LG

Life's Good

ENGLISH

# PLASMA TV OWNER'S MANUAL

**PLASMA TV MODELS**

42PG69**
50PG69**

Please read this manual carefully before operating your TV.
Retain it for future reference.
Record model number and serial number of the TV.
Refer to the label on the back cover and quote this information.
To your dealer when requiring service.

DVB
Digital Video Broadcasting

Trademark of the DVB Digital Video Broadcasting Project (1991 to 1996)

**ID Number(s):** 5506: 42PG6900 5508: 50PG6900
5528: 42PG6910 5529: 50PG6910

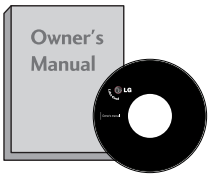
ENERGY STAR

This product qualifies for ENERGY STAR in the "factory default (Home mode)" setting and this is the setting in which power savings will be achieved.
Changing the factory default picture setting or enabling other features will increase power consumption that could exceed the limits necessary to qualify for Energy Star rating.

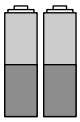
# ACCESSORIES

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

■ Image shown may differ from your TV.

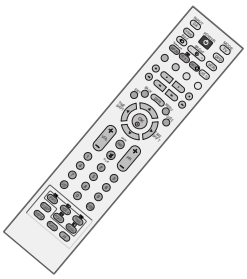



Owner's Manual



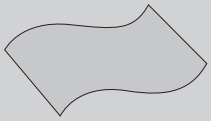
Batteries

Power Cord



Remote Control

This feature is not available for all models.

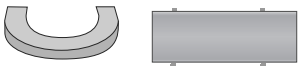


Polishing Cloth
Polishing cloth for use on the screen.

* Lightly wipe any stains or fingerprints on the surface of the TV with the polishing cloth.

Do not use excessive force. This may cause scratching or discolouration.

(50PG69** only)

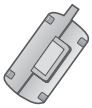


Cable management clip

(42PG69** only)

Cable Holder

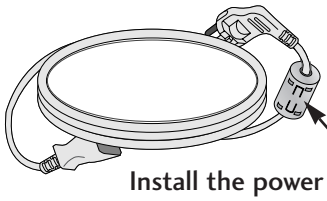
Protection cover
(Refer to p.9)



Ferrite core
(This feature is not available for all models.)

## Use of ferrite core (This feature is not available for all models.)

Ferrite core can be used to reduce the electromagnetic wave when connecting the power cord.
The closer the location of the ferrite core to the power plug, the better it is.



Install the power plug closely.

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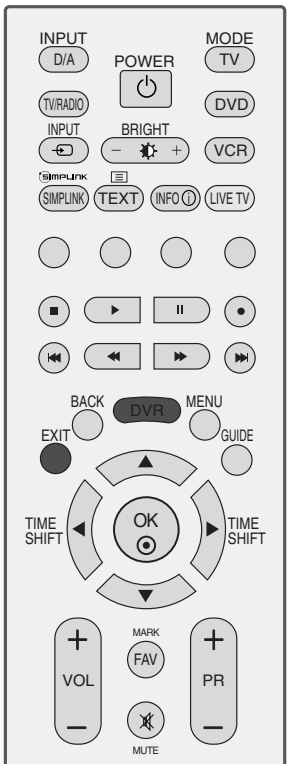
## HOME MENU

This menu is a contents guide.

In the Home Menu, you can access the Recorded list of the DVR, Manual Recording of the DVR, Schedule List or the TV Menu.





This displays the remaining record time for analogue input. (Analog TV, AV1,AV2, AV3)

This displays the remaining record time for DTV input.

