **HDMI/DVI IN 1**, **HDMI IN 2**, or **3** jack on the TV.

2 No separate audio connection is necessary. HDMI supports both audio and video.

2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI1/DVI**, **HDMI2**, or **HDMI3** input source on the TV using the **INPUT** button on the remote control.
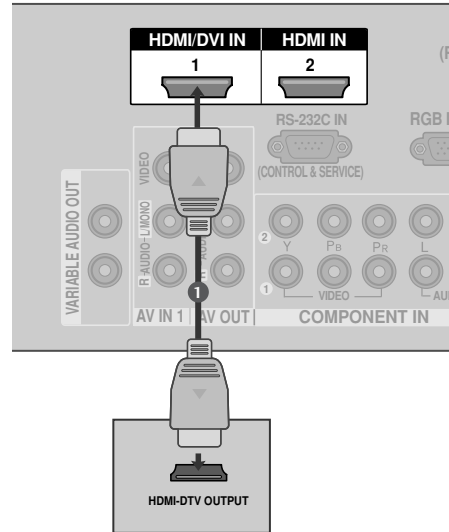
HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480p	31.47 31.50	59.94 60.00
1280x720p	37.50 44.96 45.00	50.00 59.94 60.00
1920x1080i	28.125 33.72 33.75	50.00 59.94 60.00
1920x1080p	56.25 67.50	50.00 60.00

🛈 NOTE

▶ If you use unsupported resolution, there may be noise associated with the resolution, vertical pattern, contrast or brightness.

EXTERNAL EQUIPMENT SETUP

DVI to HDMI Connection
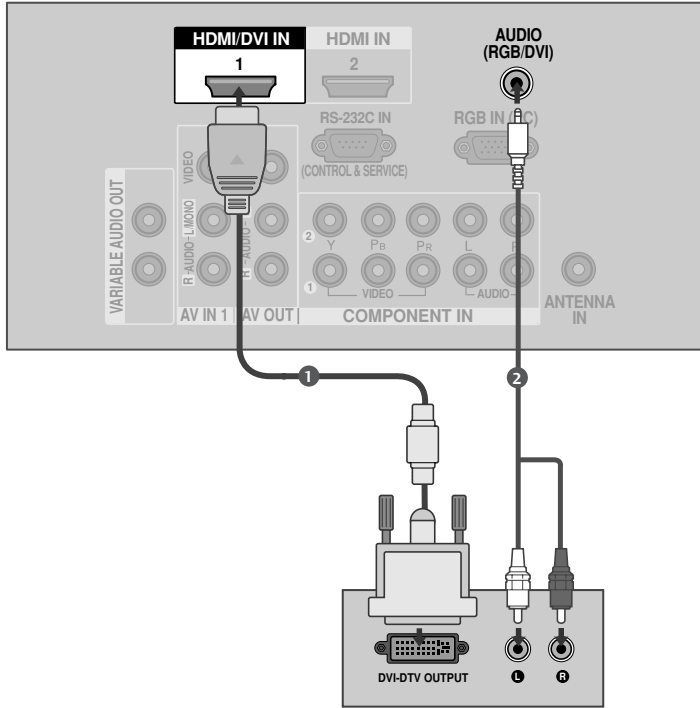
1. How to connect

1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN 1** jack on the TV.

2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the TV.

2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select **HDMI1/DVI** input source on the TV using the **INPUT** button on the remote control.

DVD SETUP

Component Connection

1. How to connect

1 Connect the video outputs (Y, P$_B$, P$_R$) of the DVD to the **COMPONENT IN VIDEO1** jacks on the TV.
Match the jack colors (Y = green, P$_B$ = blue, and P$_R$ = red).

2 Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO1** jacks on the TV.

2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **Component 1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **COMPONENT IN 2** input, select the **Component 2** input source on the TV.
- Refer to the DVD player's manual for operating instructions.
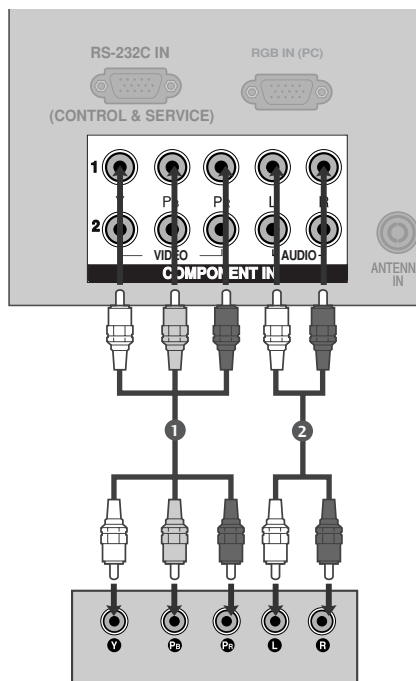
Component Input ports

To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	P$_B$	P$_R$

	Y	P$_B$	P$_R$
Video output ports on DVD player	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

EXTERNAL EQUIPMENT SETUP

S-Video Connection

1. How to connect

1 Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the TV.

2 Connect the audio outputs of the DVD to the **AUDIO** input jacks on the TV.

2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.
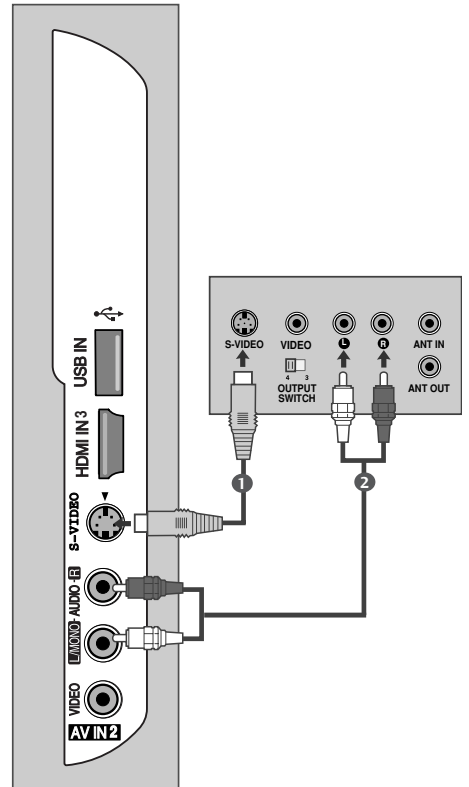
HDMI Connection

1. How to connect

1 Connect the HDMI output of the DVD to the **HDMI/DVI IN 1**, **HDMI IN 2**, or **3** jack on the TV.

2 No separate audio connection is necessary. HDMI supports both audio and video.

2. How to use

- Select the **HDMI1/DVI** or **HDMI2** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.
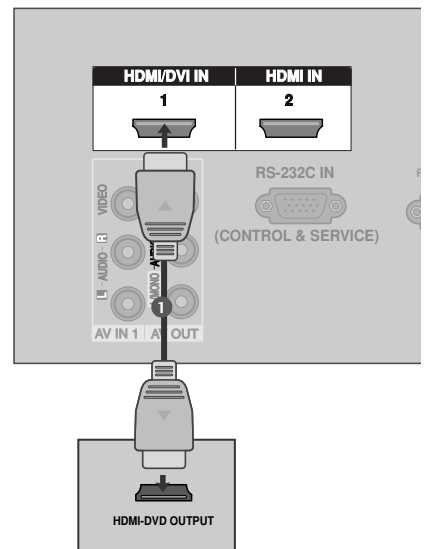
VCR SETUP

■ To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
■ Use the ISM feature in the Option menu to avoid having a fixed image remain on the screen for a long period of time (Plasma TV models only). If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen. This phenomenon is common to all TVs and is not covered by warranty.

Antenna Connection
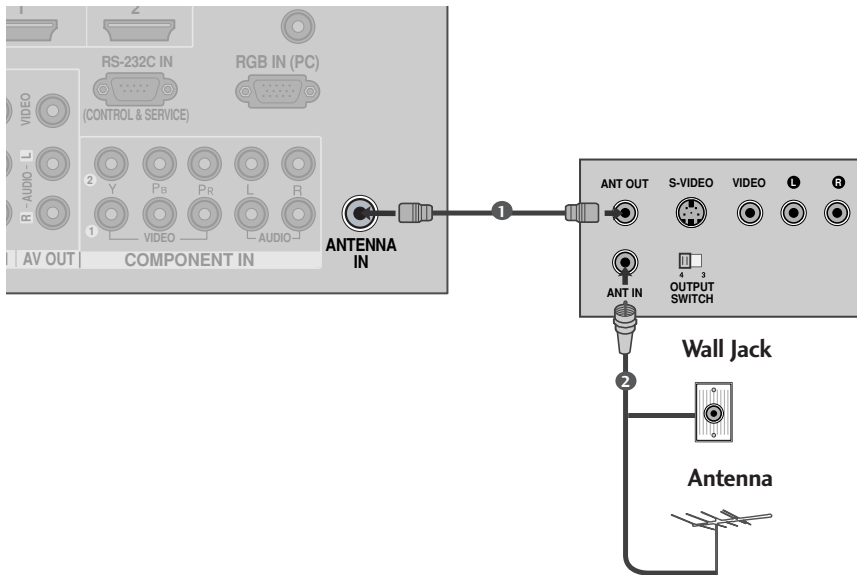
1. How to connect

1 Connect the RF antenna out socket of the VCR to the **ANTENNA/CABLE IN** socket on the TV.

2 Connect the antenna cable to the RF antenna in socket of the VCR.

2. How to use

■ Set VCR output switch to 3 or 4 and then tune TV to the same channel number.
■ Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

EXTERNAL EQUIPMENT SETUP

Composite (RCA) Connection

1. How to connect

1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

2. How to use

■ Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
■ Select the **AV1** input source on the TV using the **INPUT** button on the remote control.
■ If connected to **AV IN2**, select **AV2** input source on the TV.

! NOTE

▶ If you have a mono VCR, connect the audio cable from the VCR to the **AUDIO L/MONO** jack of the TV.
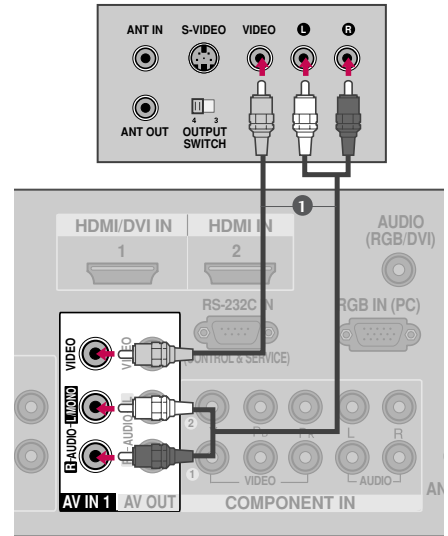
S-Video Connection

1. How to connect

1 Connect the S-VIDEO output of the VCR to the **S-VIDEO** input on the TV.

1 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the TV.

2. How to use

■ Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
■ Select the **AV2** input source on the TV using the **INPUT** button on the remote control.

! NOTE

▶ S-Video provides better quality than composite. Use it when available.
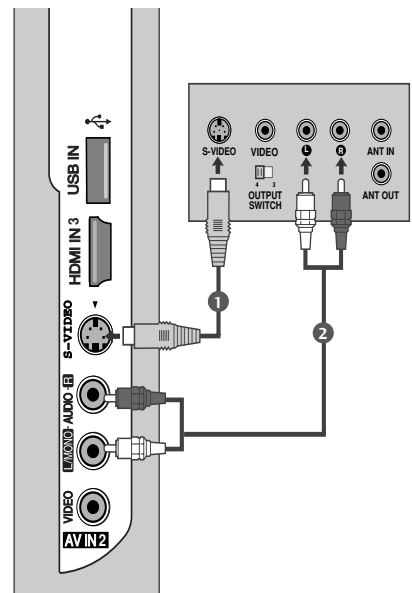
OTHER A/V SOURCE SETUP

1. How to connect

Camcorder

Video Game Set

❶ Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colors.

(Video = yellow, Audio Left = white, and Audio Right = red)

2. How to use

- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN1** input, select the **AV1** input source on the TV.
- Operate the corresponding external equipment.
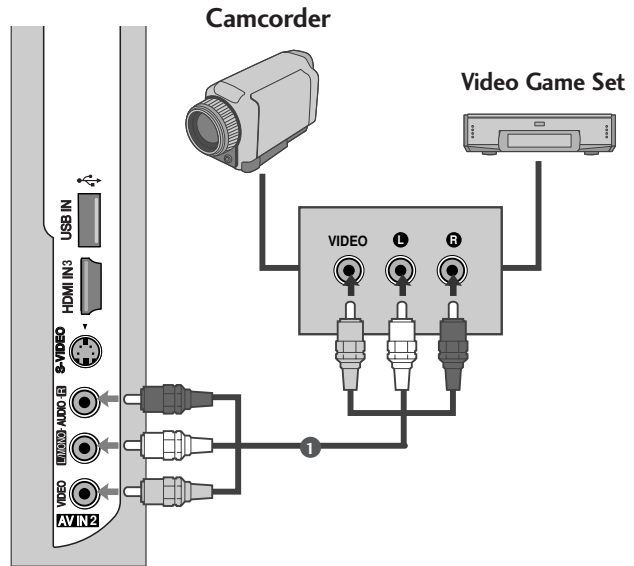
USB CONNECTION

1. How to connect

❶ Connect the USB device to the **USB IN** jack on the side of TV.

or

Memory Stick

2. How to use

- After connecting the **USB IN** jack, you use the **TIME MACHINE** function. (▶ **p.50**)
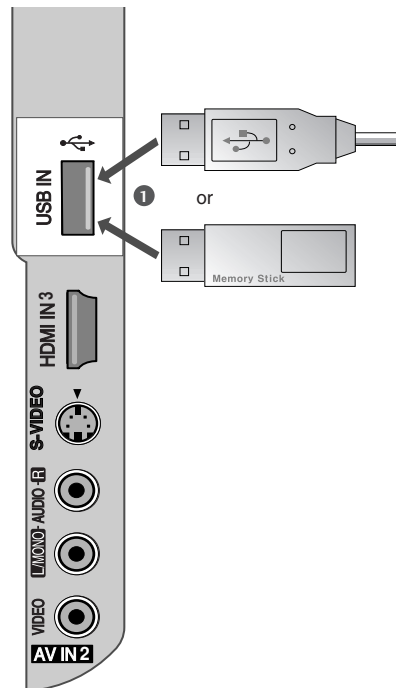
AV OUT SETUP

The TV has a special signal output capability which allows you to hook up the second TV or monitor.

1. How to connect

① Connect the second TV or monitor to the TV's **AV OUT** jacks.

2. How to use

■ See the Operating Manual of the second TV or monitor for further details regarding that device's input settings.

🛈 NOTE

▶ Component, RGB, HDMI input sources cannot be used for AV out.

▶ We recommend to use the AV OUT jacks for VCR recording.
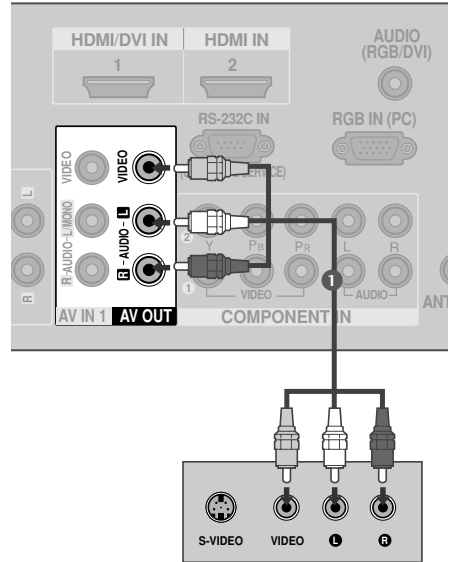
EXTERNAL STEREO SETUP

Use to connected either an external amplifier, or add a sub-woofer to your surround sound system.

1. How to connect

① Connect the input jack of the stereo amplifier to the **VARIABLE AUDIO OUT** jacks on the TV.

2. How to use

■ Set up your speakers through your analog stereo amplifier, according to the instructions provided with the amplifier.

❶ NOTE

▶ When connecting with external audio equipments, such as amplifiers or speakers, please turn the TV speakers off. (▶ **p.96**)
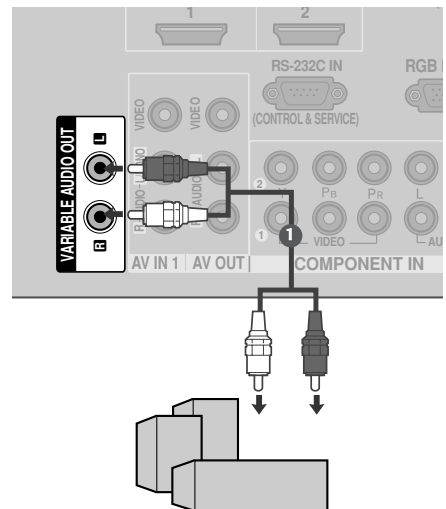
PC SETUP

This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

VGA (D-sub 15 pin) Connection

1. How to connect

1 Connect the VGA output of the PC to the **RGB IN (PC)** jack on the TV.

2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the TV.

2. How to use

■ Turn on the PC and the TV.
■ Select the **RGB-PC** input source on the TV using the **INPUT** button on the remote control.
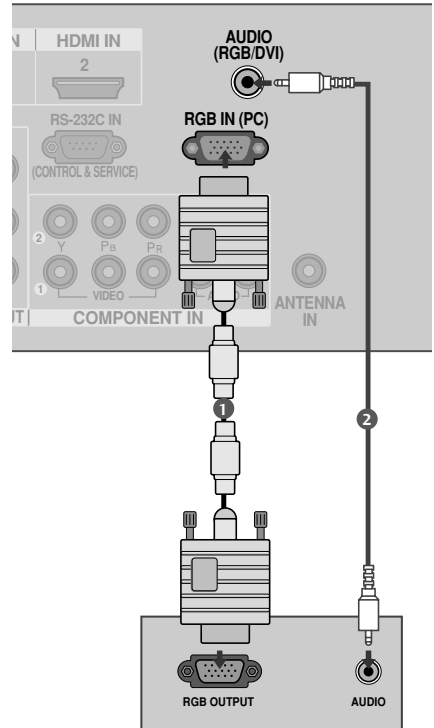
Supported Display Resolution (RGB PC mode)

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.468	70.08
640x480	31.469 37.500	59.94 75.00
800x600	37.879 46.875	60.31 75.00
1024x768	48.363 56.476 60.023	60.00 70.06 75.02
1280x768	47.776	59.87
1280x1024	64.00	60.00
1360x768	47.712	60.01
1366x768	47.70	60.01
1920x1080	66.59	59.93

LCD TV model only

SETUP

EXTERNAL EQUIPMENT SETUP

🛈 NOTE

► Avoid keeping a fixed image on the screen for a long period of time. The fixed image may become permanently imprinted on the screen.

► In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear.

► The synchronization input form for Horizontal and Vertical frequencies is separate.

► We recommend using 1024x768, 60Hz (42PG30TR) / 1360x768, 60Hz (50PG30TR) / 1920x1080, 60Hz (42LG70ER) for the PC mode, they provide the best picture quality.

► This set uses a VESA Plug and Play Solution. The set provides EDID data to the PC system with a DDC protocol. The PC adjusts automatically when using this set.

► DDC protocol is preset for RGB (Analog RGB), HDMI (Digital RGB) mode.

► If required, adjust the settings for Plug and Play functionally.

► If graphic card on the PC does not output analog and digital RGB simultaneously, connect only one of either RGB or HDMI IN (or HDMI/DVI IN) to display the PC on the set.

► If graphic card on the PC does output analog and digital RGB simultaneously, set the set to either RGB or HDMI; (the other mode is set to Plug and Play automatically by the set.)

► Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.

► When you use too long RGB-PC cable, there might be a noise on the screen. We recommend using under 5m of the cable. It provides the best picture quality.

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SCREEN SETUP FOR PC MODE

Auto Configure (RGB mode only)

Automatically adjusts picture position and minimizes image shaking. After adjustment, if the image is still not correct, your set is functioning properly but needs further adjustment.

Auto configure

This function is for the automatic adjustment of the screen position, clock, and phase. The displayed image will unstable for a few seconds while the auto configuration is in progress.

1 Press the **MENU** button and then use $\wedge$ or $\vee$ button to select the **PICTURE** menu.
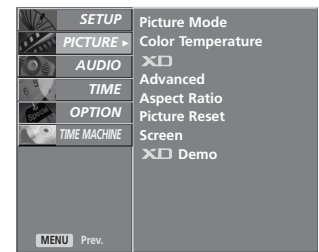
2 Press the $>$ button and then use $\wedge$ or $\vee$ button to select **Screen**.

3 Press the $>$ button and then use $\wedge$ or $\vee$ button to select **Auto Config**.

4 Press the $>$ button to start **Auto Config**.

  ■ When **Auto Config.** has finished, OK will be shown on screen.
  ■ If the position of the image is still not correct, try Auto adjustment again.

  ■ If picture needs to be adjusted more after Auto adjustment in RGB, you can adjust the **Manual Config**.

5 Press the **EXIT** button to return to TV viewing.

EXTERNAL EQUIPMENT SETUP
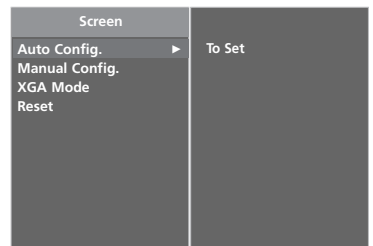
Adjustment for screen Phase, Clock, Position

If the picture isn't clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually. To correct the screen size, adjust Clock.
This function works in the following mode: RGB, Component.
It's not available to use Phase, Clock function in Component.

Clock This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.

Phase This function allows you to remove any horizontal noise and clear or sharpen the image of characters.
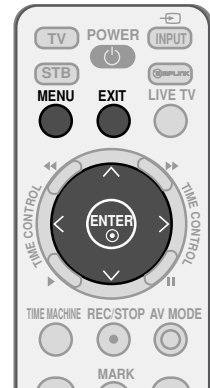
① Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

❶

② Press the ＞ button and then use ∧ or ∨ button to select **Screen**.

③ Press the ＞ button and then use ∧ or ∨ button to select **Manual Config.**.

❷

④ Press the ＞ button and then use ∧ or ∨ button to select **Phase**, **Clock**, **H-Position** or **V-Position**.

⑤ Press the ＜ or ＞ button to make appropriate adjustments.

⑥ Press the **EXIT** button to return to TV viewing.

❸ ❹ ❺

Selecting Wide XGA mode

To see a normal picture, match the resolution of RGB mode and selection of XGA mode.

This function works in the following mode: RGB-PC mode.
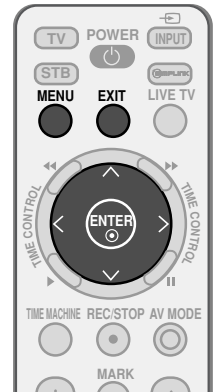
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the ＞ button and then use ∧ or ∨ button to select **Screen**.

3 Press the ＞ button and then use ∧ or ∨ button to select **XGA Mode**.

4 Press the ＞ button and then use ∧ or ∨ button to select the desired XGA resolution.

5 Press the **EXIT** button to return to TV viewing.

SETUP
PICTURE ►
AUDIO
TIME
OPTION
TIME MACHINE

Picture Mode
Color Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

MENU Prev.

❶

Picture Mode
Color Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen   ►   To Set
XD Demo

❷

Screen

Auto Config.
Manual Config.   √ 1024 X 768
XGA Mode   ►   1280 X 768
Reset   1360 X 768

❸ ❹
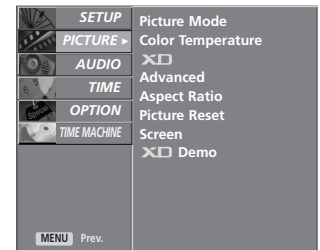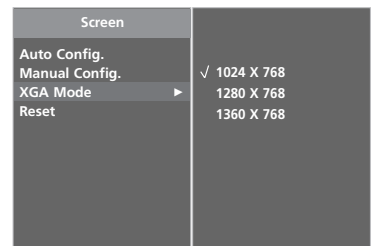
Initializing (Reset to original factory settings)

This function operates in current mode.
Initialize the adjusted value.
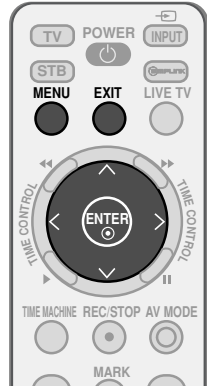
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the > button and then use ∧ or ∨ button to select **Screen**.

3 Press the > button and then use ∧ or ∨ button to select **Reset**.

4 Press the > button.

5 Press the **EXIT** button to return to TV viewing.

SETUP	Picture Mode
PICTURE ▶	Color Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
TIME MACHINE	Picture Reset
	Screen
	XD Demo

MENU Prev.

❶

Picture Mode	
Color Temperature	
XD	
Advanced	
Aspect Ratio	
Picture Reset	
Screen ▶	To Set
XD Demo	

❷

Screen	
Auto Config.	
Manual Config.	
XGA Mode	
Reset ▶	To Set

❸ ❹
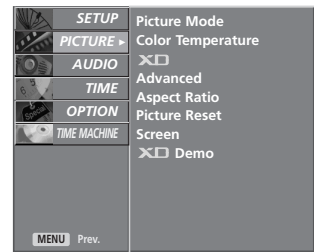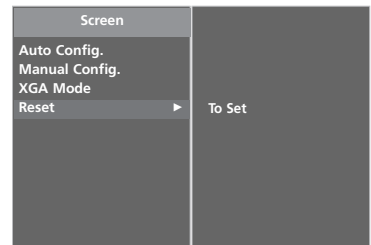
WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.

MENU	Displays the main menu.
EXIT	Clear all on-screen displays and return to TV viewing from any menu.Adjust the brightness on screen.
LIVE TV	In Delayed mode, the screen returns to Live program from TV, AV1, AV2 and Component1, Component2 modes.
THUMBSTICK (Up/Down/Left Right/ENTER)	Navigate the on-screen menus and adjust the system settings to your preference.
VCR/DVD control buttons	Control video cassette recorders or DVD players. Control connected SIMPLINK devices by pressing the ∧ ∨ ⟨ ⟩, **ENTER** buttons and buttons for play, pause, fast reverse, fast forward.
TIME CONTROL	Adjusts the Time Machine function.
TIME MACHINE	Brings up to Home Menu.
REC/STOP	Use for TIME CONTROL record or trick play. Use it for current playing mode stop.
AV MODE	It helps you select and set images and sounds. ▶ **p.47**
VOLUME UP /DOWN	Increase/decrease the sound level.
FAV	Scroll through the programmed Favorite channels. ▶ **p.44**
MARK	Check and un-check channels in the recorded TV menu.
MUTE	Switch the sound on or off. ▶ **p.38**
CHANNEL UP/DOWN NUMBER button	Select available channels.
CH EDIT	Memorizes or erased selected channel. ▶ **p.41**
Q.VIEW	Tune to the last channel viewed.

POWER	Switches the TV on from standby or off to standby.
TV	In AV 1-2, Component 1-2, RGB-PC, HDMI1/DVI, HDMI2, and HDMI3 input sources, screen returns to the last TV channel.
INPUT	If you press the button once, the input source OSD will appear on screen as shown. Press the ∧ or ∨ button and then ENTER button to select the desired input source (TV, AV1, AV2, Component1, Component2, RGB, HDMI1/DVI, HDMI2, or HDMI3).
STB	Select the remote's operating mode: STB
SIMPLINK	See a list of AV devices connected to TV. When you toggle this button, the SimpLink menu appears at the screen. ▶ **p.48-49**

PIP CH - /+	Selects a channel for the sub picture. ▶ **p.77**
SWAP	Exchanges the main/sub images in PIP/DW. ▶ **p.78**
PIP INPUT	Switches the sub picture PIP, DW mode. ▶ **p.78**
PIP	Selects the input source for the sub picture in PIP/DW picture mode. ▶ **p.77**
SIZE	Adjusts the sub picture size. ▶ **p.78**
POSITION	Moves the sub picture. ▶ **p.78**

RATIO	Change the aspect ratio. ▶ **p.79**
CAPTION	Selects CAPTION mode. ▶ **p.97**
− ☼ +	Adjust the brightness on screen.
MTS	Selects the MTS sound: Mono, Stereo, or SAP. ▶ **p.98**
DivX	Selects a DivX Audio Language or Subtitle Language. ▶ **p.74**

Installing Batteries
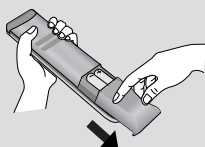
- Open the battery compartment cover on the back side and install the batteries matching correct polarity (+ with +, - with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV /CHANNEL CONTROL

TURNING ON TV

If your TV will be turned on, you will be able to use its features.

❶ First, connect power cord correctly.
   At this moment, the TV switches to standby mode.
   - In standby mode to turn TV on, press the ⏻/| , **INPUT**, **CH (▲ or ▼)** button on the TV or press the **POWER**, **TV**, **INPUT**, **CH (∧ or ∨)**, **Number (0~9)** button on the remote control and then the TV will switch on.

CHANNEL SELECTION

❶ Press the **CH (∧ or ∨)** or **NUMBER** buttons to select a channel number.

VOLUME ADJUSTMENT

❶ Press the **VOL (+** or **-)** button to adjust the volume.

❷ If you want to switch the sound off, press the **MUTE** button.

❸ You can cancel the Mute function by pressing the **MUTE** , **VOL (+** or **-)** button.

ON-SCREEN MENUS SELECTION

Your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

1 Press the **MENU** button and then ∧ or ∨ button to display each menu.

2 Press the ＞ button and then ∧ or ∨ button to select a menu item.

3 Change the setting of an item in the sub or pull-down menu with ＜ or ＞ button.
You can move to the higher level menu by pressing the **ENTER** or **MENU** button.

SETUP MENU

SETUP ▸	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Favorite Channel
TIME	
OPTION	
TIME MACHINE	

MENU Prev.

⇄

PICTURE MENU

SETUP	Picture Mode
PICTURE ▸	Color Temperature
AUDIO	XD
TIME	Advanced
OPTION	Aspect Ratio
TIME MACHINE	Picture Reset
	Screen
	XD Demo

MENU Prev.

⇄

AUDIO MENU

SETUP	Sound Mode
PICTURE	Auto Volume
AUDIO ▸	Balance 0
TIME	TV Speaker
OPTION	
TIME MACHINE	

MENU Prev.

⇅

OPTION MENU

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ▸	Caption/Text
TIME MACHINE	Set ID
	ISM Method
	Low Power

MENU Prev.

Plasma TV model

⇅

TIME MACHINE MENU

SETUP	Time Control
PICTURE	Record Quality
AUDIO	Recorded TV
TIME	Schedule List
OPTION	Manual Record
TIME MACHINE ▸	HDD Format
	DivX Reg. Code
	USB Backup
	USB HDD Format
	Subtitle

MENU Prev.

⇄

SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ▸	Set ID
TIME MACHINE	Caption/Text
	Power Indicator

MENU Prev.

LCD TV model

⇄

TIME MENU

SETUP	Clock
PICTURE	Off Time
AUDIO	On Time
TIME ▸	Sleep Time
OPTION	Auto Sleep
TIME MACHINE	

MENU Prev.

---

❶ NOTE

▶ It's not available to use **SETUP** menu on playing recorded program and playing movie.
▶ The OSD mainly use pictures for the Plasma TV models.

AUTO CHANNEL TUNING

Auto Tuning should be used to memorize all the active channels in your area before you are able to use the TV.

There are two ways of storing channels in the TV's memory. You can use either.

One is called AUTO TUNING and the other is called MANUAL TUNING.

In AUTO TUNING mode, the TV will memorize the channels in ascending numerical order. If there are additional channels you want to add or delete, you can manually add or delete those channels with Manual Tuning.

It's not available to use this function on recording program.

1 Press the **MENU** button and then use ⌃ or ⌄ button to select the **SETUP** menu.

2 Press the ⟩ button and then use ⌃ or ⌄ button to select **Auto Tuning**.

3 Press the ⟩ button. **Auto Tuning** starts the channel search.

4 If you want to stop auto tuning, press the **ENTER** button. Only the channels found up to at that time are memorized.

SETUP ▶	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Favorite Channel
TIME	
OPTION	
TIME MACHINE	

MENU Prev.

❶

Auto Tuning ▶	To start
Manual Tuning	
Favorite Channel	

❷ ❸

Auto Tuning	
TV	5
	0 %
⦿ Stop	

❹

MANUAL TUNING: ADDING/DELETING CHANNELS

You can add or delete channels from the channel scan manually.

1 Use the **CH+/-** or NUMBER buttons to select the channel number you want to add or delete.

2 Press the **CH EDIT** button.

3 Press the **CH EDIT** button to select **Memory** or **Erase**.

4 Press the **ENTER** button.

■ You can also use the **SETUP** menu to adjust **Manual Tuning**.

SETUP ►	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Favorite Channel
TIME	
OPTION	
TIME MACHINE	

MENU Prev.

➡

SETUP ►	Auto Tuning	
PICTURE	Manual Tuning	►
AUDIO	Favorite Channel	
TIME		
OPTION		
TIME MACHINE		

MENU Prev.

TV	7
Memory	on
Fine	0
Booster	on
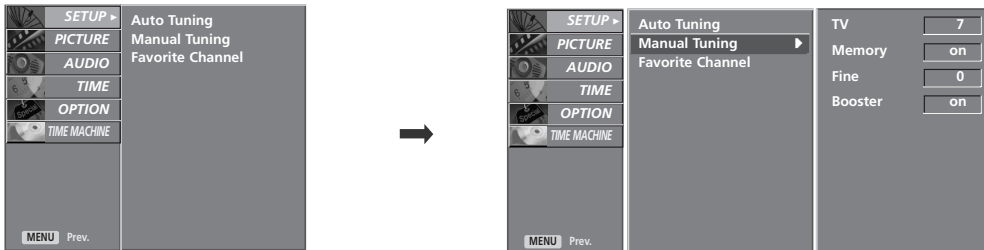
FINE TUNING ADJUSTMENT

Normally fine tuning is only necessary if reception is poor.

To remove fine tuning from a channel, reprogram the finely-tuned channel with Auto Tuning or Manual Tuning.

If a finely-tuned channel is memorized, the color of the channel number changes to yellow.
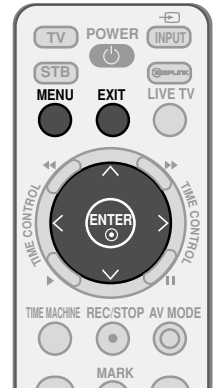
1 Press the **MENU** button and then use ⌃ or ⌄ button to select the **SETUP** menu.

2 Press the ⟩ button and then use ⌃ or ⌄ button to select **Manual Tuning**.

3 Press the ⟩ button and then use ⌃ or ⌄ button to select **Fine**.

4 Press the ⟨ or ⟩ button to adjust the picture to your preference.

5 Press the **ENTER** button to store it.

6 Press the **EXIT** button to return to normal TV viewing.
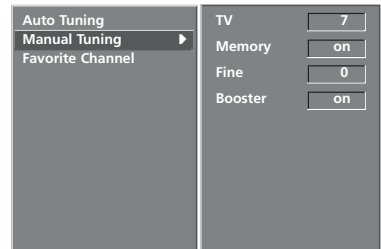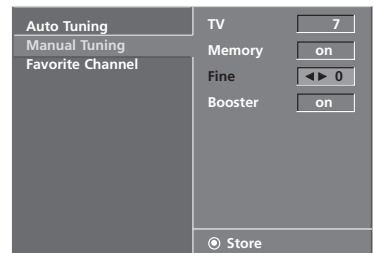
BOOSTER

In some models, **Booster** is an optional function. Only a set with **Booster** can perform this function.

If the reception is poor at the fringe area of TV signal, select **Booster** to **On**.
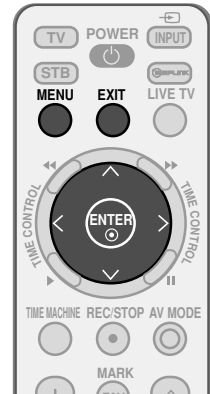
1 Press the **MENU** button and then use ∧ or ∨ button to select the **SETUP** menu.

2 Press the ＞ button and then use ∧ or ∨ button to select **Manual Tuning**.

3 Press the ＞ button and then use ∧ or ∨ button to select **Booster**.

4 Press the ＜ or ＞ button to select **On** or **Off.**

5 Press the **ENTER** button to store it.

6 Press the **EXIT** button to return to normal TV viewing.
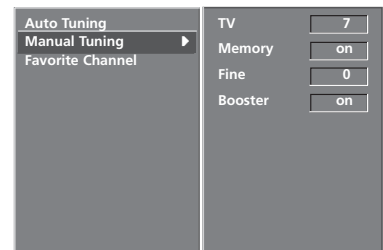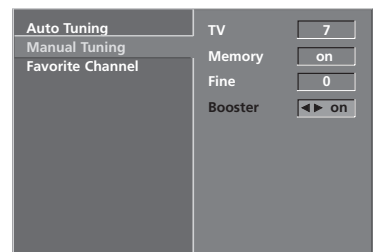
FAVORITE CHANNELS SETUP

This function lets you select your favorite channels directly.
Repeatedly press the FAV button to select stored favorite channels.
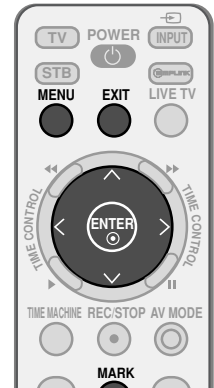
1 Press the **MENU** button and then use ∧ or ∨ button to select the **SETUP** menu.

2 Press the > button and then use ∧ or ∨ button to select **Favorite Channel**.

3 Press the > button and then use ∧ or ∨ button to select first favorite channel position.

4 Use the < or > button to set the desired channel number for first favorite channel.

5 Repeat steps 3 to 5 to memorize other favorite channels.
   ▪ You can store up to 8 channels.

6 Press the **EXIT** button to return to normal TV viewing.

SETUP ▶	Auto Tuning
PICTURE	Manual Tuning
AUDIO	Favorite Channel
TIME	
OPTION	
TIME MACHINE	

MENU Prev.

❶

Auto Tuning		
Manual Tuning		
Favorite Channel ▶	√ ---- ---
	---- ---
	---- ---
	---- ---
	---- ---
	---- ---
	---- ---
	---- ---

❷ ❸ ❹ ❺
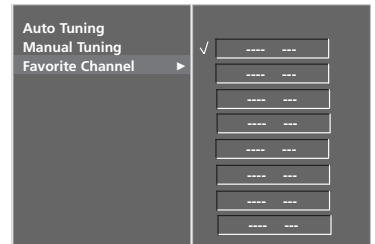
INPUT SOURCE SELECTION

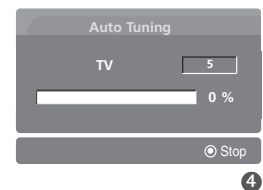Sets a label to each input source which is not in use when you press **INPUT** button.
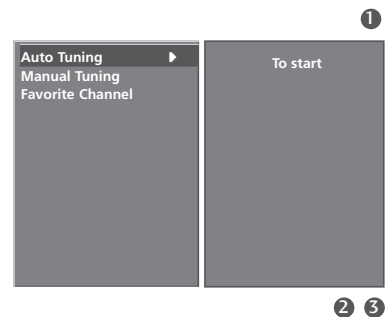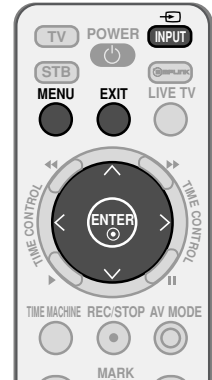
1 Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

2 Press the > button and then use ∧ or ∨ button to select **Input Label**.

3 Press the > button and then use ∧ or ∨ button to select the source: AV1, AV2, Component1, Component2, RGB, HDMI1/DVI, HDMI2, or HDMI3.

4 Press the > button and then use ∧ or ∨ button to select the label.

5 Press the **EXIT** button to return to normal TV viewing.

45
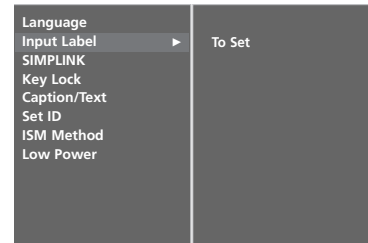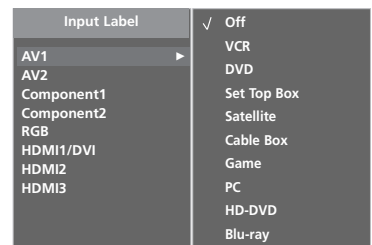
KEY LOCK

The TV can be set so that the remote control is needed to control it.

This feature can be used to prevent unauthorized viewing.

This TV is programmed to remember which option it was last set to even if you turn the set off.
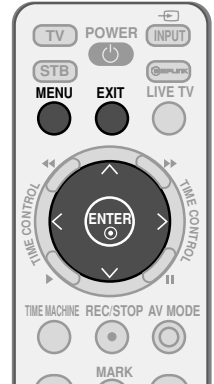
1 Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

2 Press the **>** button and then use ∧ or ∨ button to select **Key Lock**.

3 Press the **>** button and then use ∧ or ∨ button to select **On** or **Off**.

4 Press the **EXIT** button to return to normal TV viewing.

❶ NOTE

▶ In **Key Lock** 'On', if the set is turned off, press the **r / I**, **INPUT**, **CH ▲ / ▼** button on the set or **POWER**, **INPUT**, **TV**, **CH +/-** or NUMBER buttons on the remote control then the set will be turned on.

▶ With the **Key Lock On**, the display '⚠ **Key Lock On**' appears on the screen if any button on the front panel is pressed while viewing the set.

AV MODE

You can select the optimal images and sounds.

1 Press the **AV MODE** button repeatedly to select the desired source: **Off**, **Cinema**, **Sport**, and **Game**.

2 Press the **EXIT** button to save and return to TV viewing.
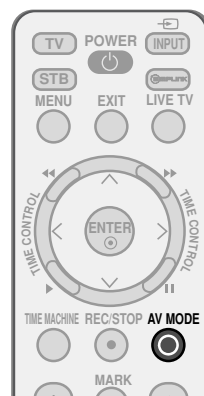
ⓘ NOTE

▶ If you select "**Cinema**" in AV mode, **Cinema** will be selected both for "PICTURE menu - Picture Mode" and "AUDIO menu - Sound Mode" respectively.

▶ If you select "**Off**" in AV mode, the "**Picture Mode**" and "**Sound Mode**" return to previous selected value.

WATCHING TV /CHANNEL CONTROL

SIMPLINK

This function operates only with devices with the ⓢimplink logo.
This TV might not function when using it with other products with HDMI-CEC function.

This allows you to control and play other AV devices connected with HDMI cable without additional cables and settings.

To start using SIMPLINK, turn it on in the user menus.