DVR
▶ p.49

EPG
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TV Menu
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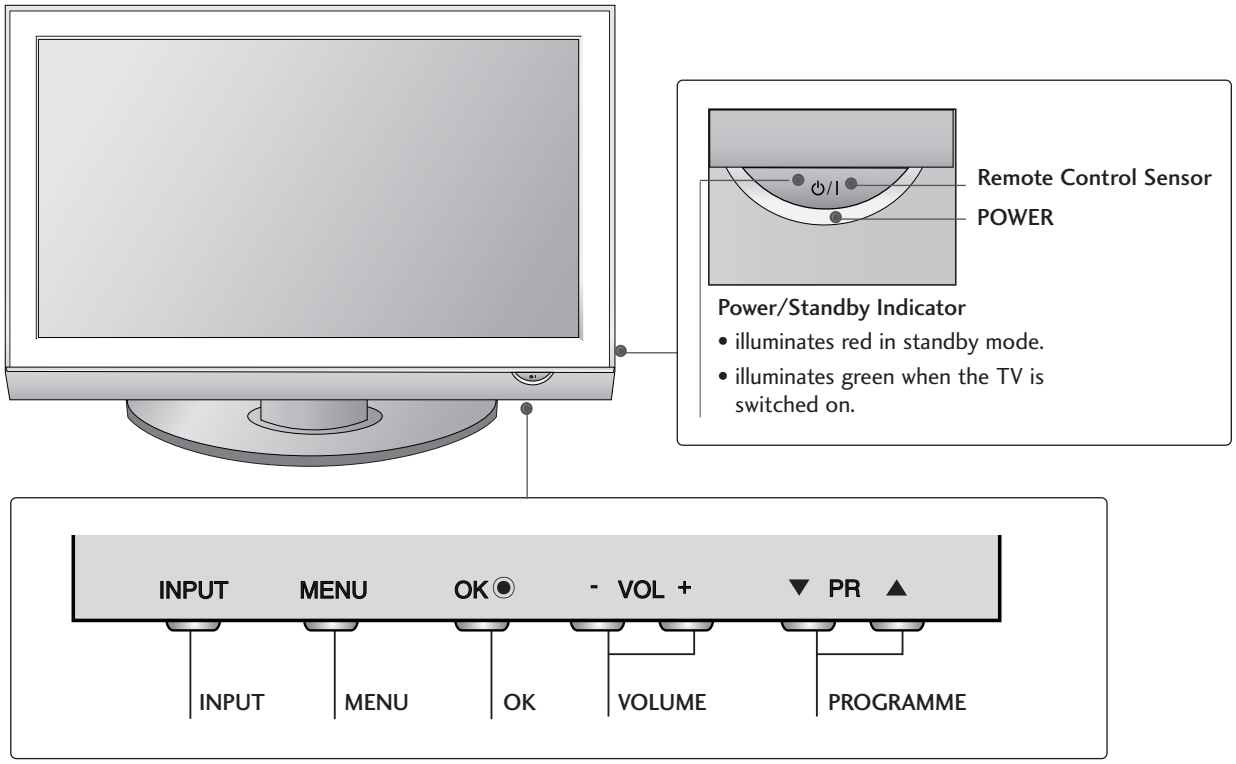
# FRONT PANEL CONTROLS

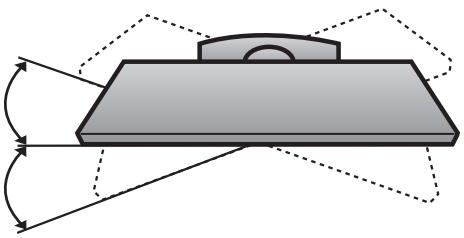
■ Image shown may differ from your TV.