It's not available to use this function on recording program and playing movie.
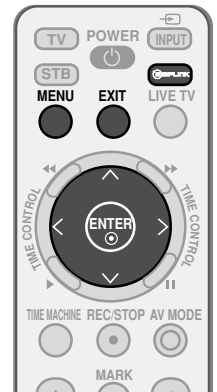
1 Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

2 Press the > button and then use ∧ or ∨ button to select **SIMPLINK**.

3 Press the > button and then use ∧ or ∨ button to select **On** or **Off**.

4 Press the **EXIT** button to return to normal TV viewing.

---
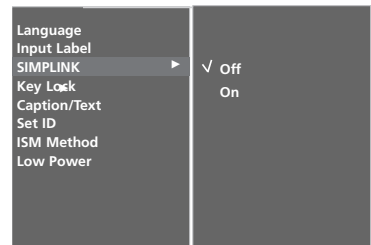
❶ NOTE

► Connect the HDMI/DVI IN or HDMI IN terminal of the TV to the rear terminal (HDMI terminal) of the SIMPLINK device with the HDMI cable.

► When you switch the Input source with the INPUT button on the remote control, the SIMPLINK device will stop.

► When you select a device with home theater functionality, the sound output automatically switches to the home theater speakers.

► If a connected SIMPLINK home theater system doesn't play the audio from the TV, connect the VARIABLE AUDIO OUT terminal on the back of the TV to the VARIABLE AUDIO IN terminal on the back of the SIM-PLINK device with the VARIABLE AUDIO OUT cable.

► If the SIMPLINK is operated, the keys such as play / pause / fast reverse / fast forward are used for driving the SIMPLINK device, but not used for the TIME MACHINE feature.

SimpLink Functions

Disc playback: Control connected AV devices by pressing the ∧ ∨ ＜ ＞ , **ENTER** buttons.

Direct Play: After connecting AV devices to TV, you can directly control the devices and play media without additional settings.

Select AV device: Enables you to select one of AV devices connected to TV and play it.

Power off all devices: When you power off TV, all connected devices are turned off.

Switch audio-out : Offers an easy way to switch audio-out.

* A device, which is connected to TV through HDMI cable but does not support Simplink, does not provide this function.

SimpLink Menu

Press the ∧ ∨ ＜ ＞ button and then **ENTER** button to select the desired SIMPLINK source.

① **TV viewing:** Switch to the previous TV channel regardless of the current mode.

② **DISC playback:** Select and play discs. When multiple discs are available, the titles of the discs are conveniently displayed at the bottom of the screen.

③ **VCR playback:** Play and control the connected VCR.

④ **HDD Recordings playback:** Play and control recordings stored in HDD.

⑤ **Audio Out to Home theater/Audio Out to TV :** Select Home theater or TV speaker for Audio Out.

▶ Selected Device

▶ When no device is connected (displayed in gray)

▶ When a device is connected (displayed in bright color)
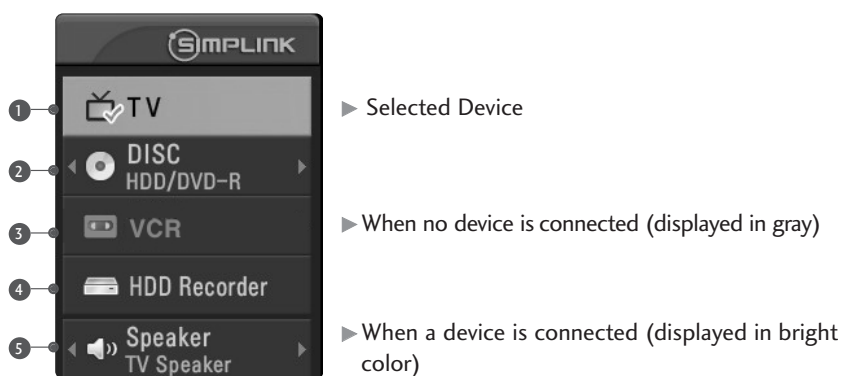
Note: To operate SIMPLINK, the HDMI cable over 1.2 version with *CEC function should be used.
(*CEC: Consumer Electronics Control)

TIME MACHINE

TIME CONTROL (PAUSE & REPLAY OF LIVE TV)

This function allows the unit to automatically record live TV and make it available for reviewing at any time.

With Time control turned on, you may pause and rewind normal TV viewing at any time without missing any of the live broadcast. (Time control and Recording functions might not work if the signal strength is weak.)
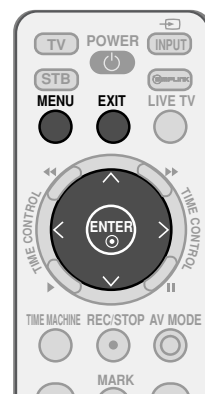
1 Press the **MENU** button and then use ⌃ or ⌄ button to select the **TIME MACHINE** menu.

2 Press the ⟩ button and then use ⌃ or ⌄ button to select **Time Control**.

3 Press the ⟩ button and then use ⌃ or ⌄ button to select **On** or **Off**.

**4** Press the **EXIT** button to return to normal TV viewing.

SETUP	Time Control
PICTURE	Record Quality
AUDIO	Recorded TV
TIME	Schedule List
OPTION	Manual Record
TIME MACHINE ▶	HDD Format
	DivX Reg. Code
	USB Backup
	USB HDD Format
MENU Prev.	Subtitle

❶

Time Control ▶	✓ Off
Record Quality	On
Recorded TV	
Schedule List	
Manual Record	
HDD Format	
DivX Reg. Code	
USB Backup	
USB HDD Format	
Subtitle	

❷ ❸
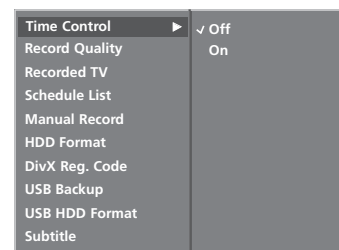
Using the Time Control function

1 After selecting the **Time Control On**, press the **ENTER** button.

- As soon as Time Control starts, a progress bar indicating the current recording status is displayed in the bottom of the screen.
- Press the **EXIT** button to hide the 'Progress Bar' or press the **ENTER** button to display the 'Progress Bar'.
- This function is preserved even change a program on progressing the Time control.

2 When finishing the Time control function, enter the **TIME MACHINE** menu and turn **Time Control Off**.

The 'Progress Bar'?

This function indicates a possible TIME MACHINE reshowing section ,a current on-screen and real live broadcasting position.

❶ Status of current displayed video.
❷ Current save time.
❸ 15 minute intervals from Time Control start time. (Total - one hour).
❹ Indicates current Time Control position.

❗ NOTE

▶ TIME MACHINE: A device which records and plays broadcast program contents onto a hard disk in set or SET TOP BOX.

▶ In order to save hard-disk space, nothing is saved when there is no signal.

▶ The total storage space of the hard-disk is 160 GB. 4 GB minimum is reserved for Time Control.

▶ When turning power on, it may take up to a maximum of 3 minutes to initialize the HDD.

▶ The Recording function will not initiate for a copy-protected program.

▶ Because an analog broadcast is transferred to a digital signal, video that contains rapid movement may show "cross stripes". This happens when the analog signal is compressed and then restored in the digital signal. The unit will attempt to reduce this excessive picture noise.

▶ When using the PIP/DW mode, Time Control is stopped.

▶ Time Control is available in TV, AV1, AV2, Component (480i/480p/720p/1080i) mode.

▶ Time Control is not available for Audio only channels.

▶ Maximum recording file size is up to 16GB (4Hr).

Using the Time Control function, play

- When in time Control, the following options are available.

DELAYED -0:17:58

Indicates that the current broadcast and displayed video differ.

▶	II	⤻ ⤺
Play	Pause	Forward/Backward

■ When pressing the ● button delaying Time Control, Time Control is dumped. And delayed time is recording.

Using the remote control

You can shift playback to any point within the recorded program.

◀◀ / ▶▶	When playing, Repeatedly, press the **REW(◀◀)** button to speed up ◀◀→ ◀◀◀→ ◀◀◀◀→ ◀◀◀◀◀→ ◀◀◀◀◀◀. Repeatedly, press the **FF(▶▶)** button to speed up ▶▶▶▶→ ▶▶▶▶→ ▶▶▶▶→ ▶▶▶▶▶▶. ■ Pressing these buttons repeatedly increases the fast forward/reverse speed.
∧ ∨	■ Press the ▶▶I button to jump about 20 seconds forward. ■ Pressing the I◀◀ button to jump about 8 seconds backward.
II	During playback, press the **Pause(II)** button. ■ Still screen is displayed. ■ Repeatedly press the **Pause(II)** button to advance frame by frame. ■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion (the ▐▶ icon is displayed.) ■ Press the **Pause(II)** button and then use the **REW(◀◀)** button for slow motion (the ◀▐ icon is displayed.)
⟨ ⟩	When using the ⟨ or ⟩ button during playback a cursor indicating the position can be viewed on the screen.
PLAY(▶)	Press the **PLAY(▶)** button to return to normal playback.
LIVE TV	If you want to return to the current live broadcast, press the **LIVE TV** button.

FORMAT HARD DISK

Erases all programs and initializes the hard disk.
It's available to use this function on Time Control off.
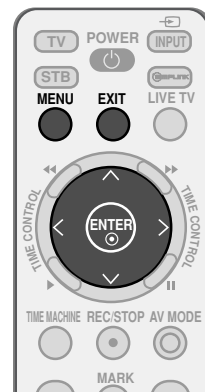
① Press the **MENU** button and then use ∧ or ∨ button to select the **TIME MACHINE** menu.

② Press the ＞ button and then use ∧ or ∨ button to select **HDD Format**.

③ Press the ＞ button to start **HDD Format**.

■ if you press the ＞ button, this message is displayed.

> ⑦ **Do you want to format HDD?**
>
> | Yes | No |
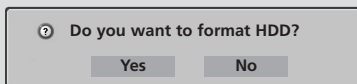
■ if you select Yes, this message is displayed.

> ⓘ **HDD formatting is started.**
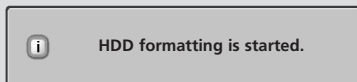
■ When completing, this message is displayed.

> ⓘ **HDD formatting is completed.**

④ Press the **EXIT** button to return to normal TV viewing.

SETUP	Time Control
PICTURE	Record Quality
AUDIO	Recorded TV
TIME	Schedule List
OPTION	Manual Record
TIME MACHINE ▶	HDD Format
	DivX Reg. Code
	USB Backup
MENU Prev.	USB HDD Format
	Subtitle

❶

Time Control	
Record Quality	
Recorded TV	
Schedule List	
Manual Record	
HDD Format ▶	To set
DivX Reg. Code	
USB Backup	
USB HDD Format	
Subtitle	

❷ ❸
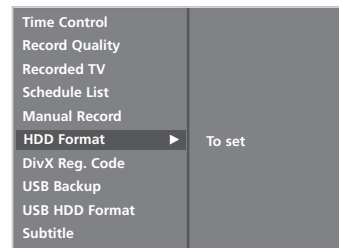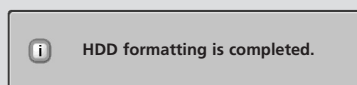
TIME MACHINE

INSTANT RECORDING

Use this function to record the programme you are watching on the main screen.

Instant Record

This function records the currently displayed program.

1 Select the program you wish to record and then press the ● button. During recording `REC 0:00:00/2:00:00` is displayed. Use this feature to record up to 2 hours of programming.

2 If you want to stop recording, press the ● button.

■ While recording, if you press the ● button less than 10 seconds after recording started, this message is displayed.

⚠ **Recording is not completed. Recording time must exceed 10 seconds.**

■ If you press the ● button more than 10 seconds after recording started, this message is displayed.

ⓘ **Recording is completed.**
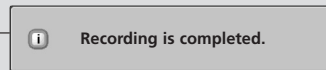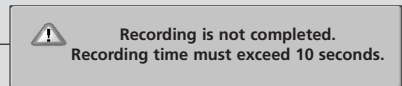
3 You can increase or decrease recording time by pressing the ● button while recording. After pressing the ● button, press the ‹ or › buttons repeatedly to increase or decrease the recording time. Each time you press ‹ or › button the recording duration changes as shown below.

+10min→ +20min→ +30min→ +40min→ +50min→ +60min

No Change

-10min→ -20min→ -30min→ -40min→ -50min→ -60min
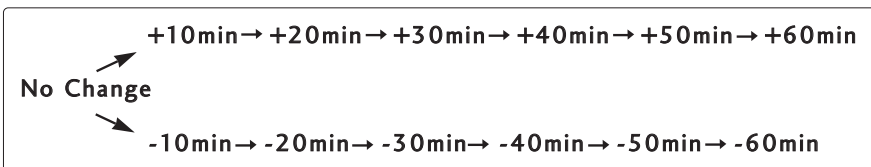
The extra recording time added to existing setting equals the final recording time.

Recording Option

| Recording time | 3:00 PM |
| 3:00 PM~4:00 PM | (0 min Recorded) |

| Set duration | ◄ | **No Change** | ► |

| OK | Cancel | Stop Record |

3

4 After adjusting the recording time, select **ENTER**. The Status bar will be displayed.

Total recording duration

REC 0:00:00/2:00:00

Elapsed recording time
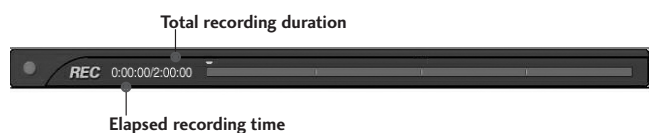
■ Press the **RETURN** button to hide the Status bar. Press the **ENTER** button to display the Status bar.

5 Recording stops when the selected duration is reached or when you press the ● button.
Although recording has stopped, the Time control feature remains active.
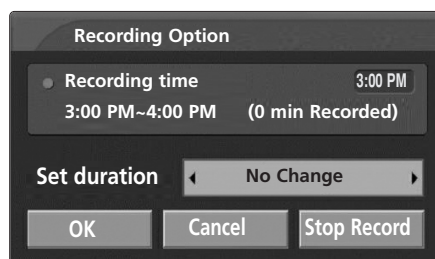
ⓘ NOTE

▶ When recording, if the available storage space becomes low, the recording will be automatically stopped.

▶ Recordings of less than 10 seconds will not be saved.

▶ To save disk space while recording broadcasts, no data will be saved if there is no signal.

▶ The recording function will not initiate for a copy-protected program.

▶ The displayed time may differ slightly from the actual time.

▶ In there is no signal or a film source is being viewed, the displayed time may differ slightly from the actual time.

▶ Time control recording is not possible with copy-protected programs.

> ⓘ **Stop recording due to copy protection.**
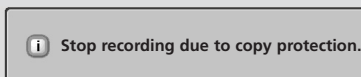
▶ When a poor quality external source is recorded (old VHS tape for example) the quality of the recording will not be as good as it could be.

▶ Programs are stored separately according to the color system that they are using. e.g. PAL/NTSC.

▶ Manual Recording available time is maximum 4 hours and minimum 5 minutes.

▶ Broadcast materials are protected by copyright and that recording and playback of certain material would only be permissible by permission of the copyright owner.
Audio and video recordings you make using this recorder are for your personal use only. You may not sell, lend or rent them to other people.

MANUAL RECORD

This function is easy to register to reserved recording.
This function is also available in TIME MACHINE menu.
When Manual Record, it's stored the default sound of the set.
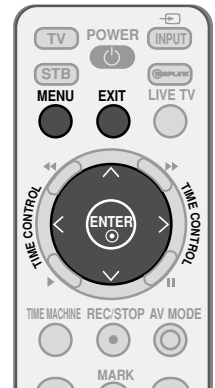
1 Press the **TIME MACHINE** button to display **Home** menu.
Use the ∧ or ∨ button to select the **Manual Record** and
then use the **ENTER** or ＞ button.

2 **Manual Record** screen is displayed as shown below.
Use the ∧ ∨ ＜ ＞ button to set the **Input**, **TV/CATV**,
Date, **Time**, **Duration**, **Frequency** .

▶ **Input** : Select the input source from the TV, AV1, AV2,
Component1/2(480i).
▶ **TV/CATV** : Select either the current channel or a scanned
channel.
▶ **Date** : You can select a date up to one month in the future.
▶ **Time /Duration** : Ensure you have set correctly.
▶ **Frequency** : Choose among Once, Daily and Weekly.

3 After setting the **Manual Record** , press the **ENTER** button.
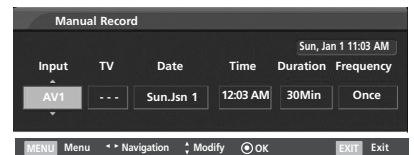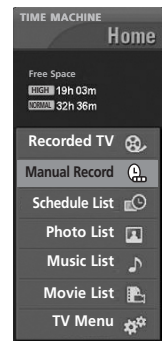
SCHEDULE LIST

This function is used to show scheduled recordings.
This function is also available in TIME MACHINE menu.
You can store up to 8 programs.

1 Press the **TIME MACHINE** button to display **Home** menu.
Use the ∧ or ∨ button to select the **Schedule List** and
then use the **ENTER** or ⟩ button.

2 **Schedule List** screen is displayed as shown below.
Use the ∧ or ∨ button to select recorded program.

3 Press the **ENTER** button to open the Pop-up Menu.

> ▶ **Modify** : Modify the schedule list.
> ▶ **Delete** : Delete the schedule list.
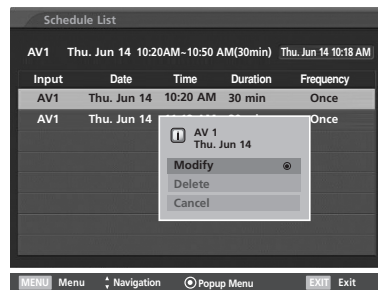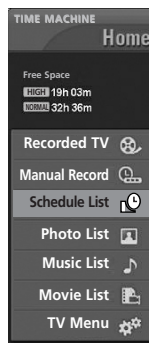
RECORD QUALITY

When recording analogue broadcasts and external input signals,
the Record Quality can be selected.
This function is not available while a recording is taking place.

1 Press the **MENU** button and then use ∧ or ∨ button to
select the **TIME MACHINE** menu.

2 Press the ⟩ button and then use ∧ or ∨ button to select
Record Quality.

3 Press the ⟩ button and then use ∧ or ∨ button to select
High or **Normal**.

4 Press the **EXIT** button to return to normal TV viewing.
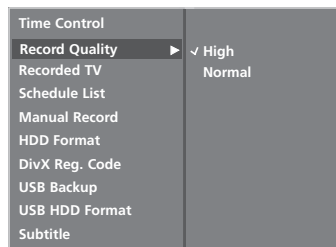
TO USE THE USB DEVICE

Precautions when using the USB device

▶ Only a USB storage device is recognizable.

▶ If the USB storage device is connected through a USB hub, the device is not recognizable.

▶ A USB storage device using an automatic recognition programme may not be recognized.

▶ A USB storage device which uses its own driver may not be recognized.

▶ In case of a card reader, up to four memory cards are concurrently recognizable.

▶ The recognition speed of a USB storage device may depend on each device.

▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.

▶ Please do not connect the USB storage device which was artificially maneuvered on the PC. The device may cause the product to malfunction or fail to be played. Never forget to use only a USB storage device which has normal music files or image files.

▶ Please use only a USB storage device which was for-matted as a FAT32 file system provided with the Windows operating system. In case of a storage

device formatted as a different utility programme which is not supported by Windows, it may not be recognized.

▶ Please connect power to a USB storage device which requires an external power supply. If not, the device may not be recognized.

▶ Please connect a USB storage device with cable is offered by USB maker. If connected with cable is not offered by USB maker or an excessively long cable, the device may not be recognized.

▶ Some USB storage devices may not be supported or operated smoothly.

▶ If the name of a folder or file is too long, it will not be displayed or recognized.

▶ Please backup the important file because a data of USB device may be damaged. Data management is consumer's responsibility and in consequence the man-ufactures does not cover the product bearing data damage.

▶ Supported maximum external HDD size is up to 400GB.

▶ Supported maximum USB memory stick size is up to 32GB.

When connecting the USB device

Enjoy the recorded media, photo, music and Movie stored in the USB device.When you connect a USB device, this screen is displayed, automatically.

In USB device, you can not add a new folder or delete the existing folder.

1 Connect the USB device to the **USB IN** jacks on the side of TV.

2 Press the ⋀ or ⋁ button to select the desired item.

3 Press the **ENTER** button.

USB HDD

USB memory stick

①

USB is connected.
Select a menu.
Photo List
Music List
Movie List
Cancel
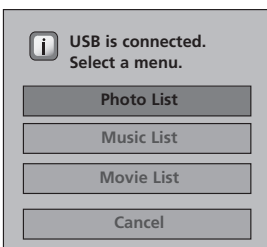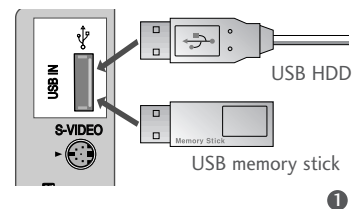
For the case when the USB which contains photo, music, and movie files is connected

② ③

USB HDD is connected.
Select a menu.
Recorded TV
USB Backup
Cancel

For the case when the USB which defaulted to backup use of the record list

② ③

To use the recorded list with USB storage device

1 Connect the USB device to the **USB IN** jacks on the side of TV.
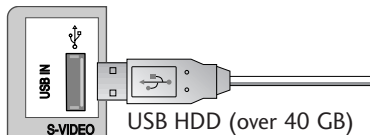
USB HDD (over 40 GB)

■ Only USB HDD that are over 40 GB and 1 partition can be used for USB Backup.

2 To use the USB storage device (over 40 GB) for USB Backup, execute the "USB HDD Format"

■ It initializes the HDD connected to the USB as disk mode for backup.
■ It is activated only when the USB HDD available for backup is connected.
■ When "USB HDD Format" is executed, all the data stored in the USB storage device is deleted.
■ While performing "USB HDD Format", do not remove the USB storage device.
  It may cause error on the TV and the storage device.

❶ Press the **MENU** button and then use ∧ or ∨ button to select the **TIME MACHINE** menu.
❷ Press the > button and then use ∧ or ∨ button to select **USB HDD Format**.
❸ Press the > button to start **USB HDD Format**.

SETUP	Time Control
PICTURE	Record Quality
AUDIO	Recorded TV
TIME	Schedule List
OPTION	Manual Record
TIME MACHINE	HDD Format
	DivX Reg. Code
	USB Backup
	USB HDD Format ▶	To set
MENU Prev.	Subtitle

■ if you press the > button, this message is displayed.

⊙ **Do you want to initialize USB HDD?**
  Yes   No
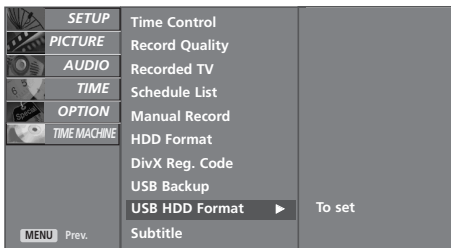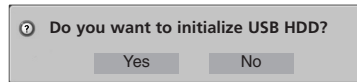
When 'Yes' is selected, a pop-up notice appears containing a message to initialize the connected USB HDD.

When initialization is complete, a pop-up notice of completion is displayed and the connected USB HDD is available for backup.

■ Depending on the capacity of the USB storage device, the initialization time may vary.
■ The initialized USB storage device only operates in the "Recorded List".
■ The initialized USB storage device is not recognized by the PC.
■ When a USB storage device of less than 40 GB is connected, the "USB HDD Format" is not activated.
■ Supported maximum external HDD size for back-up is up to 400GB.

❶ NOTE

▶ When attempting to access the USB Backup of the TIME MACHINE menu after the initialization, an alert message is displayed and access is blocked because there are no backed up items.
▶ When even a single backed up file exists through 'Copy to USB HDD' from the 'Recorded TV' of the TIME MACHINE menu, the access to USB Back is allowed.

RECORDED TV PROGRAM LIST

You can view the recorded programme list at a glance.
This function is also available in TIME MACHINE menu.
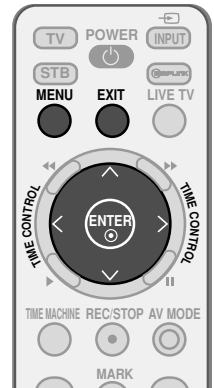
1 Press the **TIME MACHINE** button to display **HOME** menu.
Use the ∧ or ∨ button to select **Recorded TV** and then use the
ENTER or 〉 button.

TIME MACHINE
Home

Free Space
HIGH 19h 03m
NORMAL 32h 36m

Recorded TV
Manual Record
Schedule List
Photo List
Music List
Movie List
TV Menu

Recorded TV	Page 2/3		☑ Not Marked

Free Space
HIGH 11h 24m
NORMAL 22h 46m

Input : TV60
Date : Wed.Mar10 2007
Duration : 20 min
Quality : High

No Title	TV60	Wed.Mar10	10 : 20 AM
No Title	TV62	Wed.Mar10	3 : 10 PM
No Title	TV30	Wed.Mar14	4 : 25 PM
No Title	TV30	Wed.Mar19	6 : 02 AM
No Title	TV32	Wed.Mar19	4 : 20 PM

| **MENU** Menu | ↕ Navigation | ◉ Popup Menu | CH ⊿ Move Page | **MARK** Mark | **EXIT** Exit |

Screen Components

❶ Usable HDD space
❷ Current page/Total pages
❸ Marked title or program
❹ Corresponding buttons on the
remote control

Recorded TV	Page 2/3 —		☑ Not Marked

Free Space
HIGH 11h 24m
NORMAL 22h 46m

Input : TV60
Date : Wed.Mar10 2007
Duration : 20 min
Quality : High

No Title	TV60	Wed.Mar10	10 : 20 AM
No Title	TV62	Wed.Mar10	3 : 10 AM
No Title	TV30	Wed.Mar14	2 : 25 PM
No Title	TV30	Wed.Mar19	6 : 02 AM
No Title	TV32	Wed.Mar19	4 : 20 PM

| **MENU** Menu | ↕ Navigation | ◉ Popup Menu | CH ⊿ Move Page | **MARK** Mark | **EXIT** Exit |

Recorded program Selection and Popup Menu

The recorded program stored in the internal HDD or the USB storage device can be played.
The preview recorded list is shown in the preview page.

① Use the **CH** ⌃ or ⌄ button for page up/down navigation.

② Use the **MARK** button to delete from the list. A ☑ is displayed next to the preview window if an item is marked.

③ Use ⌃ or ⌄ button to navigation the appropriate Recorded program, then press the **ENTER** button to open the Pop-up Menu.
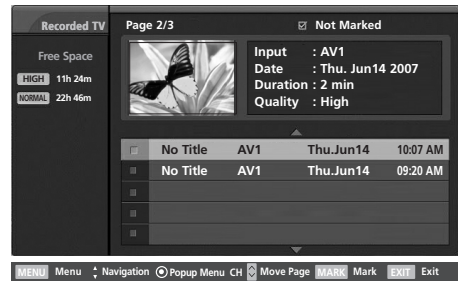
- ▶ **Play** : Begin playback of selected recorded program.
- ▶ **Mark All** : mark all recorded programs on the screen.
- ▶ **Unmark All** : Change marked recorded programs to unmarked recorded programs.
- ▶ **Delete** : Delete the selected recorded programs.
- ▶ **Rename** : Edit recorded program title.
- ▶ **Copy to USB HDD** : Copies the recorded program in the internal HDD to the USB storage device.
  It is activated only when a USB HDD available for backup is connected.

HDD Backup process screen

ⓘ **USB backup is started.**
Copying to USB HDD. **(1/1)**

75%

EXIT Close ■ **Stop**

■ if you press the ● button, this message is displayed.

❓ **Do you really want to cancel the backup?**
Yes **No**

Screen 1

Recorded TV	Page 2/3		☑ Not Marked
Free Space		Input	: AV1
HIGH 11h 24m		Date	: Thu. Jun14 2007
NORMAL 22h 46m		Duration	: 2 min
		Quality	: High
☐ No Title	AV1	Thu.Jun14	10:07 AM
No Title	AV1	Thu.Jun14	09:20 AM

MENU Menu ↕ Navigation ◉ Popup Menu CH ⊗ Move Page MARK Mark EXIT Exit

❶

Screen 2

Recorded TV	Page 2/3		☑ Not Marked
Free Space		Input	: AV1
HIGH 11h 24m		Date	: Thu. Jun14 2007
NORMAL 22h 46m		Duration	: 2 min
		Quality	: High
☐ No Title	AV1	Thu.Jun14	10:07 AM
No Title	AV1		

ⓘ AV 1
10:07 AM~10:09 AM

Play ◉
Mark All
Delete
Rename
Copy to USB HDD.
Cancel

MENU Menu ↕ Navigation ◉ Popup Menu CH ⊗ Move P.

❷ ❸

■ When 'Yes' is selected, the backup is cancelled and is converted back to input mode. If more than two files are transferred, the transferred file is stored, and the backup operations on the files in progress of transferring and scheduled for backup are cancelled.

■ When 'No' is selected, returns to the backup process screen.

Copying   0%(0/0)

While backup is being performed in the background, the status of the copy progress can be checked by pressing the 'ENTER' button.

▶ **Cancel** : Close the Pop-up menu.

④ Repeatedly, press **EXIT** button to return to TV viewing or press **TIME MACHINE** button to return to the **Home** menu.

■ If the HDD has a problem performing a recording related function, this message is displayed.

■ If the temperature is below zero (0˚), a warning message is displayed and you will not be able to use the TIME MACHINE functions.

ⓘ **HDD initialization is in progress.**

⚠ **Cannot operate DVR at low temperature.**

④

USB BACKUP

When the Recorded List is stored exceeding the capacity of the internal HDD, the USB backup feature allows the backup of Recorded List of the internal HDD to the external HDD for back-up connected through USB.

To use USB backup function, be sure to initialize the USB HDD using TIME MACHINE menu- USB HDD format.

To use USB Backup, USB HDD is necessary more than 40 GB, 1 partition disk, and FAT32 system.

It only supports file backup features; therefore, playback of the Recorded List directly from the current OSD is not allowed. In order to play the recorded contents, the files must be moved to the internal HDD through the 'Copy to Recorded List' from the popup menu.

View the list of the backed up recorded program by using the 'Copy to USB HDD' from the 'Recorded TV'.

It moves to the external HDD list for backup connected by USB.

1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME MACHINE** menu.

SETUP	Time Control	
PICTURE	Record Quality	
AUDIO	Recorded TV	
TIME	Schedule List	
OPTION	Manual Record	
TIME MACHINE ▶	HDD Format	
	DivX Reg. Code	
	USB Backup ▶	To set
	USB HDD Format	
MENU Prev.	Subtitle	
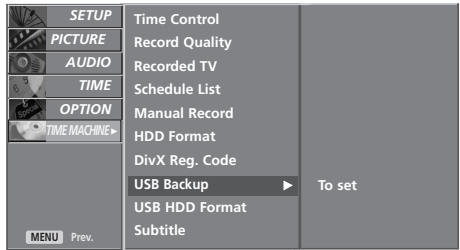
2 Press the > button and then use ∧ or ∨ button to select **USB Backup**.

❶ ❷ ❸

3 Press the > button to start **USB Backup**.
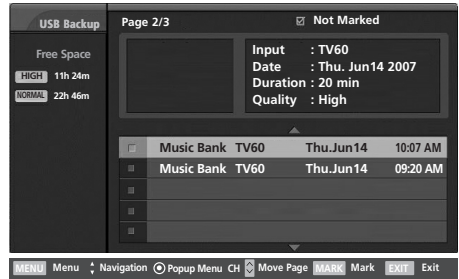
4 **USB Backup** screen is displayed as shown.
Use the **CH** ∧ or ∨ button to navigation in the recorded program.

USB Backup — Page 2/3 — ☑ Not Marked
Free Space
HIGH 11h 24m
NORMAL 22h 46m
Input : TV60
Date : Thu. Jun14 2007
Duration : 20 min
Quality : High

☐ Music Bank TV60 Thu.Jun14 10:07 AM
☐ Music Bank TV60 Thu.Jun14 09:20 AM

MENU Menu ↕ Navigation ◉ Popup Menu CH ◈ Move Page MARK Mark EXIT Exit
❹

Use **MARK** button to mark or unmark a recorded program.

Use ∧ or ∨ button to navigation the appropriate recorded program, then press the **ENTER** button to show up the pop-up menu.
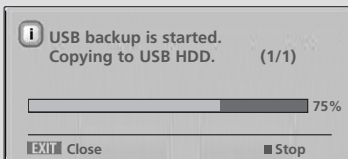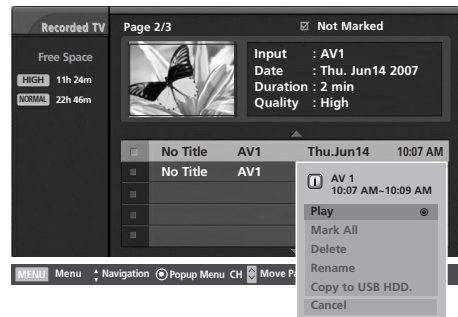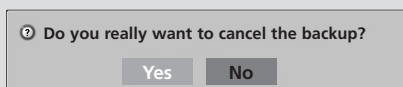
▶ **Mark All**: mark all recorded programs on the screen.
▶ **Unmark All**: Change marked recorded programs to unmarked recorded programs.
▶ **Delete**: Delete the selected recorded programs.

USB Backup — Page 2/3 — ☑ Not Marked
Free Space
HIGH 11h 24m
NORMAL 22h 46m
Input : TV60
Date : Thu. Jun14 2007
Duration : 20 min
Quality : High

☐ Music Bank TV60 Thu.Jun14 10:07 AM
☐ Music Bank TV
☐ TV 60
10:07 AM~10:27 AM
Mark All ◉
Delete
Copy to Recorded List.
Cancel

MENU Menu ↕ Navigation ◉ Popup Menu CH
❹
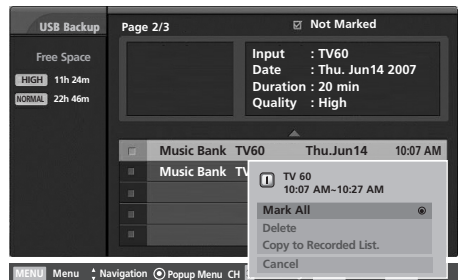
▶ **Copy to Recorded List**: Restores the Recorded Program to the internal HDD.

HDD Backup process screen
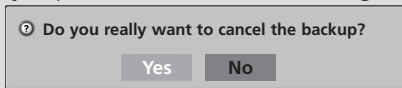
> ⓘ **USB backup is started.**
> **Copying to Recorded List.** (1/1)
>
> ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ **75%**
>
> **EXIT** Close ■ Stop

■ if you press the ● button, this message is displayed.

> ❓ **Do you really want to cancel the backup?**
>
> **Yes** **No**

■ When 'Yes' is selected, the backup is cancelled and is converted back to input mode. If more than two files are transferred, the transferred file is stored, and the backup operations on the files in progress of transferring and scheduled for backup are cancelled.

■ When 'No' is selected, returns to the backup process screen.

Copying 0%(0/0)

While backup is being performed in the background, the status of the copy progress can be checked by pressing the 'ENTER' button.

▶ **Cancel**: Close the pop-up menu.

⚠ **CAUTION**

▶ If you turn the power off on Copying or recording, this message is displayed as shown below.

Copying

> ❓ **Powering off during USB HDD backup.**
> **Continue HDD backup?**
>
> **Yes** **No**

Copying and recording

> ❓ **Powering off while recording and HDD backup.**
> **Continue recording and HDD backup?**
>
> **Yes** **No**
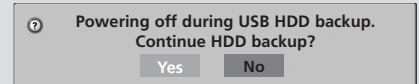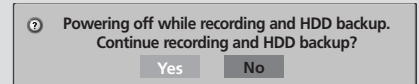
▶ If you selects No, Copying stops and then power is off.

▶ If you selects Yes, Copying continues and the power is turned off.

▶ If you press the **EXIT** button to disappear this message.

⑤ Repeatedly, press **EXIT** button to return to TV viewing or press the **TIME MACHINE** button to return to the **Home** menu.

⊘ **NOTE**

▶ When even a single back up file exists in the initialized USB HDD (from the USB HDD Format menu) through 'Copy to USB HDD' from the 'Recorded TV', the access to the USB Backup is allowed.

▶ If Manual or Instant Record operates while a recorded program is transferring from USB HDD to Recorded TV, Copying will pause.

Then, press the **ENTER** button, and '--%' will be displayed in Record message, and after recording is completed, Copying will continue again.

▶ Playback is not available while recording along with USB Backup.

Playing recorded programs

- You can play the selected program in the recorded program list.

① Play a recorded program.

② While playing, You will see a playback screen as shown below.

- ■ Initially, an icon showing the current playback mode is displayed ▶ *PLAYING*. Press the **ENTER** button to display the progress bar
- ■ To stop displaying the recorded programs icon, press the **EXIT** button.
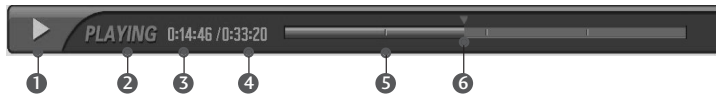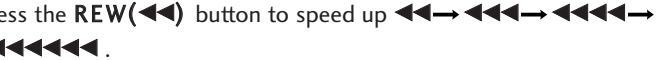
▶ *PLAYING* 0:14:46 /0:33:20

① ② ③ ④ ⑤ ⑥

The 'Progress Bar'?
This function indicates a possible TIME MACHINE reshowing section ,a current on-screen and real on-broadcasting position, a section of section-recording.
❶ Indicates movement of recorded program.
❷ Indicates status of recorded program.
❸ Indicates elapsed playback time.
❹ Indicates total playback time.
❺ Indicates a quarter of program runtime.
❻ Indicates current playback position.

Using the remote control

You can shift playback to any point within playing the recorded program.

◀◀ / ▶▶	When playing, repeatedly, press the **REW(◀◀)** button to speed up ◀◀→ ◀◀◀→ ◀◀◀◀→ ◀◀◀◀◀→ ◀◀◀◀◀◀ . repeatedly, press the **FF(▶▶)** button to speed up ▶▶ → ▶▶▶ → ▶▶▶▶ → ▶▶▶▶▶ → ▶▶▶▶▶▶. ■ Pressing these buttons repeatedly increases the fast forward/reverse speed.
∧ ∨	■ Press the ∧ button to jump about 20 seconds forward. ■ Pressing the ∨ button to jump about 8 seconds backward.
II	During playback, press the **Pause(II)** button. ■ Still screen is displayed. ■ Repeatedly press the **Pause(II)** button to advance frame by frame. ■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion (the ◀I icon is displayed.) ■ Press the **Pause(II)** button and then use the **REW(◀◀)** button for slow motion (the ◀I icon is displayed.)
‹ ›	■ When using the ‹ or › button during playback a cursor indicating the position can be viewed on the screen.
PLAY(▶)	Press the **PLAY(▶)** button to return to normal playback.
LIVE TV	Press the **LIVE TV** button to jump at the front of the program.
●	■ If you press the **STOP(●)** button, you can watch TV.

TIME MACHINE

PHOTO LIST

It's available to playback the photo file(∗.jpg) in the USB device.
The On Screen Display may be different from your set. Images are an example to assist with the TV operation.
Supports up to four drives.
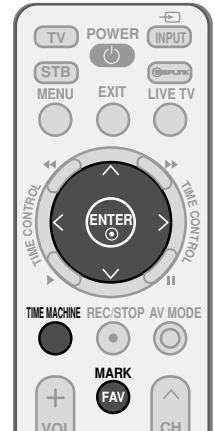
PHOTO(∗.JPEG) supporting file

Baseline: width<=4800, height is no limit
• You can play JPEG files only.
• Only baseline scan is supported among JPEG.
• Non-supported files are displayed in the form of icon.

Screen Components

■ Press the **TIME MACHINE** button and then use ∧ or ∨ button to select the **Photo List** menu.

TIME MACHINE
Home

Free Space
HIGH 19h 03m
NORMAL 32h 36m

Recorded TV
Manual Record
Schedule List
Photo List
Music List
Movie List
TV Menu

Photo List   Page 2/3   ☑ Not Marked

USB Device
Drive1

📁 **UP Folder**

Folder   ◉   ☐ File 1. jpg   ☐ File 2. jpg

☐ File 3. jpg   ☐ File 4. jpg   ☐ File 5. jpg

MENU Menu   ◇ Navigation   ◉ OK   CH Move Page   MARK Mark   EXIT Exit

① Displays the selected drive
② Moves to upper level file
③ Current page/Total pages
④ Total number of marked thumbnail photos
⑤ Corresponding buttons on the remote control

Photo Selection and PopUp Menu

As shown, up to 6 thumbnail photos are listed per page.

1 Use ⌄ ⌄ ⟨ ⟩ buttons to select the target folder or drive then press **ENTER** .

2 Use the **CH** ⌃ or ⌄ button to navigation in the thumbnail photo page.

3 Use the **MARK** button to mark or unmark a photo. When one or more photos are marked, you can view individual photos or a slide show of the marked photos. If no photos are marked, you can view all photos individually or all photos in the folder in a slide show.

4 Use ⌃ ⌄ ⟨ ⟩ button to navigation the appropriate thumbnail photos, then press the **ENTER** button to show the PopUp menu.

> ▶ **View**: Display the selected item.
> ▶ **Mark All** : Mark all photos on the screen.
> ▶ **View Marked**: Display the marked photos.
> ▶ **Unmark All**: Deselect all marked photos.
> ▶ **Cancel**: Close the pop-up menu.

5 Repeatedly, press **EXIT** button to return to TV viewing or press the **TIME MACHINE** button to return to the **Home** menu.

Set up the menu in Full-Sized Screen

You can change the settings to display photos stored on a USB device, on a full-sized screen.
Detailed operations are available on full-sized photo view screen.

1 Use ∧ ∨ < > buttons to select the target folder or drive then press **ENTER**.

2 Use the **CH** ∧ or ∨ button to navigation the thumbnail photo page.

3 Use ∧ ∨ < > button to navigation the appropriate thumbnail photos, then press the **ENTER** button to show the PopUp menu.

4 Use ∧ or ∨ button to Move to the **View** menu, then press the **ENTER** button.

5 The selected photo is displayed in full size.

> ▷ **Slide Show**: When no picture is selected, all photos in the current folder are displayed during slide show. When selected, the selected photos are displayed during slide show. To start slide show, press **ENTER** button on **Slideshow ▷** .
> ▪ Set the time interval of the slide show in **Option**.
> ▷ **BGM** : Listen to music while viewing photos in full size. To start BGM, press **ENTER** button on **BGM ▷** .
> ▪ Set the BGM device and album in **Option** .
> ▷ **↻ (Rotate)** : Rotate photos.
> ▪ Rotates the photo 90° clockwise upon **ENTER** button on **↻ (Rotate)**.

The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.

▶ **Option**: Set values for **Slide Speed** and **Music folder**. Use ⟨ or ⟩ button to select **Option** and press **ENTER** button.

■ Use ⟨ or ⟩ button and **ENTER** button to set values. Then go to ▭ and press **ENTER** to save the settings.

■ You cannot change **Music Folder** while BGM is playing.

▶ **Hide**: Hide the menu on the full-sized screen. Use ⟨ or ⟩ button to select **Hide** and press **ENTER** button.