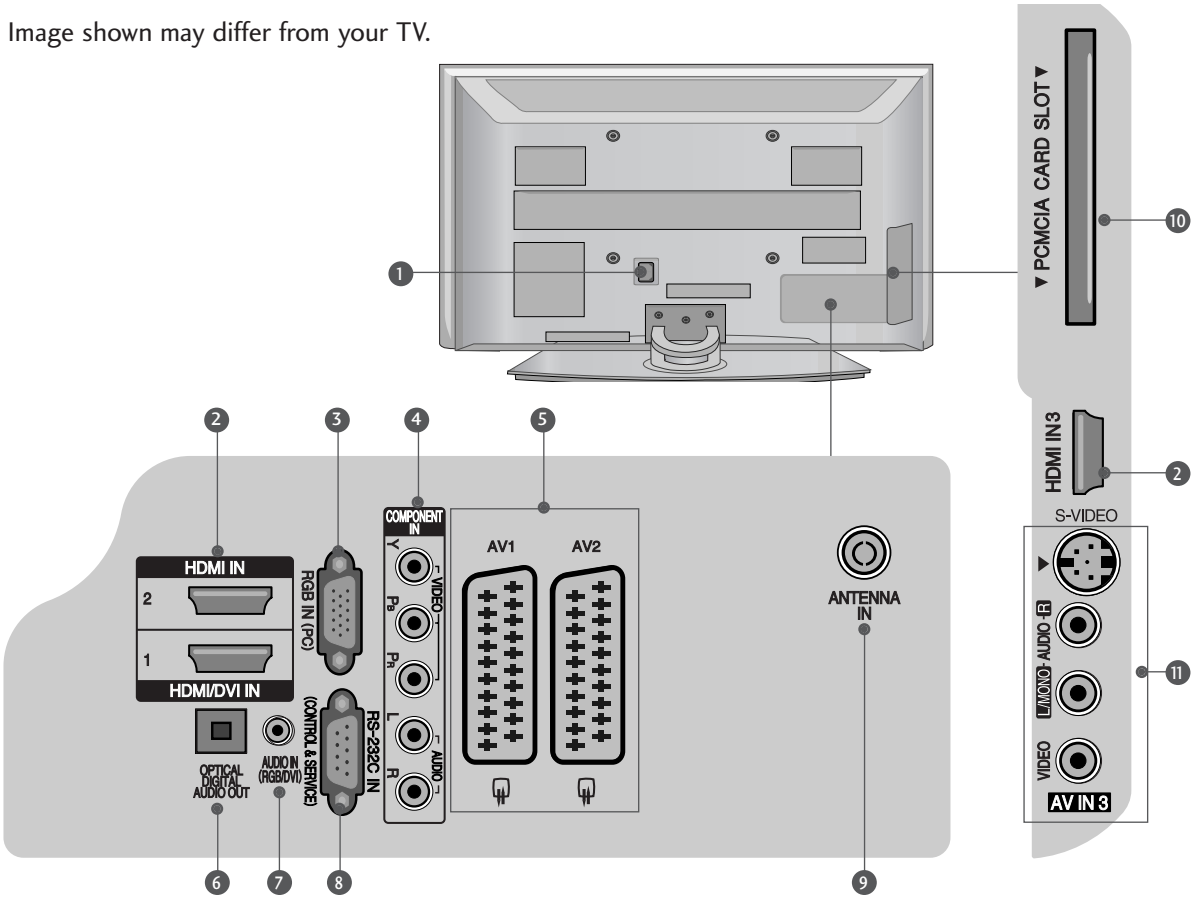

## Swivel Stand

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.



# BACK PANEL INFORMATION

■ Image shown may differ from your TV.




❶ **Power Cord Socket**
This TV operates on an AC power. The voltage is indicated on the Specifications page. Never attempt to operate the TV on DC power.

❷ **HDMI Input**
Connect a HDMI signal to HDMI IN.
Or DVI(VIDEO)signal to HDMI/DVI port with DVI to HDMI cable.

❸ **RGB Input**
Connect the output from a PC.

❹ **Component Input**
Connect a component video/audio device to these jacks.

❺ **Euro Scart Socket (AV1/AV2)**
Connect scart socket input or output from an external device to these jacks.

❻ **OPTICAL DIGITAL AUDIO OUT**
Connect digital audio from various types of equipment.
Note: In standby mode, these ports do not work.

❼ **RGB/DVI Audio Input**
Connect the audio from a PC or DTV.

❽ **RS-232C IN (CONTROL & SERVICE) PORT**
Connect to the RS-232C port on a PC.

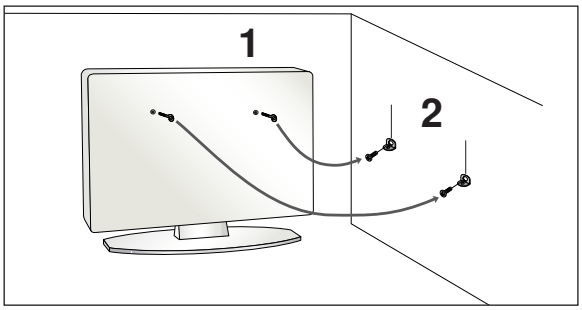
❾ **Antenna Input**
Connect RF antenna to this jack.

❿ **PCMCIA (Personal Computer Memory Card International Association) Card Slot**
(This feature is not available in all countries.)

⓫ **S-Video Input**
Connect S-Video out from an S-VIDEO device.
**Audio/Video Input**
Connect audio/video output from an external device to these jacks.

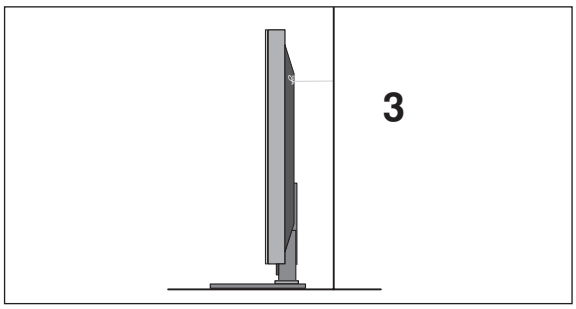
# PLEASE SET IT UP CAREFULLY SO THE PRODUCT DOESN'T FALL OVER.

- **You should purchase necessary components to fix the TV to the wall on the market.**
- Position the TV close to the wall to avoid the possibility of it falling when pushed.
- The instructions shown below are a safer way to set up the TV, which is to fix it to the wall, avoiding the possibility of it falling forwards if pulled. This will prevent the TV from falling forward and causing injury. This will also prevent the TV from damage. Ensure that children do not climb or hang from the TV.




1. Use the eye-bolts or TV brackets/bolts to fix the TV to the wall as shown in the picture.
   (If your TV has bolts in the eyebolts, loosen these bolts.)
   * Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.

2. Secure the wall brackets with the bolts on the wall. Match the height of the bracket that is mounted on the wall.




3. Use a sturdy rope to tie the TV. It is safer to tie the rope so it becomes horizontal between the wall and the TV.

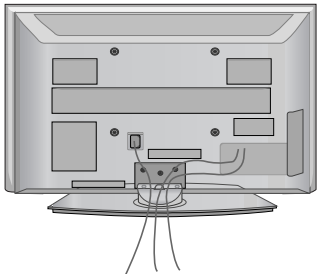
**NOTE**

- ► 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.

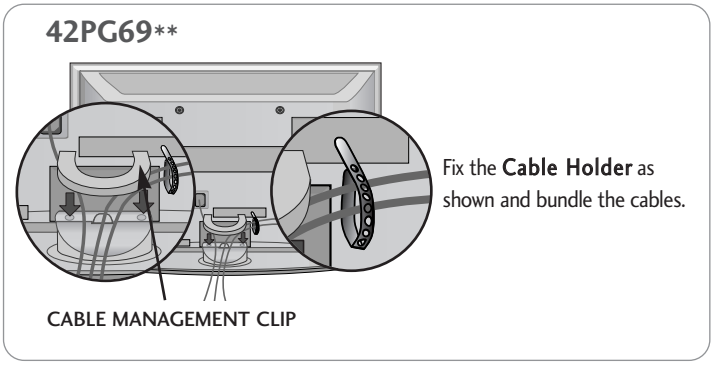
# BACK COVER FOR WIRE ARRANGEMENT

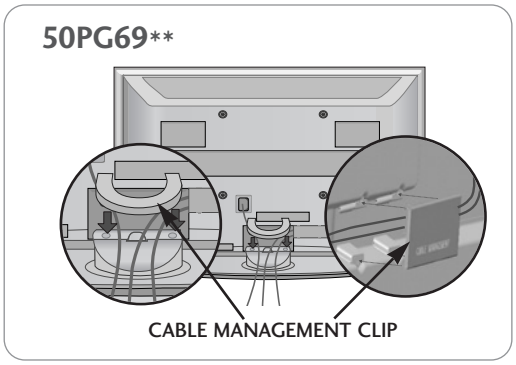
■ Image shown may differ from your TV.

1 Connect the cables as necessary.
To connect additional equipment, see the **External equipment Setup** section.



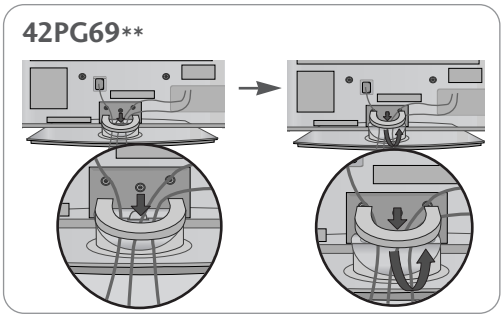
2 Install the **CABLE MANAGEMENT CLIP** as shown.

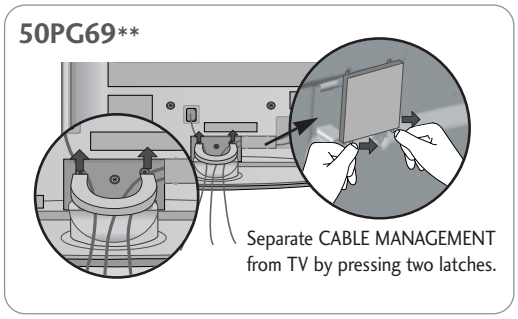



## How to remove the cable management clip

Hold the **CABLE MANAGEMENT CLIP** with both hands and pull it upward.
For the 42PG69** model, press the center of the **CABLE MANAGEMENT CLIP** and then lift it .



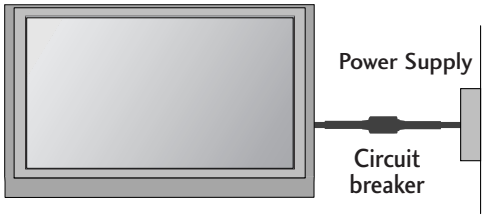

**NOTE**

▶ Do not use the **CABLE MANAGEMENT CLIP** to lift the TV.
- If the TV is dropped, you may be injured or the TV may be damaged.

- The TV can be installed in various ways such as on a wall or on a desktop etc.
- The TV is designed to be mounted horizontally.