■ To see the menu again on the full-sized screen, press **ENTER** button to display.

ⓘ Change slide speed using ◀▶

| Slide Speed | ◀ Fast ▶ |
| Music Folder | Music |

| OK | Cancel |

▶

🗋 Select Folder

🗁 Drive 1

◀ Up Folder
▶ Sub Folder
⊙ Select Folder

---
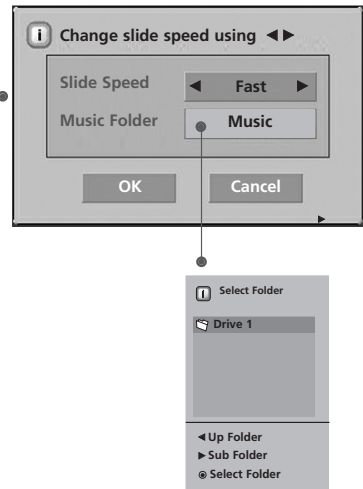
5 Use ⟨ or ⟩ button to select the previous or next photo. Use ⋀ ⋁ ⟨ ⟩ button to select and control the menu on the full-sized screen.

6 Use **EXIT** button to go back to the photo list from the full-sized screen.

7 Repeatedly, press **EXIT** button to return to TV viewing or press the **TIME MACHINE** button to return to the **Home** menu.

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❶ **NOTE**

▶ If it is Progressive JPEG format, some photos may be not decoded.

MUSIC LIST

Purchased music files(∗.MP3) may contain copyright restrictions.
Playback of these files may not be supported by this model.

Music file on your USB device can be played by this unit.

The On Screen Display may be different from your set. Images are an example to assist with the TV operation.

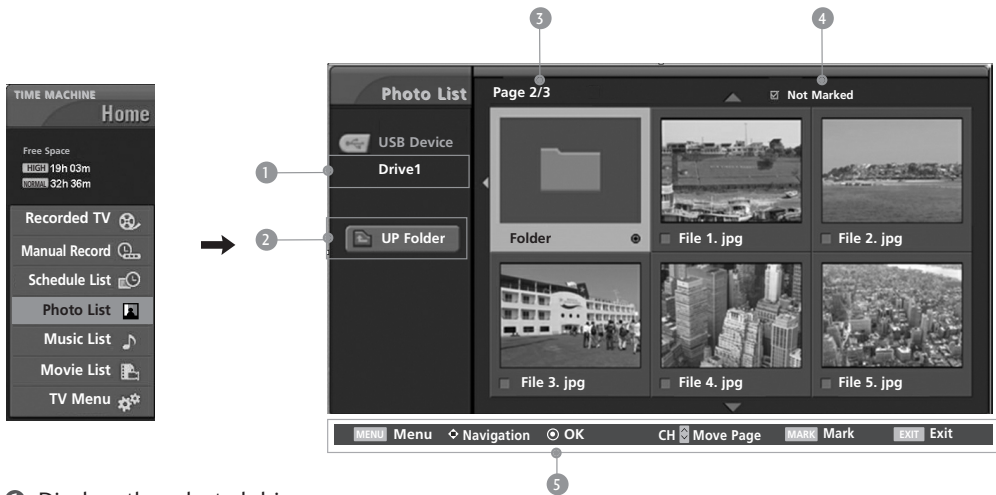Supports up to four drives.

MUSIC(∗.MP3) supporting file

Bitrate range 8Kbps ~ 320Kbps

•Sampling rate
MPEG1 : 32000, 44100, 48000Hz
MPEG2 : 16000, 24000, 22050Hz
MPEG2.5 : 8000, 11025, 12000Hz

Screen Components

■ Press the **TIME MACHINE** button and then use ∧ or ∨ button to select the **Music List** menu.

TIME MACHINE
Home

Free Space
HIGH 19h 03m
NORMAL 32h 36m

Recorded TV
Manual Record
Schedule List
Photo List
Music List
Movie List
TV Menu

Music List   Page1/11   ☑ Not Marked

USB Device

Drive1   ◀   ▓▓ 00:00/04:02   Mariah Carey-Emotions.mp3 ▓▓▓

UP Folder

☐	**Mariah Carey-Emotions.mp3**	◉ 04:02
☐	BH-I Love You.mp3	03:40
☐	BSB-I´ll Be Missing You(Live).mp3	04:30
☐	BSB-Your Style.mp3	03:30
☐	BSB-I´ll Never Break your Heart.mp3	04:45
☐	Bon Jovi – Never Say Goodbye.mp3	03:57
☐	Buzz-Don´t Cry.mp3	04:41
☐	Mariah Carey – Hero.mp3	04:20

▼

MENU **Menu**   ↔ **Navigation**   ◉ **Popup Menu**   CH ◉ **Move Page**   MARK **Mark**   EXIT **Exit**

❶ Displays the selected drive

❷ Moves to upper level file

❸ Current page/Total pages

❹ Current playing time/Total playing time

❺ Total number of marked musics

❻ Corresponding buttons on the remote control

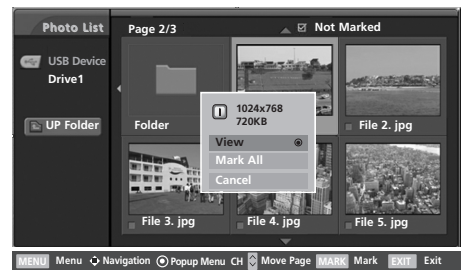# Music Selection and PopUp Menu

As shown, up to 8 music titles are listed per page.

① Use ∧ ∨ ‹ › buttons to select the target folder or drive then press **ENTER**.

② Use the **CH** ∧ or ∨ button to navigation in the music titles page.

③ Use **MARK** button to mark or unmark a music. When one or more music files are marked, the marked musics will be played in sequence. For example, if you want to listen to only one music repeatedly, just mark the music only and play it. If no music is marked, all the music in the folder will be played in sequence.

④ Use ∧ or ∨ button to navigation the appropriate musics, then press the **ENTER** button to show up the pop-up menu.

> ▶ **Play** (During stop): Play the selected musics.
>   Once a music finishes playing, the next selected one will be played. When there are no selected musics to play, the next one in the current folder will be played. If you go to a different folder and press the **ENTER** button, the current music in playback will stop.
>
> ▶ **Play Marked**: Play the selected musics. Once a music finishes playing, the next selected one will be played automatically.
>
> ▶ **Stop Play** (During playback): Stop the playing musics.
>
> ▶ **Play With Photo**: Start playing the selected musics and then move to the Photo List.
>
> ▶ **Mark All**: Mark all musics in the folder.
>
> ▶ **Unmark All**: Deselect all marked musics.
>
> ▶ **Cancel**: Close the pop-up menu.

⑤ Repeatedly, press **EXIT** button to return to TV viewing or press the **TIME MACHINE** button to return to the **Home** menu.
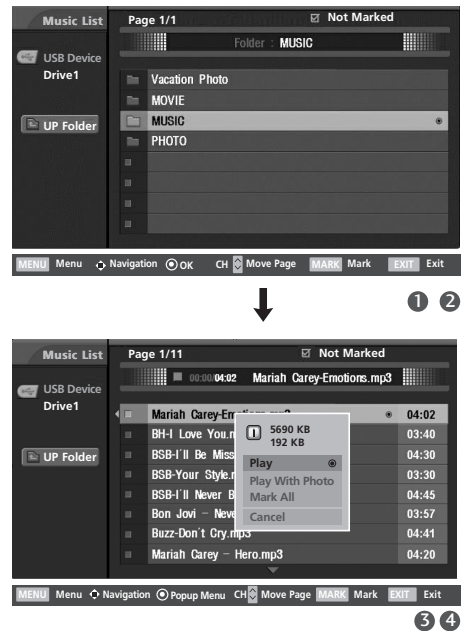
■ If you don't press any button for a while during the playing, the play information box (as shown in the below) will float as a screen saver.

■ The 'Screen Saver'?

Screen saver is to prevent screen pixel damage due to an fixed image remaining on the screen for a extended period of time.

▶ 00:20/04:20 **Without Me**

---

❶ NOTE

▶ When music is playing, 🎵 is displayed in front of the music title.

▶ A damaged or corrupted music does not play but displays 00:00 in playtime.

▶ A music downloaded from a paid service with copyright protection does not start but displays inappropriate information in playtime.

▶ If you press **ENTER**, ● , **EXIT** buttons, screen saver is stopped.

▶ The **PLAY(▶)** , **Pause(II)** , **Stop(●)** , ▶▶ , ◀◀ buttons on the remote control are also available in this mode.

MOVIE LIST

The movie list is activated once USB is detected. It is used when playing movie files on TV.
Displays the movies in the USB folder and supports Play.
Allows playback of all movies in the folder and user desired files.
Editing such as delete and add is not allowed.
It is a movie list that displays folder information and Divx file.
Supports up to four drives.

MOVIE(∗.avi/∗.Divx) supporting file

Video format : DivX3. xx, DivX4. xx, DivX5. xx, XVID 1.1.1, XVID 1.1.2, XVID 1.1.3, 3IV1, 3IV2, FVFW,
DMK2, RMP4, DIV3, DIV4, DIV5, DIV6, MP43, COL1, AP41, nAVI, DX50

Audio format : AC3, PCM, MP2, MP3
　　　　　　　Sampling frequency : within 8~48 khz (MP3)
　　　　　　　Bit rate : within 8~320 kbps (MP3)

Subtitle format : ∗.smi/ ∗.srt/ ∗.sub(microsub, svsub)/ ∗.ass/ ∗.txt(subtext, dvdss)

■ DivX may not be played depending on its types or recording methods.
■ If the video and audio stucture of recorded file is not interleaved, either video or audio is outputted.
■ Max bitrate of playable DivX is 4 M.
■ Maximum FPS (Frame Per Second) can be reached only at SD level. FPS is 25 FPS (720*576) or 30 FPS (720*480) depending on Resolution.
■ Files of 25 FPS or 30 FPS of higher may not be played properly.
■ If the file is recorded with GMC, the unit supports only 1 point of recorded level.
(GMC is the acronym for Global Motion Compensation, a technique used to compensate MPEG Video files.)

Screen Components

■ Press the **TIME MACHINE** button and then use
∧ or ∨ button to select the **Movie List** menu.
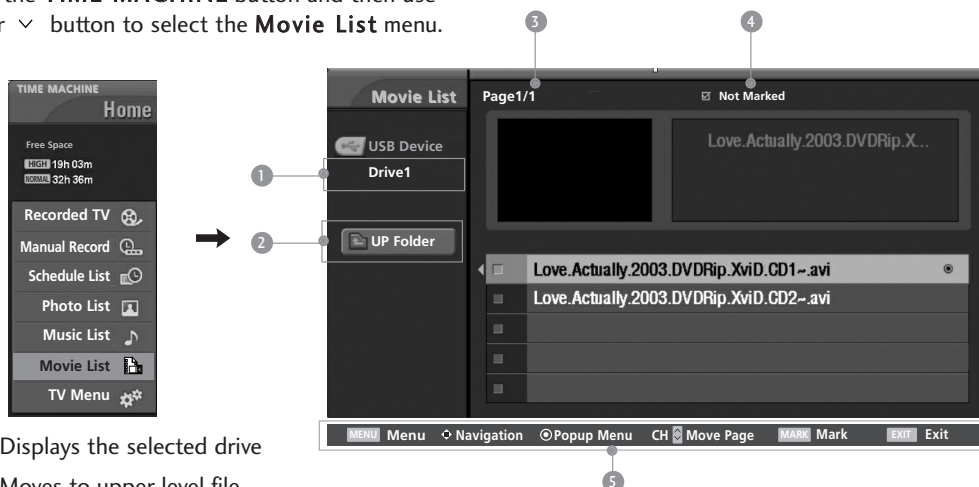
❶ Displays the selected drive
❷ Moves to upper level file
❸ Current page/Total pages
❹ Total number of marked movies
❺ Corresponding buttons on the remote control

Movie Selection and PopUp Menu

1 Use ∧ ∨ ⟨ ⟩ buttons to select the target folder or drive then press **ENTER**.

2 Use the **CH** ∧ ∨ button to navigation in the movie titles page.

3 Use **MARK** button to mark or unmark a movie. When one or more movie files are marked, the marked movies will be played in sequence.

4 Use ∧ or ∨ button to navigation the appropriate movies, then press the **ENTER** button to show up the pop-up menu.

> ▶ **Preview**: Displays the preview video of the current file.
> ▶ **Play** : Play the selected movie.
>   Divx Play is executed while screen changes.
> ▶ **Mark All** : Mark all Movie in the folder.
> ▶ **Unmark All** : Deselect all marked Movies.
> ▶ **Cancel** : Close the pop-up menu.

5 Repeatedly, press **EXIT** button to return to TV viewing or press the **TIME MACHINE** button to return to the **Home** menu.

Movie List	Page 1/1	☑ Not Marked
USB Device Drive1		Folder : LoveActually
UP Folder		
	📁 BB Project	
	📁 LoveActually	◉
	📁 Radio Star	
	📁 The Wedding Date	

MENU Menu ↔ Navigation ⊙ OK   CH ⇕ Move Page MARK Mark EXIT Exit

❶ ❷

Movie List	Page 1/1	☑ Not Marked
USB Device Drive1		Love.Actually.2003.DVDRip.X...
UP Folder		
	☐ Love.Actually.2003.DV	ⓘ Love. Act... No Marked
	☐ Love.Actually.2003.DV	**Preview** ◉
		Play
		Mark All
		Cancel

MENU Menu ↔ Navigation ⊙ Popup Menu CH ⇕ Move Page MARK Mark EXIT Exit

❸ ❹
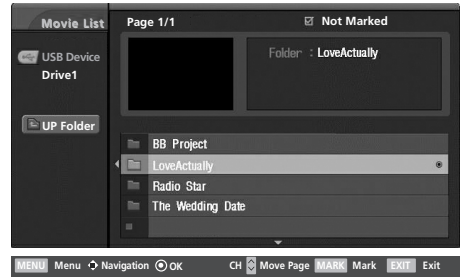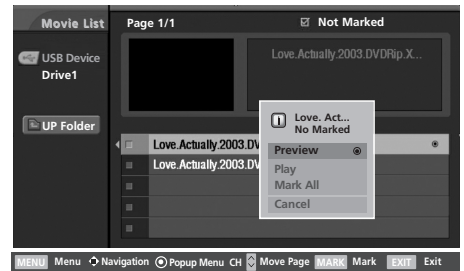
❗ NOTE
▶ In the case of files not supported, a message regarding non-supported file is displayed.

DivX Audio Language & Subtitle Language

▶ When DivX is playing, if you press the **DivX** button, this message is displayed.

| ⓘ Choose from options below. |
| **Audio Language** |
| ◄ **Mpeg(1/1)** ► | OK |
| **Subtitle Language** |
| - - - - (0/0) | OK |
| ↔ Navigation ⊙ OK EXIT Exit |
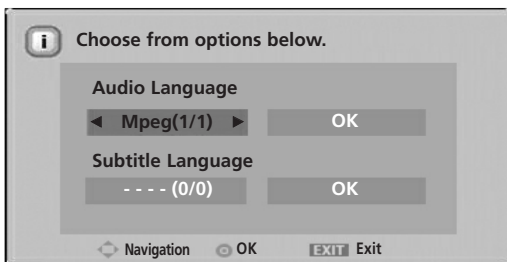
Press the ∧ ∨ ⟨ ⟩ button to select the desired option.
Supports up to Mpeg, Mp3, PCM, AC3 file.

PIP SIZE POSITION RATIO
CAPTION + − MTS DIVX LANG

SUBTITLE

Turns the subtitle control during movie play.
It's available to identical with the name of movie file.
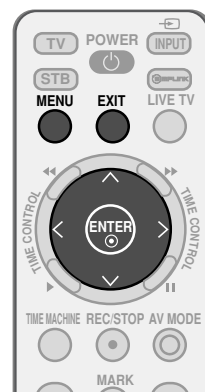
1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME MACHINE** menu.

SETUP	**Time Control**
PICTURE	**Record Quality**
AUDIO	**Recorded TV**
TIME	**Schedule List**
OPTION	**Manual Record**
TIME MACHINE	**HDD Format**
	DivX Reg. Code
	USB Backup
	USB HDD Format
MENU Prev.	**Subtitle** ▶ To set

❶ ❷ ❸

2 Press the > button and then use ∧ or ∨ button to select **Subtitle**.

3 Press the > button to start **Subtitle**.

4 Press the ∧ ∨ ‹ › button to select the desired subtitle option.

On	Off

Control	Language	Sync	Position
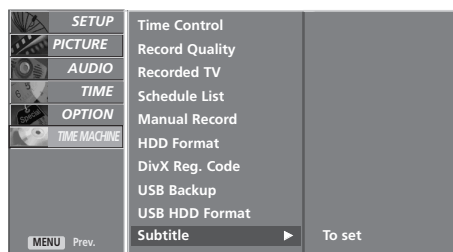
- **Control**: Turns the position of the subtitle on and off during movie play.
- **Language**: Changes the Language Group of the subtitle during movie play.
- **Sync**: Adjusts the time synchronization of the subtitle from -10 secs ~ +10 secs by steps of 1 secs during movie play.
- **Position**: Changes the position of the subtitle either up or down during movie play.

5 Press the **EXIT** button to return to Movie playing.

DIVX REGISTRATION CODE

Confirm the DivX registration code number of the TV. Using the registration number, movies can be rented or purchased at www.divx.com/vod.

With a DivX registration code from other TV, playback of rented or purchased DivX file is not allowed. (Only DivX files matched with the registration code of the purchased TV are playable.)
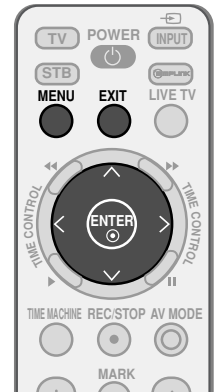
① Press the **MENU** button and then use ∧ or ∨ button to select the **TIME MACHINE** menu.

② Press the ▷ button and then use ∧ or ∨ button to select **DivX Reg. Code**.

SETUP	Time Control	
PICTURE	Record Quality	
AUDIO	Recorded TV	
TIME	Schedule List	
OPTION	Manual Record	
TIME MACHINE	HDD Format	
	DivX Reg. Code ▶	To set
	USB Backup	
	USB HDD Format	
MENU Prev.	Subtitle	

③ Press the ▷ button to start **DivX Reg. Code**.

> **ⓘ DivX Registration Code : xxxxxxx**
>
> OK
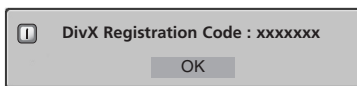
④ Press the **EXIT** button to return to normal TV viewing.
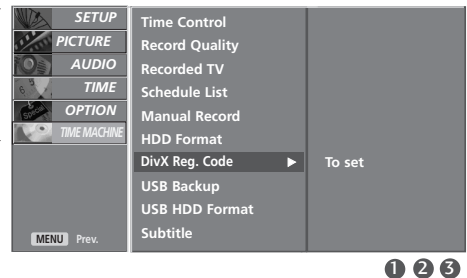
▶ Official DivX® Certified Product.
▶ Plays all version of DivX® video (including DivX® 6) with standard playback of DivX® media files.
▶ "DivX, DivX Certified, and associated logos are trademarks of DivX, and are under license."

PICTURE CONTROL

WATCHING PIP (PICTURE-IN-PICTURE)

PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.

Double Window mode splits the screen into two images, allowing two picture sources to be shown on the TV screen at the same time. Each source is given half the screen.

It's not available to use this function on recording program and playing movie.

Watching PIP/Double Window

Press the **PIP** button to access the sub picture.

Each press of PIP changes the PIP options.

PIP Mode   **DW1 Mode**   **DW2 Mode**

PIP Off
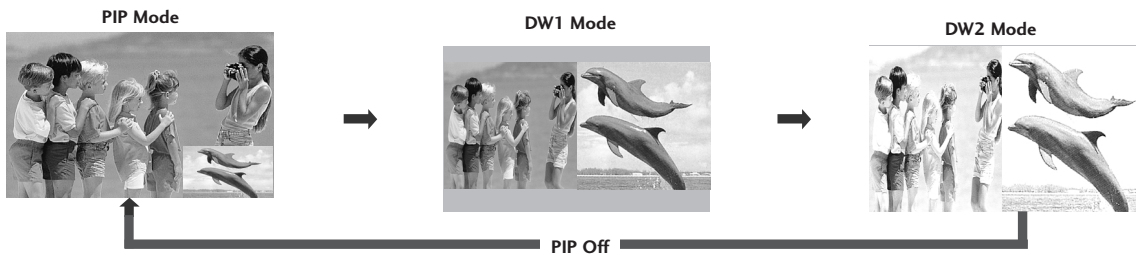
Channel Selection for Sub Picture

① Press the **PIP CH +/-** button to select a channel for the sub picture.

The selected channel number is displayed just below the channel number of main picture.

Input Source Selection for Sub Picture

Press the **PIP INPUT** button to select the input source for the sub picture.
Each press of **PIP INPUT** button is pressed, each input source for the sub picture is displayed.

Main Picture Source	Available Sub Picture Sources
TV	All
AV1	All (Except AV1)
AV2	All (Except AV2)
Component1	All (Except Component1)
Component2	All (Except Component2)
RGB	All (Except RGB)
HDMI1/DVI	All (Except HDMI1/DVI, HDMI2, HDMI3)
HDMI2	All (Except HDMI1/DVI, HDMI2, HDMI3)
HDMI3	All (Except HDMI1/DVI, HDMI2, HDMI3)

Sub Picture Size Adjustment (PIP mode only)

Press the **SIZE** button to adjust the sub picture size.
With **SIZE** button in PIP mode, sub picture is adjusted.