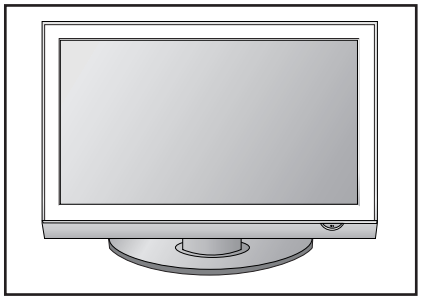
### EARTHING

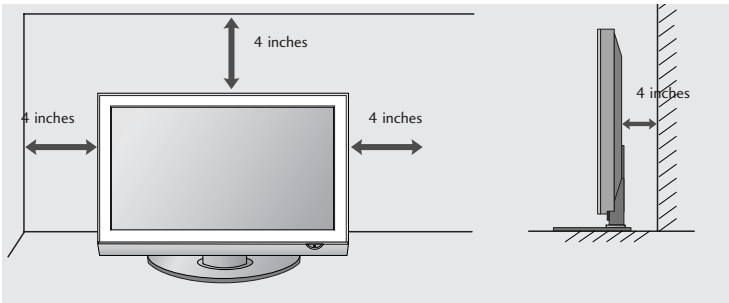
Ensure that you connect the earth wire to prevent possible electric shock. Do not try to earth the TV by connecting it to telephone wires, lightening rods or gas pipes.




## DESKTOP PEDESTAL INSTALLATION

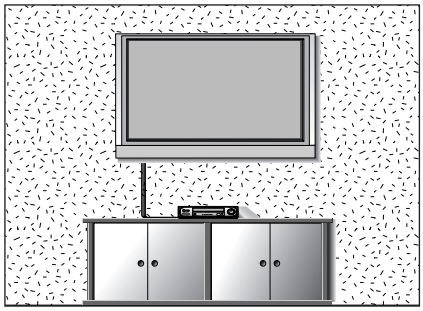
For adequate ventilation allow a clearance of 4" (10cm) all around the TV.

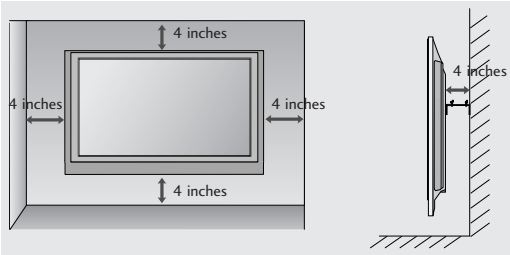





## WALL MOUNT: HORIZONTAL INSTALLATION

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



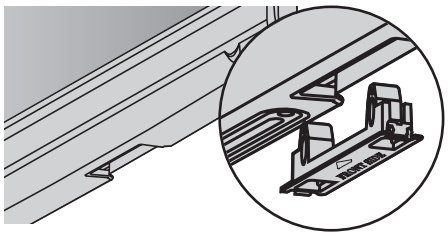



## NOT USING THE DESK-TYPE STAND

- Image shown may differ from your TV.

**When installing the wall-mounted unit, use the protection cover for desk-type stand installation.**

**PROTECTION COVER** into the TV until clicking sound.

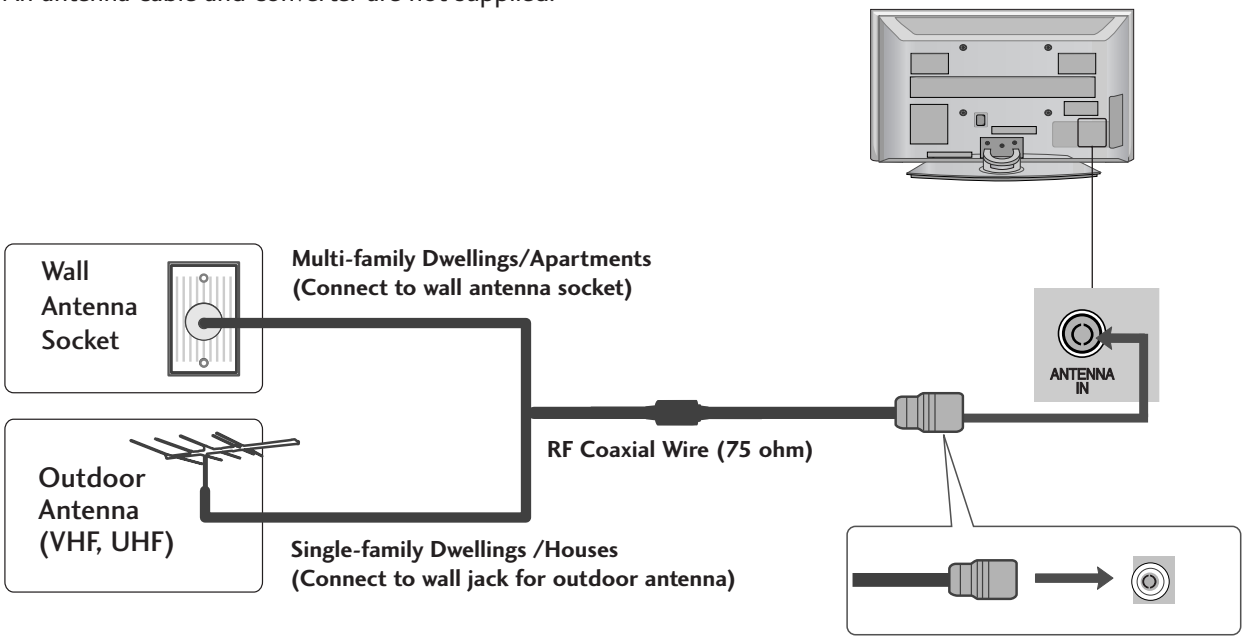


# PREPARATION

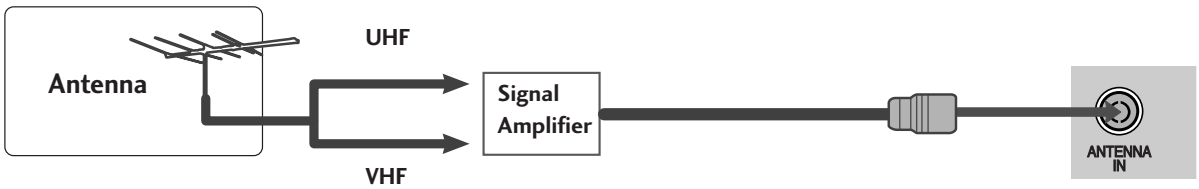
■ To prevent damage do not connect to the mains outlet until all connections are made between the devices.

## ANTENNA CONNECTION

■ For optimum picture quality, adjust antenna direction.
■ An antenna cable and converter are not supplied.




- 5V antenna power works In Digital mode only. (Refer to p. 36)




■ In poor signal areas, to achieve better picture quality it may be necessary to install a signal amplifier to the antenna as shown above.
■ If signal needs to be split for two TVs,use an antenna signal splitter for connection.

# EXTERNAL EQUIPMENT SETUP

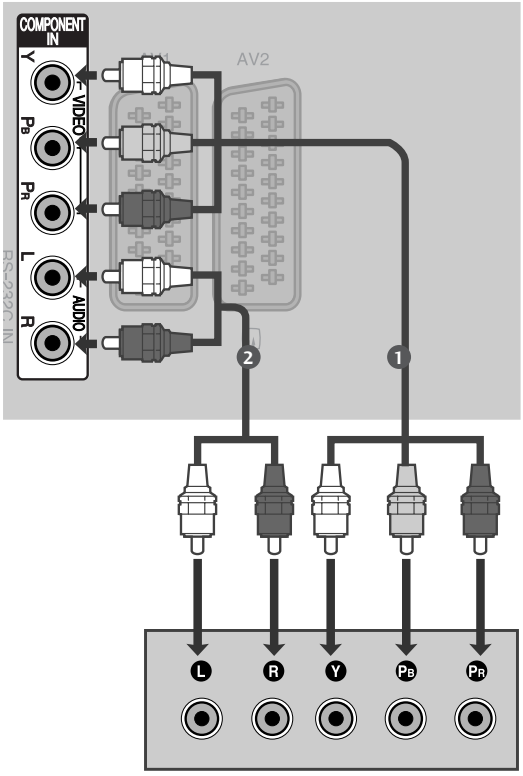
- **To avoid damaging any equipment, never plug in any power cords until you have finished connecting all equipment.**
- Image shown may differ from your TV.

## HD RECEIVER SETUP

- This TV can receive Digital RF/Cable signals without an external digital set-top box. However, if you do receive Digital signals from a digital set-top box or other digital external device, refer to the diagram as shown below.

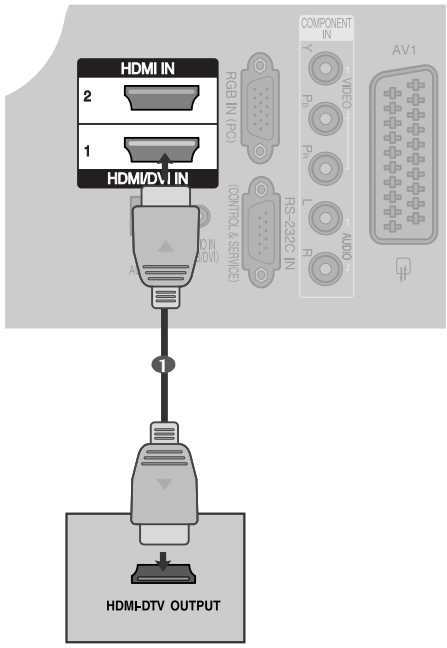
### Connecting with a component cable

1. Connect the video outputs (Y, PB, PR) of the digital set top box to the **COMPONENT IN VIDEO** jacks on the TV.
2. Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the TV.
3. Turn on the digital set-top box.
   (Refer to the owner's manual for the digital set-top box.)
4. Select **Component** input source using the **INPUT** button on the remote control.