Swapping the PIP

Use the **SWAP** button to switch the main and sub pictures.

Moving the Sub Picture (PIP mode only)

Press the **POSITION** button.
Repeatedly press the **POSITION** button then sub picture moves.
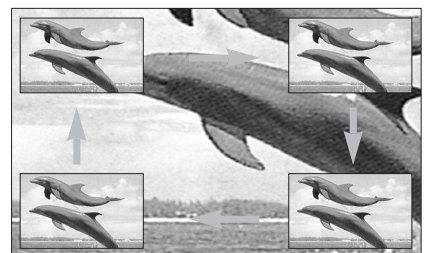
PICTURE SIZE (ASPECT RATIO) CONTROL

This feature lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV.

❶ NOTE

▶ If a fixed image is displayed on the screen for a long time, the image could become imprinted on the screen and remain visible.

This phenomenon is common to all manufacturers and is not covered by warranty. Although, after watching video that did not fill the screen, any after-image from the black bars will normally dissipate after a few minutes.

1 Press the **RATIO** button repeatedly to select the desired picture format.

■ You can also adjust **Aspect Ratio** in the **PICTURE** menu.

16:9

Following selection will lead you to adjust the picture horizontally, in a linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).
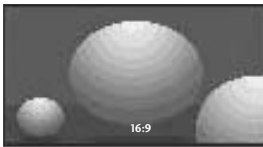
4:3

Following selection will lead you to view a picture with an original 4:3 aspect ratio, with gray bars appearing at both the left and right sides.
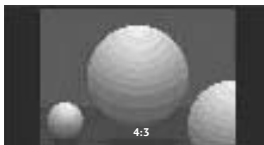
Zoom 1

Following selection will lead you to view the picture without any alternation, while filling the entire screen. However, the top and bottom portions of the picture will be cropped.

You can adjust the enlarge proportion of Cinema Zoom using ∧ or ∨ button.
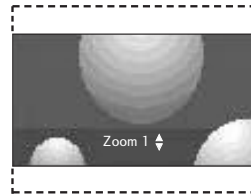
Zoom 2

Choose Zoom2 when you want the picture to be altered, both horizontally extended and vertically cropped. The picture taking a halfway trade off between alteration and screen coverage.

You can adjust the enlarge proportion of Cinema Zoom using ∧ or ∨ button.
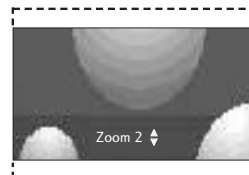
❶ NOTE

▶ You can only select **16:9** (Wide), **4:3**, **Zoom 1/2** in TV, AV, Component, HDMI mode.
▶ You can only select **16:9** (Wide), **4:3**, in RGB/HDMI-PC mode only.
▶ You can select **4:3**, **16:9**, **Zoom1**, **Zoom2** in Recorded TV, Movie List, Play back mode only.
▶ In Time Control Delay/Recording Delay function, TV displays the aspect ratio of previous input mode.
▶ It's available 16:9 when viewing a jpeg file in photo list.

PRESET PICTURE SETTINGS

Picture Mode-Preset

Picture Mode adjusts the TV for the best picture appearance. Select the preset value in the **Picture Mode** menu based on the program category.

Intelligent Sensor(Only LCD TV models), **Vivid, Standard, Cinema, Sport,** and **Game** are programmed for optimum picture reproduction at the factory and cannot be changed.
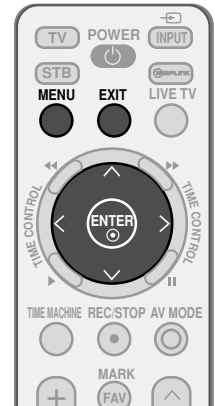
① Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

② Press the > button and then use ∧ or ∨ button to select **Picture Mode**.

③ Press the > button and then use ∧ or ∨ button to select **Intelligent Sensor**(Only LCD TV models), **Vivid, Standard, Cinema, Sport, Game, User1,** or **User2**.

④ Press the **EXIT** button to return to normal TV viewing.

PICTURE CONTROL

Color Tone - Preset

To initialize values (reset to default settings), select the Cool option.

Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.

It's available to use this function in "**User1/2**" of **Picture mode** only.

1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the > button and then use ∧ or ∨ button to select **Color Temperature**.

3 Press the > button and then use ∧ or ∨ button to select either **Cool**, **Medium**, **Warm**, or **User**.

4 Press the **EXIT** button to return to normal TV viewing.

SETUP
PICTURE ▶
AUDIO
TIME
OPTION
TIME MACHINE

Picture Mode
Color Temperature
XD
Advanced
Aspect Ratio
Picture Reset
Screen
XD Demo

MENU Prev.

❶

Picture Mode
Color Temperature   ▶   √ Cool
XD   Medium
Advanced   Warm
Aspect Ratio   User
Picture Reset
Screen
XD Demo

❷ ❸

MANUAL PICTURE ADJUSTMENT

Picture Mode-User option

Backlight: To control the brightness of the screen, adjust the brightness of **LCD panel**.(Only LCD TV models)

Contrast: Adjusts the difference between the light and dark levels in the picture.

Brightness: Increases or decreases amount of white in the your picture.

Color: Adjusts intensity of all colors.

Sharpness: Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.

Tint: Adjusts the balance between red and green levels.
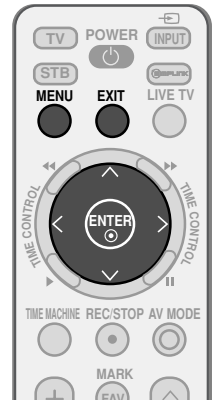
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the ⟩ button and then use ∧ or ∨ button to select **Picture Mode**.

3 Press the ⟩ button and then use ∧ or ∨ button to select **User 1** or **User 2**.

4 Press the ⟩ button and then use ∧ or ∨ button to select desired picture option (**Backlight**(Only LCD TV models)**, Contrast, Brightness, Color, Sharpness** and **Tint**).

5 Press the ⟨ or ⟩ button to make appropriate adjustments.

6 Press the **EXIT** button to return to normal TV viewing.

---
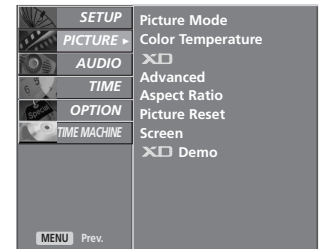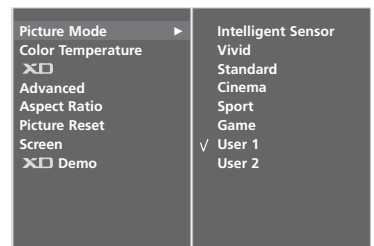
❶ NOTE
► You can't adjust color, sharpness and tint in the RGB/HDMI-PC mode to the levels you prefer.

PICTURE CONTROL

❶

Picture Mode	►	Intelligent Sensor
Color Temperature		Vivid
XD		Standard
Advanced		Cinema
Aspect Ratio		Sport
Picture Reset		Game
Screen		√ User 1
XD Demo		User 2

❷❸

User 1	
Backlight	50
Contrast	60
Brightness	50
Color	30
Sharpness	40
Tint	0

❹❺

Color Tone - User option

**To adjust red, green, blue to any color temperature you prefer.
It's available to use this function in "User1/2" of Picture
mode only.**

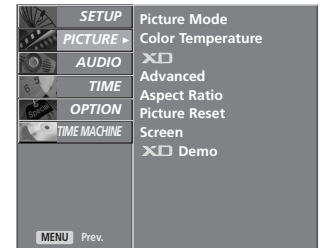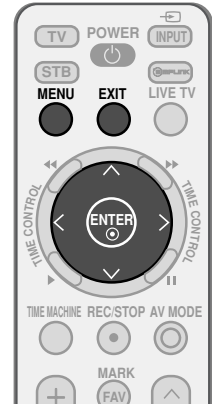**1** Press the **MENU** button and then use ⌃ or ⌄ button to
select the **PICTURE** menu.

2 Press the ⟩ button and then use ⌃ or ⌄ button to select
Color Temperature.

3 Press the ⟩ button and then use ⌃ or ⌄ button to select
User.

4 Press the ⟩ button and then use ⌃ or ⌄ button to select
Red, **Green** or **Blue**.

5 Press the ⟨ or ⟩ button to make appropriate adjustments.

6 Press the **EXIT** button to return to normal TV viewing.
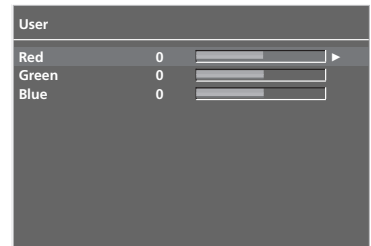
XD - PICTURE IMPROVEMENT TECHNOLOGY

XD is LG Electronic's unique picture improving technology to display a real HD source through an advanced digital signal processing algorithm.

When selecting Picture Mode options (Vivid, Standard, Cinema, Sport, and Game), XD is automatically changed to Auto.

When selecting Picture Mode options (User 1 and User 2), you can choose the Auto / Manual.

When selecting the Manual, you can adjust the XD Contrast, XD color and XD Noise.

It's not available to use this function in RGB-PC mode.
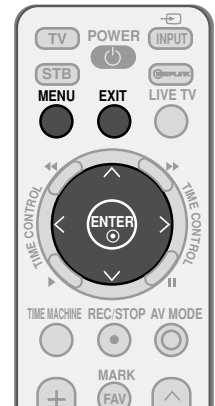
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the > button and then use ∧ or ∨ button to select **XD**.

3 Press the > button and then use ∧ or ∨ button to select **Auto** or **Manual**.

> **Selecting the Manual**
>
> 1. Press the > button and then use ∧ or ∨ button to select **XD Contrast**, **XD Color** or **XD Noise**.
>   - **XD Contrast:** Optimizing the contrast automatically according to the brightness of the reflection.
>   - **XD Color:** Adjusting the colors of the reflection automatically to reproduce as closely as possible to the natural colors.
>   - **XD Noise :** Removing the noise up to the point where it does not damage the original picture.
> 2. Use the < or > button to select **On** or **Off**.
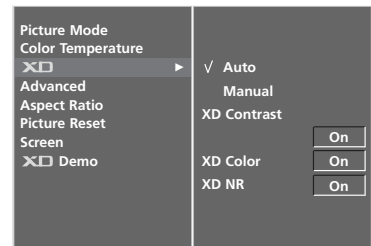
4 Press the **EXIT** button to return to normal TV viewing.

XD DEMO

Use it to see the difference between XD Demo on and XD Demo off.

It's not available to use this function in RGB-PC mode.
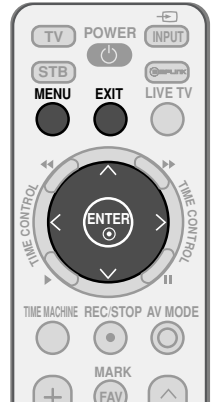
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the > button and then use ∧ or ∨ button to select select **XD Demo.**

3 Press the > button to begin **XD Demo**.

4 To stop **XD Demo**, press the **MENU** button.

❶

❷ ❸
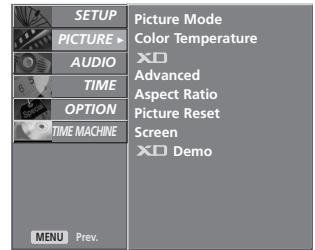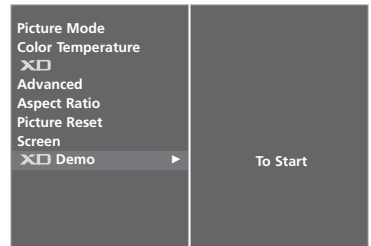
• **XD Demo**

PICTURE CONTROL

ADVANCED - CINEMA

Set up the TV for the best picture appearance for viewing movies. This feature operates only in Analog TV, AV and Component 480i mode.

1. Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2. Press the > button and then use ∧ or ∨ button to select select **Advanced**.

3. Press the > button and then use ∧ or ∨ button to select **Cinema**.

4. Press the < or > button to select **On** or **Off.**

5. Press the **EXIT** button to return to normal TV viewing.
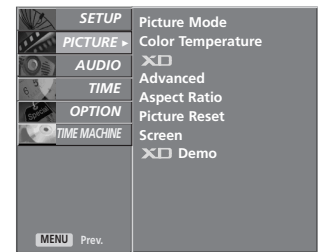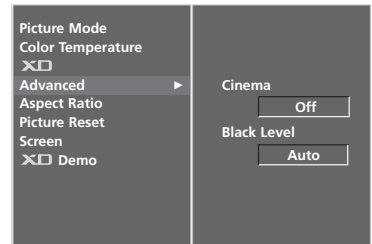
ADVANCED - BLACK (DARKNESS) LEVEL

When you watch the movie, this function adjusts the set to the best picture appearance. Adjusting the contrast and the brightness of the screen using the black level of the screen.
This function works in the following mode: AV (NTSC-M) or HDMI.
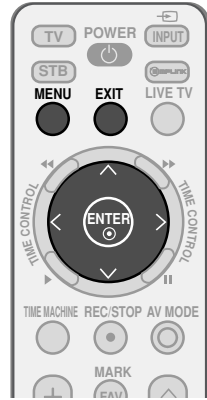
1 Press the **MENU** button and then use ∧ or ∨ button to select the **PICTURE** menu.

2 Press the > button and then use ∧ or ∨ button to select **Advanced**.

3 Press the > button and then use ∧ or ∨ button to select **Black Level**.

4 Press the < or > button to select **Low** or **High**.

   ■ **Low**: The reflection of the screen gets darker.
   ■ **High**: The reflection of the screen gets brighter.

5 Press the **EXIT** button to return to normal TV viewing.
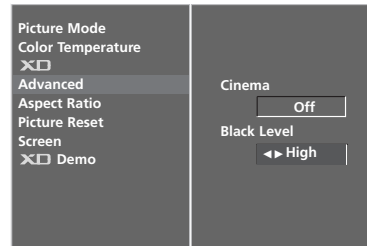
PICTURE CONTROL

PICTURE RESET

Returns to the default settings Picture Mode, Color Temperature, XD, Advanced, Aspect Ratio at the factory.
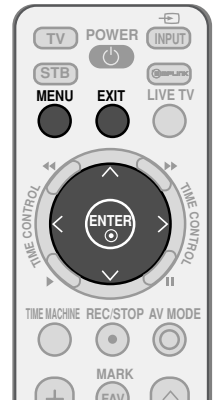
1 Press the **MENU** button and then use ︿ or ﹀ button to select **PICTURE** menu.

2 Press the ﹥ button and then use ︿ or ﹀ button to select **Picture Reset**.

3 Press the ﹥ button to initialize the adjusted value.

4 Press the **EXIT** button to return to normal TV viewing.
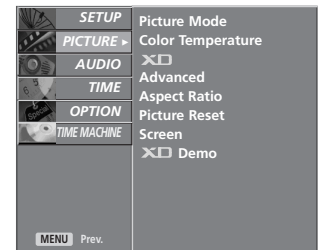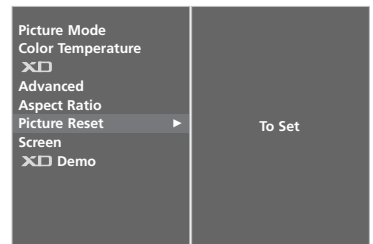
IMAGE STICKING MINIMIZATION (ISM) METHOD *- Plasma TV only*

A frozen of still picture from a PC/video game displayed on the screen for prolonged periods will result in a ghost image remaining even when you change the image. Avoid allowing a fixed image to remain on the set's screen for a long period of time.

White wash

White wash removes permanent images from the screen.

Note: An excessive permanent image may be impossible to clear entirely with White Wash.

Orbiter

Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.

Inversion

This is the function to invert the panel color of the screen. The panel color is automatically inverted every 30 minutes.
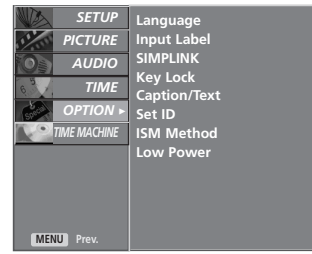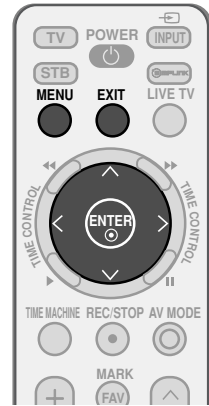
① Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

② Press the > button and then use ∧ or ∨ button to select select **ISM Method**.

③ Press the > button and then use ∧ or ∨ button to select either **Normal, White Wash, Orbiter** or **Inversion**. If you unnecessary to set this function, set **Normal**.

④ Press the **EXIT** button to return to TV viewing.
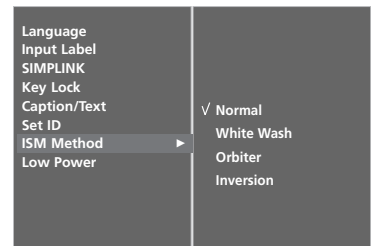
PICTURE CONTROL

LOW POWER PICTURE MODE *- Plasma TV only*

This is the function to reduce the power consumption of the set.

1 Press the **MENU** button and then use ⌃ or ⌄ button to select the **OPTION** menu.

2 Press the ﹥ button and then use ⌃ or ⌄ button to select **Low Power**.

3 Press the ﹥ button and then use ⌃ or ⌄ button to select **On** or **Off**.

4 Press the **EXIT** button to return to TV viewing.

SETUP	**Language**
PICTURE	**Input Label**
AUDIO	**SIMPLINK**
TIME	**Key Lock**
	Caption/Text
OPTION ►	**Set ID**
TIME MACHINE	**ISM Method**
	Low Power

`MENU` Prev.

❶

Language	
Input Label	
SIMPLINK	
Key Lock	
Caption/Text	
Set ID	
ISM Method	
Low Power ►	√ **Off**
	On

❷ ❸
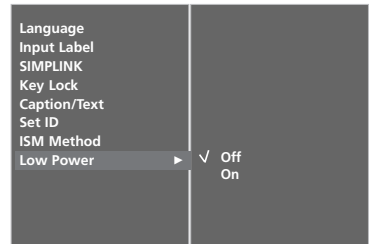
POWER INDICATOR *- LCD TV only*
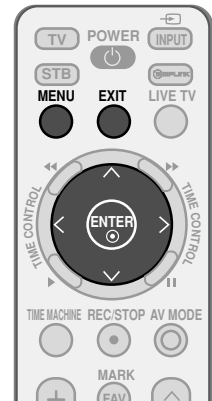
1 Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

2 Press the > button and then use ∧ or ∨ button to select **Power Indicator**.

3 Press the > button and then use ∧ or ∨ button to select **Standby Light**.

4 Press the < or > button to select **On** or **Off**.

5 Press the **EXIT** button to return to normal TV viewing.

| SETUP	Language
PICTURE	Input Label
AUDIO	SIMPLINK
TIME	Key Lock
OPTION ►	Set ID
TIME MACHINE	Caption/Text
	Power Indicator

MENU   Prev.

❶

Language	
Input Label	
SIMPLINK	
Key Lock	
Set ID	
Caption/Text	**Standby Light**
Power Indicator ►	On
	Power Light
	On

❷ ❸
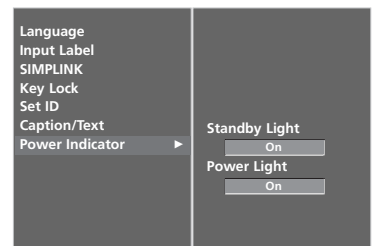
■ **Standby Light**: You can set the brightness of the LED on the front side of the TV during power standby.
■ **Power Light**: You can set the the LED on the front side of the TV to be turned on or off while watching the TV.

SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER (AUTO VOLUME)

Auto Volume automatically keeps on an equal volume level even if you change programs.
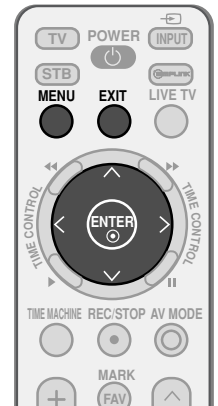
1 Press the **MENU** button and then use ∧ or ∨ button to select the **AUDIO** menu.

2 Press the ⊳ button and then use ∧ or ∨ button to select **Auto Volume**.

3 Press the ⊳ button and then use ∧ or ∨ button to select **On** or **Off**.

4 Press the **EXIT** button to return to normal TV viewing.
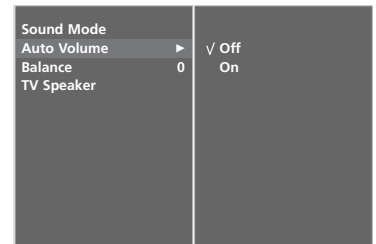
PRESET SOUND SETTINGS - SOUND MODE

Sound Mode lets you enjoy the best sound without any Special adjustment because the TV sets the appropriate sound options based on the program content.

SRS TSXT, **Clear Voice**, **Standard**, **Music**, **Cinema**, and **Sport**, **Game** are preset for good sound quality at the factory and are not adjustable.
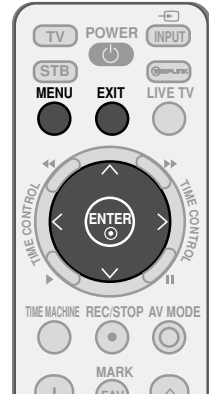
① Press the **MENU** button and then use ∧ or ∨ button to select the **AUDIO** menu.

② Press the > button and then use ∧ or ∨ button to select **Sound Mode**.

③ Press the > button and then use ∧ or ∨ button to select **SRS TSXT**, **Clear Voice**, **Standard**, **Music**, **Cinema**, **Sport**, **Game**, or **User**.