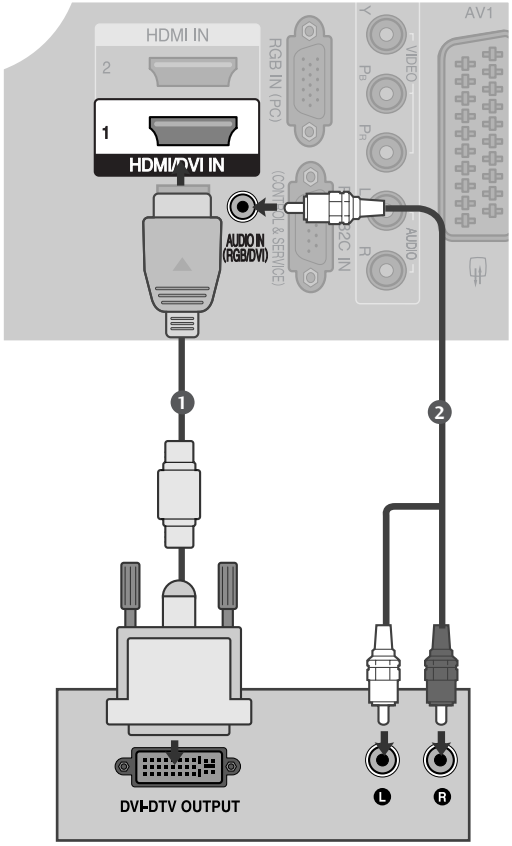

| Signal | Component | HDMI1/2/3 |
|---|---|---|
| 480i/576i | Yes | No |
| 480p/576p | Yes | Yes |
| 720p/1080i | Yes | Yes |
| 1080p | No | Yes |

## Connecting a set-top box with an HDMI cable




1. Connect the digital set-top box to **HDMI/DVI IN1** , **HDMI IN2** or **HDMI IN3** jack on the TV.
2. Turn on the digital set-top box.
   (Refer to the owner's manual for the digital set-top box.)
3. Select **HDMI1**, **HDMI2** or **HDMI3** input source using the **INPUT** button on the remote control.

## Connecting with a HDMI to DVI cable

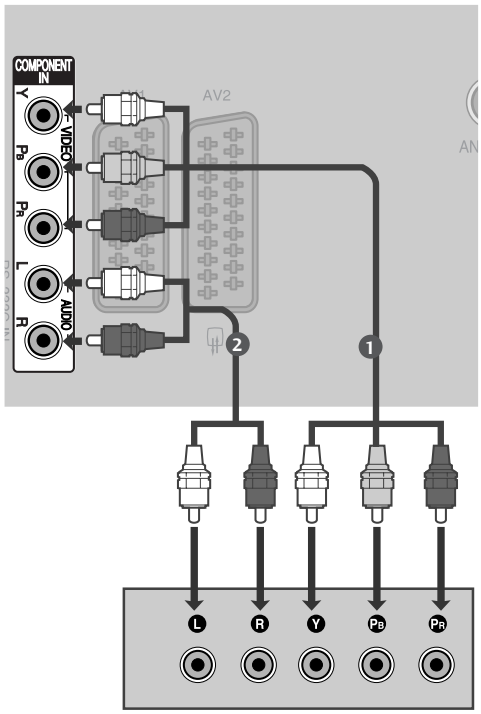



1. Connect the digital set-top box to **HDMI/DVI IN1** jack on the TV.
2. Connect the audio output of the digital set-top box to the **AUDIO IN (RGB/DVI)** jack on the TV.
3. Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
4. Select **HDMI1** input source using the **INPUT** button on the remote control.

# DVD SETUP

## Connecting with a component cable

1. Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV.
2. Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO** jacks on the TV.
3. Turn on the DVD player, insert a DVD.
4. Select **Component** input source using the **INPUT** button on the remote control.
5. Refer to the DVD player's manual for operating instructions.

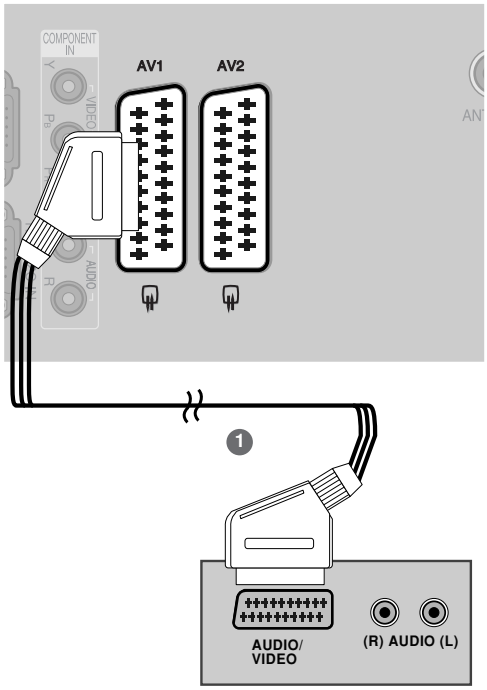



### Component Input ports

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

| Component ports on the TV | Y | PB | PR |
|---|---|---|---|
| Video output ports on DVD player | Y | PB | PR |
| | Y | B-Y | R-Y |
| | Y | Cb | Cr |
| | Y | Pb | Pr |