④ Press the **EXIT** button to return to TV viewing.
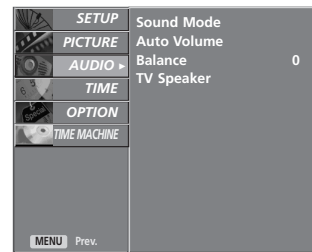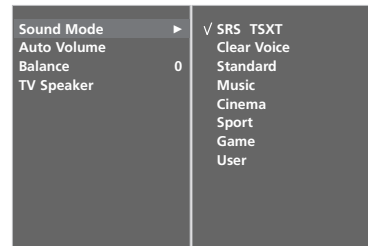
▶ **SRS** ⚫ **TruSurround XT** is a trademark of SRS Labs, Inc.
▶ **TruSurround XT technology is incorporated under license from SRS Labs, Inc.**

SETUP
PICTURE
AUDIO ▶
TIME
OPTION
TIME MACHINE

Sound Mode
Auto Volume
Balance   0
TV Speaker

MENU   Prev.

❶

Sound Mode   ▶   √ SRS TSXT
Auto Volume   Clear Voice
Balance   0   Standard
TV Speaker   Music
                      Cinema
                      Sport
                      Game
                      User

❷ ❸

SOUND SETTING ADJUSTMENT -USER MODE

Adjust the sound equalizer.
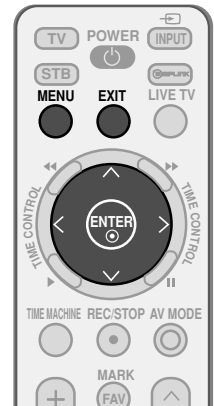
1 Press the **MENU** button and then use ∧ or ∨ button to select the **AUDIO** menu.

2 Press the ⟩ button and then use ∧ or ∨ button to select **Sound Mode**.

3 Press the ⟩ button and then use ∧ or ∨ button to select **User**.

4 Press the ⟩ button.

5 Select a sound band by pressing the ∧ or ∨ button. Make appropriate sound level with the ⟨ or ⟩ button.

6 Press the **EXIT** button to return to TV viewing.

SETUP	Sound Mode	
PICTURE	Auto Volume	
AUDIO ▶	Balance	0
TIME	TV Speaker	
OPTION		
TIME MACHINE		

Menu   Prev.

➊

Sound Mode	▶	SRS TSXT
Auto Volume		Clear Voice
Balance	0	Standard
TV Speaker		Music
		Cinema
		Sport
		Game
		√ User

➋ ➌ ➍

User

120Hz	◀▭▭▭▭▭▭▭ ▶
200Hz	▭▭▭▭▭
500Hz	▭▭▭▭▭
1. 2kHz	▭▭▭▭▭
3kHz	▭▭▭▭▭
7. 5kHz	▭▭▭▭▭
12kHz	▭▭▭▭▭

➎
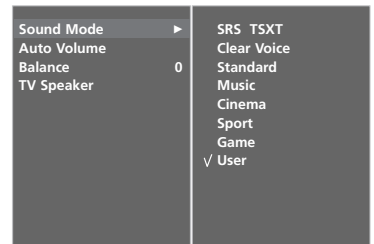
BALANCE

You can adjust the sound balance of speaker to the levels you prefer.

1 Press the **MENU** button and then use $\wedge$ or $\vee$ button to select the **AUDIO** menu.

2 Press the $>$ button and then use $\wedge$ or $\vee$ button to select **Balance**.

3 Press the $>$ button and then $<$ or $>$ button to make desired adjustment.

4 Press the **EXIT** button to return to TV viewing.

SETUP   Sound Mode
PICTURE   Auto Volume
AUDIO ►   Balance   0
TIME   TV Speaker
OPTION
TIME MACHINE

Menu   Prev.
                                            ➊

Sound Mode
Auto Volume
Balance   0 ► |IIIIIIIIIII|IIIIIIIIII|R
TV Speaker

                                          ➋ ➌
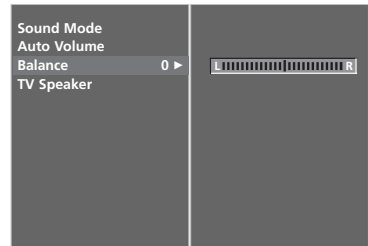
SOUND &LANGUAGE CONTROL

TV SPEAKER ON/OFF SETUP

You can adjust the internal speaker status.

In AV, Component, RGB, and HDMI mode, internal speaker audio can be outputted even though there is no video signal.

If you want to use your external hi-fi stereo system, turn off the internal speakers of the set.
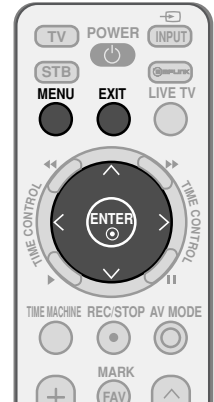
1 Press the **MENU** button and then use ∧ or ∨ button to select the **AUDIO** menu.

2 Press the > button and then use ∧ or ∨ button to select **TV Speaker**.

3 Press the > button and then use ∧ or ∨ button to select **On** or **Off**.

4 Press the **EXIT** button to return to TV viewing.

SETUP	Sound Mode
PICTURE	Auto Volume
AUDIO ▸	Balance 0
TIME	TV Speaker
OPTION	
TIME MACHINE	

Menu   Prev.

➊

Sound Mode	
Auto Volume	
Balance 0	
TV Speaker ▸	√ Off
	On

➋ ➌
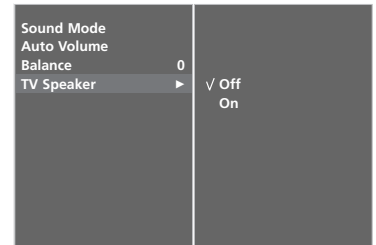
CLOSED CAPTIONS

Closed captioning is a process which converts the audio portion of a television program into written words which then appear as subtitles on the television screen. Closed captions allow viewers to read the dialogue and narration of television programs.

Using Closed Captions

Captions are the subtitles of the dialogue and narration of television programs. For prerecorded programs, program dialogue can be arranged into captions in advance. Its possible to caption a live program by using a process called real-time captioning, which creates captions instantly. Real-time captioning is normally done by professional reporters using a machine shorthand system and computer for translation into English. Captioning is an effective system for the hearing-impaired, and it can also aid in teaching language skills.
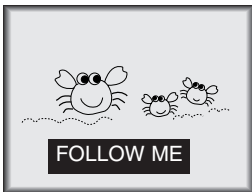
FOLLOW ME

• The picture at left shows a typical caption.

Caption Tips

• Not all TV broadcasts include closed caption signals.
• Sometimes TV stations broadcast four different caption signals on the same channel. By selecting Mode1 to Mode2, you can choose which signal you view. Mode1 is usually the signal with the captions, while another mode might show demonstration or programming information.
• Your TV might not receive caption signals normally in the following situations.

1. Poor reception conditions are encountered:

• IGNITION:
Picture may flutter, drift, suffer from black spots, or horizontal streaking. Usually caused by interference from automobile ignition systems, neon lamps, electrical drills, and other electrical appliances.

• GHOSTS:
Ghosts are caused when the TV signal splits and follows two paths. One is the direct path and the other is reflected off tall buildings, hills or other objects. Changing the direction or position of the antenna may improve reception.

• SNOW:
If your receiver is located at the weak, fringe area of a TV signal, your picture may be marred by small dots. It may be necessary to install a special antenna to improve the picture.

2. An old, bad, or illegally recorded tape is being played.
3. Strong, random signals from a car or airplane interfere with the TV signal.
4. The signal from the antenna is weak.
5. The program wasn't captioned when it was produced, transmitted, or taped.

1 Use the **CAPTION** button repeatedly to select your caption Mode 1, Mode 2, Text1, Text2, or Off.

2 Press the **EXIT** button to return to TV viewing.

■ You can also adjust **Caption/Text** in the **OPTION** menu.
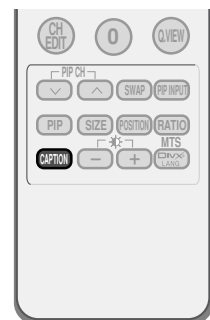
SOUND &LANGUAGE CONTROL

STEREO/SAP BROADCASTS SETUP

The TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program if the broadcaster transmits one additional sound signal in addition to the original one.

1 Use the **MTS** button to select your desired MTS mode in analog signal. Each time you press the **MTS** button, **Mono**, **Stereo**, or **SAP** appear in turn.

2 Press the **EXIT** button to save and return to TV viewing.

ON-SCREEN MENU LANGUAGE SELECTION

The menus can be shown on the screen in the selected language.

1 Press the **MENU** button and then use ∧ or ∨ button to select **OPTION** menu.

2 Press the > button and then use ∧ or ∨ button to select **Language**.

3 Press the > button and then use ∧ or ∨ button to select your desired language.

4 Press the **EXIT** button to return to TV viewing.

SOUND & LANGUAGE CONTROL
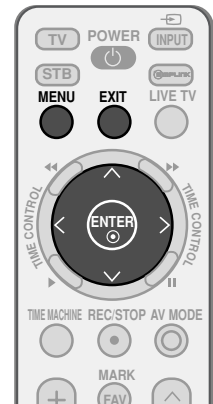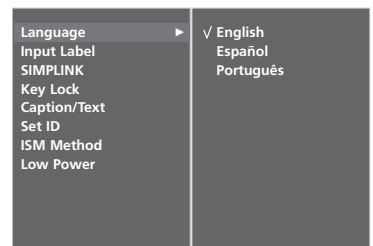
TIME SETTING

CLOCK SETUP

You must set the time correctly before using on/off time function and reservation recording function.
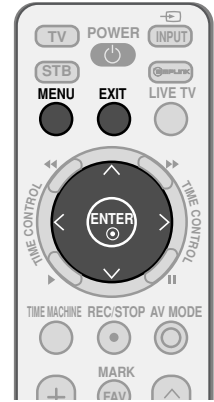
1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME** menu.

2 Press the ＞ button and then use ∧ or ∨ button to select **Clock**.

3 Press the ＞ button and then ＜ or ＞ button to select either the year, date, or time option.

4 Once selected, use the ∧ or ∨ button to set the year, date, and time options.

5 Press the **EXIT** button to return to TV viewing.
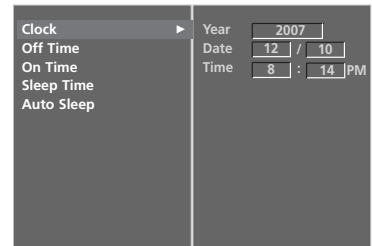
TIME SETTING

AUTO ON/OFF TIMER SETTING

The Off Time automatically switches the set to standby at the preset time.

Two hours after the set is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.

Once the on time/off time is set, these functions operate daily at the preset time.

Off Time function overrides On Timer function if they are set both to the same time.

The set must be in standby mode for the On Timer to work.
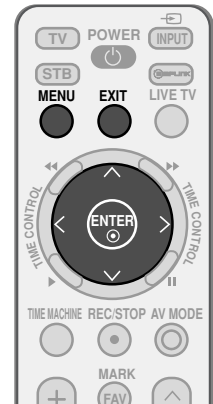
1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME** menu.

2 Press the > button and then use ∧ or ∨ button to select **Off Time** or **On Time**.

3 Press the > button and then use ∧ or ∨ button to select **On.**
  ■ To cancel the **On/Off time** function, select **Off**.

4 Press the > button and then use ∧ or ∨ button to select hour.

5 Press the > button and then use ∧ or ∨ button to select minutes.

6 **For only On Time function**
  • **Vol.**:Press the > button and then use ∧ or ∨ button to adjust volume level at turn-on.
  • **Ch.**:Press the > button and then use ∧ or ∨ button to select the channel.

7 Press the **EXIT** button to return to TV viewing.
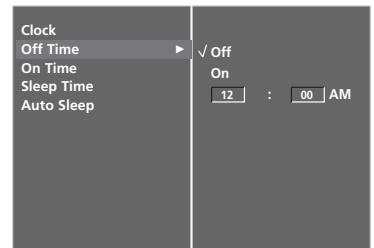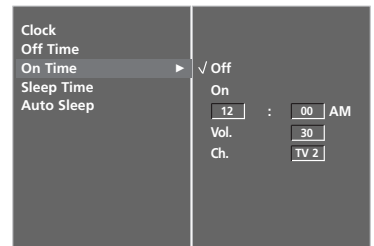
TIME SETTING

SLEEP TIME SETTING

You don't have to remember to switch the set off before you go to sleep. The sleep time automatically switches the set to standby after the preset time has elapsed.
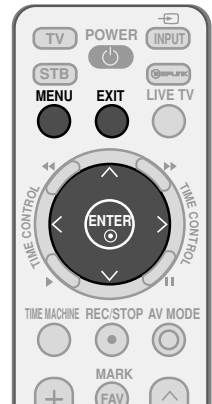
1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME** menu.

2 Press the > button and then use ∧ or ∨ button to select **SleepTime.**

3 Press the > button and then use ∧ or ∨ button to select 10, 20, 30, 60, 90, 120, 180 and 240 Min.

4 Press the **EXIT** button to return to TV viewing.

SETUP	Clock
PICTURE	Off Time
AUDIO	On Time
TIME ▸	Sleep Time
OPTION	Auto Sleep
TIME MACHINE	

MENU Prev.

❶

Clock	√ **Off**
Off Time	10 Min
On Time	20 Min
Sleep Time ▸	30 Min
Auto Sleep	60 Min
	90 Min
	120 Min
	180 Min
	240 Min

❷ ❸
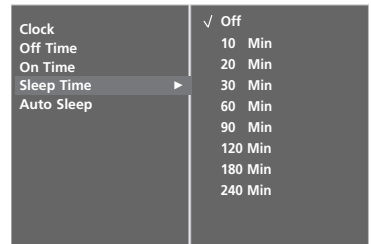
● NOTE

▶ To cancel the sleep time, repeatedly press the **SLEEP** button until the display ' ○ᶻᶻ - - -Min ' appears.

▶ When you switch the set off, the set releases the preset sleep time.

AUTO SHUT-OFF SETTING

If set to on and there is no input signal, the TV turns off auto-matically after 10 minutes.
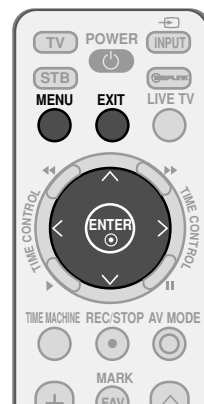
1 Press the **MENU** button and then use ∧ or ∨ button to select the **TIME** menu.

2 Press the ⟩ button and then use ∧ or ∨ button to select **Auto Sleep.**

3 Press the ⟩ button and then use ∧ or ∨ button to select **On** or **Off.**

4 Press the **EXIT** button to return to TV viewing.

SETUP	Clock
PICTURE	Off Time
AUDIO	On Time
TIME ▶	Sleep Time
OPTION	Auto Sleep
TIME MACHINE	

MENU Prev.

❶

Clock	
Off Time	
On Time	
Sleep Time	
Auto Sleep ▶	√ Off
	On

❷ ❸
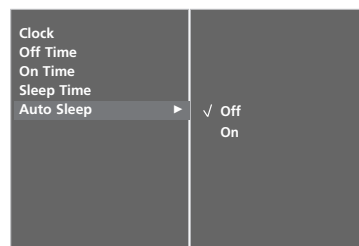
APPENDIX

TROUBLESHOOTING

The operation does not work normally.

The remote control doesn't work	■ Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV. ■ Ensure that the batteries are installed with correct polarity (+ to +, - to -). ■ Ensure that the correct remote operating mode is set: TV, VCR etc. ■ Install new batteries.
Power is suddenly turned off	■ Is the sleep timer set? ■ Check the power control settings. Power interrupted.

The video function does not work.

No picture &No sound	■ Check whether the product is turned on. ■ Try another channel. The problem may be with the broadcast. ■ Is the power cord inserted into wall power outlet? ■ Check your antenna direction and/or location. ■ Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	■ This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.
No or poor color or poor picture	■ Adjust Color in menu option. ■ Keep a sufficient distance between the product and the VCR. ■ Try another channel. The problem may be with the broadcast. ■ Are the video cables installed properly? ■ Activate any function to restore the brightness of the picture.
Horizontal/vertical bars or picture shaking	■ Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	■ Station or cable product experiencing problems, tune to another station. ■ Station signal is weak, reorient antenna to receive weaker station. ■ Check for sources of possible interference.
Lines or streaks in pictures	■ Check antenna (Change the direction of the antenna).
No picture when connecting HDMI	■ Check HDMI cable over version 1.3. The HDMI cables don't support HDMI version 1.3, it cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

APPENDIX

The audio function does not work.	
Picture OK & No sound	■ Press the VOL or VOLUME button. ■ Sound muted? Press MUTE button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly?
No output from one of the speakers	■ Adjust Balance in menu option.
Unusual sound from inside the product	■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.
No sound when connecting HDMI or USB	■ Check HDMI cable over version 1.3. ■ Check USB cable over version 2.0. ■ Use normal MP3 file. *This feature is not available for all models.

There is a problem in PC mode. (Only PC mode applied)	
The signal is out of range	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	■ Work the Auto configure or adjust clock, phase, or H/V position. (Option)
Screen color is unstable or single color	■ Check the signal cable. ■ Reinstall the PC video card.

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you will have your new TV. Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.

2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

Extended Absence

> ⚠ **CAUTION**
>
> ► If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

APPENDIX

PRODUCT SPECIFICATIONS

MODELS		42PG30TR (42PG30TR-MA)	50PG30TR (50PG30TR-MA)
Dimensions (Width x Height x Depth)	Including stand	40.9 x 28.5 x 12.1 inches 1039.5 x 726.0 x 307.6 mm	48.5 x 33.4 x 14.3 inches 1232.5 x 849.5 x 364.0 mm
	Excluding stand	40.9 x 26.5 x 3.3 inches 1039.5 x 673.7 x 84.0 mm	48.5 x 31.2 x 3.3 inches 1232.5 x 793.0 x 84.0 mm
Weight	including stand excluding stand	61.9 pounds / 28.1 kg 55.3 pounds / 25.1 kg	93.6 pounds / 42.5 kg 84.8 pounds / 38.5 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL M-N VHF 2-13, UHF 14-69, CATV 1-125 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104˚F (0 ~ 40˚C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140˚F (-20 ~ 60˚C) Less than 85%	

MODELS		42LG70ER (42LG70ER-MA)
Dimensions (Width x Height x Depth)	Including stand	40.4 x 28.8 x 11.5 inches 1026.2 x 734 x 293.4 mm
	Excluding stand	40.4 x 27.0 x 4.4 inches 1026.2 x 687.9 x 111.8 mm
Weight	including stand excluding stand	44.2 pounds / 20.05kg 50.1 pounds / 22.75kg
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC, PAL M-N VHF 2-13, UHF 14-69, CATV 1-125 75 ohm
Environment condition	Operating Temperature Operating Humidity	32 ~ 104˚F (0 ~ 40˚C) Less than 80%
	Storage Temperature Storage Humidity	-4 ~ 140˚F (-20 ~ 60˚C) Less than 85%

■ The specifications shown above may be changed without prior notice for quality improvement.

PROGRAMMING THE REMOTE CONTROL

The remote is a multi-brand or a universal remote. It can be programmed to operate most remote-controllable devices of other manufacturers.
Note that the remote may not control all models of other brands.

Programming a code into a remote mode

1. Testing your remote control.
    To find out whether your remote control can operate other components without programming, turn on a component such as a STB and press the corresponding mode button (such as a **STB**) on the remote control, while pointing at the component. Test the **POWER** and **CH** ∧ ∨ buttons to see if the component responds correctly. If the component does not operate correctly, the remote control requires programming to operate the device.

2. Switch on the component to be programmed, then press the corresponding mode button (such as **STB**) on the remote control. The remote control button of the desired device is illumintated.

3. Press the **MENU** and **MUTE** buttons simultaneously, the remote control is ready to be programmed with the code.

4. Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. If the code is correct, the device will turn off.

5. Press the **MENU** button to store the code.

6. Test the remote control functions to see if the component responds correctly. If not, repeat from step 2.

APPENDIX

HDSTB

Brand	Codes				Brand	Codes				Brand	Codes			
ALPHASTAR DSR	123				HOUSTON TRACKER	033	037	039	051	PROSAT	072			
AMPLICA	050					057	104			RCA	066	106		
BIRDVIEW	051	126	129		HUGHES	068				REALISTIC	043	074		
CHANNEL MASTER	013	014	015	018	JANIEL	060	147			SAMSUNG	123			
	036	055			JERROLD	061				SATELLITE SERVICE CO	028	035	047	057
CHAPARRAL	008	009	012	077	KATHREIN	108					085			
CITOH	054				LEGEND	057				SCIENTIFIC ATLANTA	032	138		
CURTIS MATHES	050	145			LG	001				SONY	103			
DRAKE	005	006	007	010	LUTRON	132				STARCAST	041			
	011	052	112	116	LUXOR	062	144			SUPER GUIDE	020	124	125	
	141				MACOM	010	059	063	064	TEECOM	023	026	075	087
DX ANTENNA	024	046	056	076		065					088	090	107	130
ECHOSTAR	038	040	057	058	MEMOREX	057					137			
	093	094	095	096	NEXTWAVE	028	124	125		TOSHIBA	002	127		
	097	098	099	100	NORSAT	069	070			UNIDEN	016	025	042	043
	122				PACE SKY SATELLITE	143					044	045	048	049
ELECTRO HOME	089				PANASONIC	060	142				078	079	080	086
EUROPLUS	114				PANSAT	121					101	135	136	
FUJITSU	017	021	022	027	PERSONAL CABLE	117				VIEWSTAR	115			
	133	134			PHILIPS	071				WINEGARD	128	146		
GENERAL INSTRUMENT	003	004	016	029	PICO	105				ZENITH	081	082	083	084
	031	059	101		PRESIDENT	019	102				091	120		
HITACHI	139	140			PRIMESTAR	030	110	111						

IR CODES

1. How to Connect

- Connect your wired remote control to the Remote Control port on the TV.

2. Remote Control IR Codes

- **Output waveform**

  Single pulse, modulated with 37.917KHz signal at 455KHz
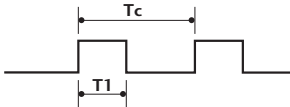
  Carrier frequency

  FCAR = 1/TC = fOSC/12

  Duty ratio = T1/TC = 1/3

- **Configuration of frame**

  1st frame

Lead code	Low custom code	High custom code	Data code	Data code
	C0 C1 C2 C3 C4 C5 C6 C7	C0 C1 C2 C3 C4 C5 C6 C7	D0 D1 D2 D3 D4 D5 D6 D7	D0 D1 D2 D3 D4 D5 D6 D7

  Repeat frame

  Repeat code   Tf

- **Lead code**

  9 ms   4.5 ms

- **Repeat code**

  0.55 ms

  9 ms   2.25 ms
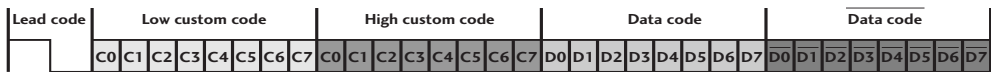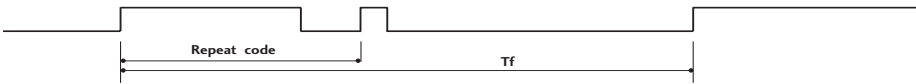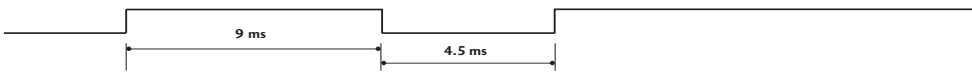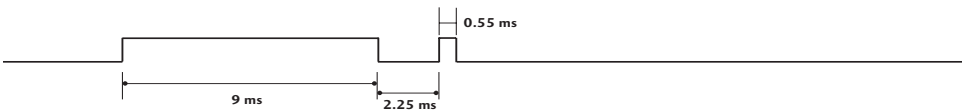
- **Bit description**

  Bit "0"   0.56 ms   1.12 ms

  Bit "1"   0.56 ms   2.24 ms
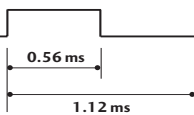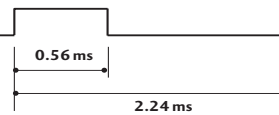
- **Frame interval: Tf**

  The waveform is transmitted as long as a key is depressed.

  Tf   Tf   Tf=108ms @455KHz
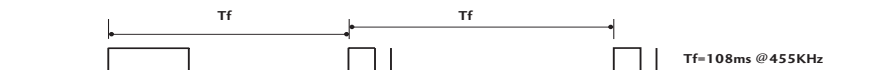
APPENDIX

Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)
43	MENU	Remote control Button
0B	INPUT	Remote control Button
9E	LIVE TV	Remote control Button
10-19	Number Key 0-9	Remote control Button
1A	Q.VIEW	Remote control Button
09	MUTE	Remote control Button
1E	FAV/MARK	Remote control Button
02	VOL +	Remote control Button
03	VOL -	Remote control Button
00	CH ∧	Remote control Button
01	CH ∨	Remote control Button
40	∧	Remote control Button
41	∨	Remote control Button
07	<	Remote control Button
06	>	Remote control Button
44	ENTER	Remote control Button
5B	EXIT	Remote control Button
7E	SIMPLINK	Remote control Button
55	CH EDIT	Remote control Button
0E	SLEEP	Remote control Button
30	AV MODE	Remote control Button
91	DivX LANG. (MTS)	Remote control Button
39	CAPTION	Remote control Button
60	PIP	Remote control Button
71	PIP +	Remote control Button
72	PIP -	Remote control Button
63	SWAP	Remote control Button
61	PIP INPUT	Remote control Button
64	SIZE	Remote control Button
62	POSITION	Remote control Button
79	RATIO	Remote control Button
E0	☀ +	Remote control Button
E1	− ☀	Remote control Button
7C	TIME MACHINE	Remote control Button
B0	PLAY	Remote control Button
BA	PAUSE	Remote control Button
BD	REC/STOP	Remote control Button
8F	REW	Remote control Button
8E	FF	Remote control Button

EXTERNAL CONTROL DEVICE SETUP

Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the TV's functions externally.

Connect the serial port of the control device to the RS-232C jack on the TV back panel.

RS-232C connection cables are not supplied with the TV.

It's not available to use this function in Time MACHINE mode.

RS-232C Setup
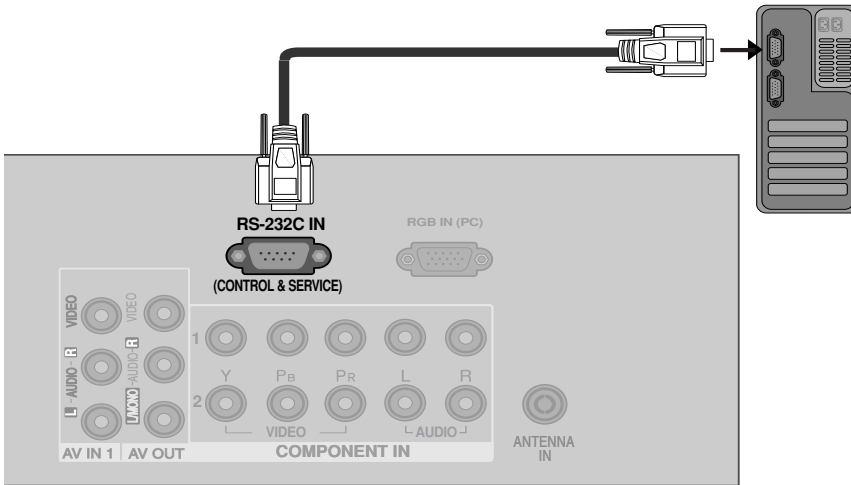
Type of Connector; D-Sub 9-Pin Male

No.	Pin Name
1	No connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No Connection
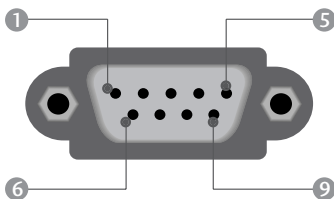
APPENDIX

RS-232C Configurations

7-Wire Configurations (Standard RS-232C cable)			
	PC	TV	
RXD	2 ———— 3		TXD
TXD	3 ———— 2		RXD
GND	5 ———— 5		GND
DTR	4 ———— 6		DSR
DSR	6 ———— 4		DTR
RTS	7 ———— 8		CTS
CTS	8 ———— 7		RTS
	D-Sub 9	D-Sub 9	
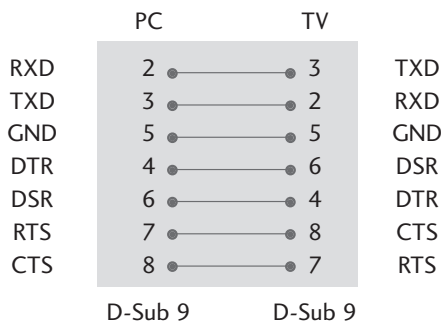
3-Wire Configurations(Not standard)			
	PC	TV	
RXD	2 ———— 3		TXD
TXD	3 ———— 2		RXD
GND	5 ———— 5		GND
DTR	4 6		DTR
DSR	6 4		DSR
RTS	7 7		RTS
CTS	8 8		CTS
	D-Sub 9	D-Sub 9	
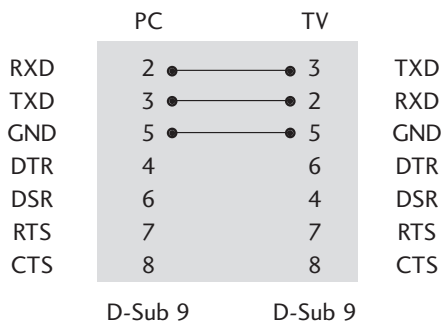
Set ID

Use this function to specify a set ID number.
Refer to 'Real Data Mapping'1. **See page p.116**

1 Press the **MENU** button and then use ∧ or ∨ button to select the **OPTION** menu.

2 Press the > button and then use ∧ or ∨ button to select **Set ID**.
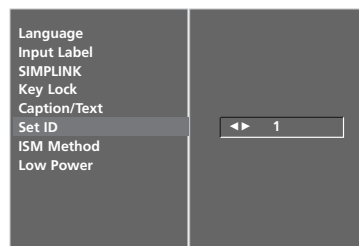
3 Press the > button and then use < or > button to adjust **Set ID** to choose the desired TV ID number.
• The adjustment range of Set ID is 1~99.

4 Press **EXIT** button to return to normal TV viewing.

SETUP / PICTURE / AUDIO / TIME / OPTION ▶ / TIME MACHINE

Language / Input Label / SIMPLINK / Key Lock / Caption/Text / Set ID / ISM Method / Low Power

Menu Prev. ❶

Language / Input Label / SIMPLINK / Key Lock / Caption/Text / Set ID / ISM Method / Low Power ◀▶ 1

❷ ❸

- It's not available to use this function in **Time machine mode.**

Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code
- Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Aspect Ratio	k	c	*
03. Screen Mute	k	d	0 ~ 1
04. Volume Mute	k	e	0 ~ 1
05. Volume Control	k	f	0 ~ 64
06. Contrast	k	g	0 ~ 64
07. Brightness	k	h	0 ~ 64
08. Color	k	i	0 ~ 64
09. Tint	k	j	0 ~ 64
10. Sharpness	k	k	0 ~ 64
11. OSD Select	k	l	0 ~ 01
12. Remote control lock mode	k	m	0 ~ 1
13. PIP/DW	k	n	*
14. PIP Position	k	q	0 ~ 3
15. Balance	k	t	0 ~ 64
16. Color Temperature	k	u	0 ~ 3
17. Red Adjustment	k	v	0 ~ 3C (or 50)
18. Green Adjustment	k	w	0 ~ 3C (or 50)
19. Blue Adjustment	k	$	0 ~ 3C (or 50)
20. Tune Command	m	a	Refer to p. 116
21. Abnormal Status	k	z	FF
22. ISM Method	j	p	Refer to p. 116
23. Low Power	j	q	0 ~ 1
24. Auto Configure	j	u	1
25. Key	m	c	Key Code
26. Input select (Main)	x	b	*
27. Input select (PIP)	x	y	*
28. Control Backlight	m	g	0 ~ 64

Only LCD TV Models

Only Plasma TV Models

Transmission / Receiving Protocol

Transmission

[Command1][Command2][ ][Set ID][ ][Data][Cr]

* [Command 1] : First command to control the set.
  (j, k, m or x)
* [Command 2] : Second command to control the set.
* [Set ID] : You can adjust the set ID to choose desired monitor ID number in option menu.
  Adjustment range is 1 ~ 99.
  When selecting Set ID '0', every connected the set is controlled.
  Set ID is indicated as decimal (1~99) on menu and as Hexa decimal (0x0~0x63) on transmission/receiving protocol.
* [DATA] : To transmit command data.
  Transmit 'FF' data to read status of command.
* [Cr] : Carriage Return
  ASCII code '0x0D'
* [ ] : ASCII code 'space (0x20)'

OK Acknowledgement

[Command2][ ][Set ID][ ][OK][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving normal data. At this time, if the data is data read mode, it indicates present status data. If the data is data write mode, it returns the data of the PC computer.

Error Acknowledgement

[Command2][ ][Set ID][ ][NG][Data][x]

* The set transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 1: Illegal Code
2: not support function
3: Wait more time

APPENDIX

01. Power (Command 2 : a)

► To control Power On/Off of the set.

Transmission

[k][a][ ][Set ID][ ][Data][Cr]

Data 0 : Power Off   1 : Power On

Ack

[a][ ][Set ID][ ][OK][Data][x]

► To show Power On/Off.

Transmission

[k][a][ ][Set ID][ ][FF][Cr]

Ack

[a][ ][Set ID][ ][OK][Data][x]

* In like manner, if other functions transmit '0xFF' data based on this format, Acknowledgement data feed back presents status about each function.

02. Aspect Ratio (Command 2 : c)

► To adjust the screen format. (Main picture format) You can also adjust the screen format using the RATIO button on remote control or in the PICTURE menu.

Transmission

[k][c][ ][Set ID][ ][Data][Cr]

Data 1: Normal screen (4:3)   4: Zoom1
       2: Wide screen (16:9)   5: Zoom2

Ack

[c][ ][Set ID][ ][OK][Data][x]

* Using the PC input, you select either 16:9 or 4:3 screen aspect ratio.

03. Screen Mute (Command 2 : d)

► To select screen mute on/off.

Transmission

[k][d][ ][Set ID][ ][Data][Cr]

Data 0 : Screen mute off (Picture on)
      1 : Screen mute on (Picture off)

Ack

[d][ ][Set ID][ ][OK][Data][x]

04. Volume Mute (Command 2 : e)

* To control volume mute on/off.

   You can also adjust mute using the MUTE button on remote control.

Transmission

[k][e][ ][Set ID][ ][Data][Cr]

      Data 0 : Volume mute on (Volume off)
      Data 1 : Volume mute off (Volume on)

Ack

[e][ ][Set ID][ ][OK][Data][x]

05. Volume Control (Command 2 : f)

► To adjust volume. You can also adjust volume with the VOLUME buttons on remote control.

Transmission

[k][f][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[f][ ][Set ID][ ][OK][Data][x]

06. Contrast (Command 2 : g)

► To adjust screen contrast. You can also adjust contrast in the PICTURE menu.

Transmission

[k][g][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[g][ ][Set ID][ ][OK][Data][x]

07. Brightness (Command 2 : h)

► To adjust screen brightness. You can also adjust brightness in the PICTURE menu.

Transmission

[k][h][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[h][ ][Set ID][ ][OK][Data][x]

08. Color (Command 2 : i)

► To adjust the screen color. You can also adjust color in the PICTURE menu.

Transmission

[k][i][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[i][ ][Set ID][ ][OK][Data][x]

09. Tint (Command 2 : j)

► To adjust the screen tint. You can also adjust tint in the PICTURE menu.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data Red : 0 ~ Green : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[j][ ][Set ID][ ][OK][Data][x]

10. Sharpness (Command 2 : k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the PICTURE menu.

Transmission

[k][k][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 116.

Ack

[k][ ][Set ID][ ][OK][Data][x]

11. OSD Select (Command 2 : l)

▶ To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

 Data 0 : OSD off   1 : OSD on

Ack

[l][ ][Set ID][ ][OK][Data][x]

12. Remote control lock mode (Command 2 : m)

▶ To lock the front panel controls on the monitor and remote control.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 0 : Lock off   1 : Lock on

Ack

[m][ ][Set ID][ ][OK][Data][x]

* If you're not using the remote control, use this mode.
When main power is on/off, external control lock is released.

13. PIP / DW (Command 2 : n)

▶ To control the PIP (Picture In picture)/DW.
You can also control the PIP/DW using the PIP button on the remote control or in the PIP/DW menu.

Transmission

[k][n][ ][Set ID][ ][Data][Cr]

Data 0: PIP/DW off   2: DW1
      1: PIP   3: DW2

Ack

[n][ ][Set ID][ ][OK][Data][x]

14. PIP Position (Command 2 : q)

▶ To select sub picture position for PIP.
You can also adjust the sub picture position using POSITION button on the remote control or in the PIP/DW menu.

Transmission

[k][q][ ][Set ID][ ][Data][Cr]

      Data 0: Right down on screen
      Data 1: Left down on screen
      Data 2: Left up on screen
      Data 3: Right up on screen

Ack

[q][ ][Set ID][ ][OK][Data][x]

15. Balance (Command 2 : t)

▶ To adjust balance.
You can also adjust balance in the AUDIO menu.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      * Refer to 'Real data mapping 1'. See page 117.

Ack

[t][ ][Set ID][ ][OK][Data][x]

16. Color Temperature (Command 2 : u)

▶ To adjust color temperature. You can also adjust Color Temperature in the PICTURE menu.

Transmission

[k][u][ ][Set ID][ ][Data][Cr]

Data 0: Medium   1: Cool   2: Warm   3: User

Ack

[u][ ][Set ID][ ][OK][Data][x]

17. Red Adjustment (Command 2 : v)

▶ To adjust red in color temperature.

Transmission

[k][v][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 50
      * Refer to 'Real data mapping 2'. See page 116.

Ack

[v][ ][Set ID][ ][OK][Data][x]

18. Green Adjustment (Command 2 : w)

▶ To adjust green in color temperature.

Transmission

[k][w][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 50
      * Refer to 'Real data mapping 2'. See page 116.

Ack

[w][ ][Set ID][ ][OK][Data][x]

19. Blue Adjustment (Command 2 : $)

▶ To adjust blue in color temperature.

Transmission

[k][$][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 50
      * Refer to 'Real data mapping 2'. See page 116.

Ack

[$][ ][Set ID][ ][OK][Data][x]

20 . Tune Command/Channel Tuning
(Command 1 : m, Command 2 : a)

▶ Tune channel to following physical number.

Transmission

[m][a][ ][ ][Set ID][ ][Data0][ ][Data1][ ]
      [Data2][ ][Data3][ ][Data4][ ][Data5][Cr]

    Data 0: NTSC air : 02 ~ 45
             NTSC cable : 01, 0E ~ 7D
    Data 1 ~ 4: Don't care
    Data 5: High -> Main channel: 0, Sub channel: 8
           Low -> Air: 0, CATV: 1

Ack

[a][ ][Set ID][ ][OK][Data0][Data1]
        [Data2][Data3][Data4][Data5][x][a][ ]
        [Set ID][ ][NG][Data0][x]

21. Abnormal State (Command 2 : z)

▶ To recognize an abnormal state.
   This feature is not available for all models.

Transmission

[k][z][ ][Set ID][ ][FF][ ][Cr]

Data FF : Read

Ack

[z][ ][Set ID][ ][OK][Data][x]

Data 0: Normal (Power on and signal exist)
      1: No signal (Power on)
      2: Turn the TV off by remote control
      3: Turn the TV off by sleep time function
      4: Turn the TV off by RS-232C function
      5: 5V down
      6: AC down
      7: Turn the TV off by Fan Alarm function
      8: Turn the TV off by Off time function
      9: Turn the TV off by Auto sleep function
      a: Turn the TV off by AV board detect

* This function is "read only".

22. ISM Method
(Command 1 : j, Command 2 : p)

▶ To control the ISM method. You can also adjust ISM
   Method in OPTION menu.
   It's not available to use this function in LCD TV models.

Transmission

[j][p][ ][Set ID][ ][Data][Cr]

Data 1: Inversion   2: Orbiter
      4: White wash   8: Normal

Ack

[p][ ][Set ID][ ][OK/NG][Data][x]

23. Low Power
(Command 1 : j, Command 2 : q)

▶ To reduce the power consumption of the set. You can
   also adjust Low Power in OPTION menu.
   It's not available to use this function in LCD TV models.

Transmission

[j][q][ ][Set ID][ ][Data][ ][Cr]

Data 0 : Off
     1 : On

Ack

[q][ ][Set ID][ ][OK/NG][Data][x]

24. Auto Configure
(Command 1 : j, Command 2 : u)

▶ To adjust picture position and minimize image shaking
   automatically. It works only in RGB (PC) mode.

Transmission

[j][u][ ][Set ID][ ][Data][Cr]

Data 1: To set

Ack

[u][ ][Set ID][ ][OK/NG][Data][x]

✱ Real data mapping 1

0 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

✱ Real data mapping 2

0 : -40
1 : -39
2 : -38
⋮
28 : 0
⋮
4E : +38
4F : +39
50 : +40

25. Key (Command 1 : m, Command 2 : c)

► To send IR remote key code.
Transmission

[m][c][ ][Set ID][ ][Data][Cr]

Data Key code - Refer to page 110.
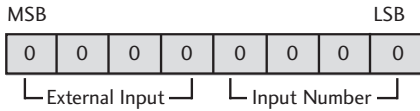
Ack

[c][ ][Set ID][ ][OK][Data][x]

26. Input select (Command 1 : x, Command 2 : b)
(Main Picture Input)

► To select input source for set.
Transmission

[x][b][ ][Set ID][ ][Data][Cr]

Data Structure

MSB   LSB

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

└─External Input─┘   └─Input Number─┘

External Input				Data
0	0	0	1	Analog
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB-PC
1	0	0	1	HDMI

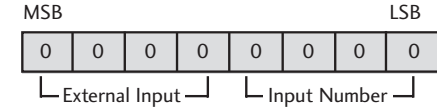| Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

[b][ ][Set ID][ ][OK][Data][x]

27. PIP Input select (Command 1 : x, Command 2 : y)

► To adjust input source for sub picture in PIP mode.
Transmission

[x][y][ ][Set ID][ ][Data][Cr]

Data Structure

MSB   LSB

| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

└─External Input─┘   └─Input Number─┘

External Input				Data
0	0	0	1	Analog
0	0	1	0	AV
0	1	0	0	Component
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4

Ack

[y][ ][Set ID][ ][OK][Data][x]

28. Backlight (Command : m g)
(Only LCD TV model)

► To adjust screen backlight.
Transmission

[m][g][ ][Set ID][ ][Data][Cr]

Data Min:00 ~ Max:64 (*transmit by Hexadecimal code)
     *Refer to 'Real data mapping 1'. See page 116.

Ack

[g][ ][Set ID][ ][OK/NG][Data][x]

LG Electronics Inc.