## Connecting with a Euro Scart cable

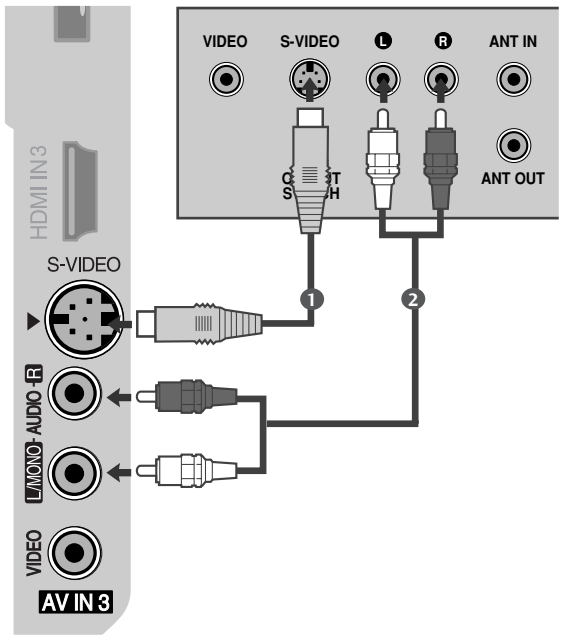



1. Connect the Euro scart socket of the DVD to the **AV1** Euro scart socket on the TV.
2. Turn on the DVD player, insert a DVD.
3. Select **AV1** input source using the **INPUT** button on the remote control.
   If connected to **AV2** Euro scart socket, select **AV2** input source.
4. Refer to the DVD player's manual for operating instructions.

**NOTE**

▶ Any Euro scart cable used must be signal protected.

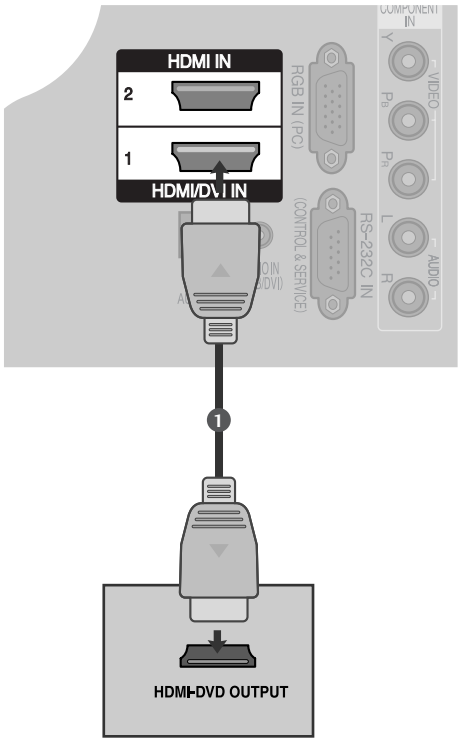
## Connecting with a S-Video cable




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.
3. Turn on the DVD player, insert a DVD.
4. Select **AV3** input source using the **INPUT** button on the remote control.
5. Refer to the DVD player's manual for operating instructions.

## Connecting the HDMI cable

1. Connect the HDMI output of the DVD to the **HDMI/DVI IN1** , **HDMI IN2** or **HDMI IN3** jack on the TV.
2. Select **HDMI1**, **HDMI2** or **HDMI3** input source using the **INPUT** button on the remote control.
3. Refer to the DVD player's manual for operating instructions.




**NOTE**

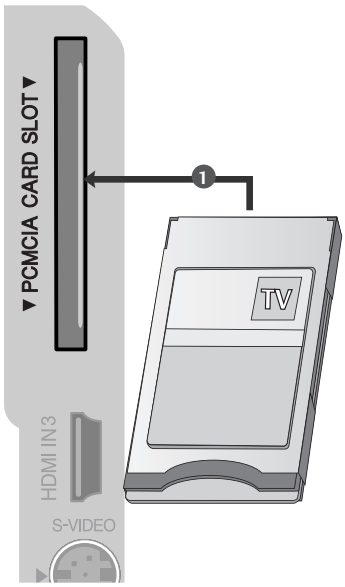
- The TV can receive video and audio signals simultaneously when using a HDMI cable.
- If the DVD player does not support Auto HDMI, you must TV the output resolution appropriately.

# INSERTION OF CI MODULE

- **To view the scrambled (pay) services in digital TV mode.**
- **This feature is not available in all countries.**

1. Insert the CI Module to **PCMCIA** (Personal Computer Memory Card International Association) **CARD SLOT** of TV as shown.

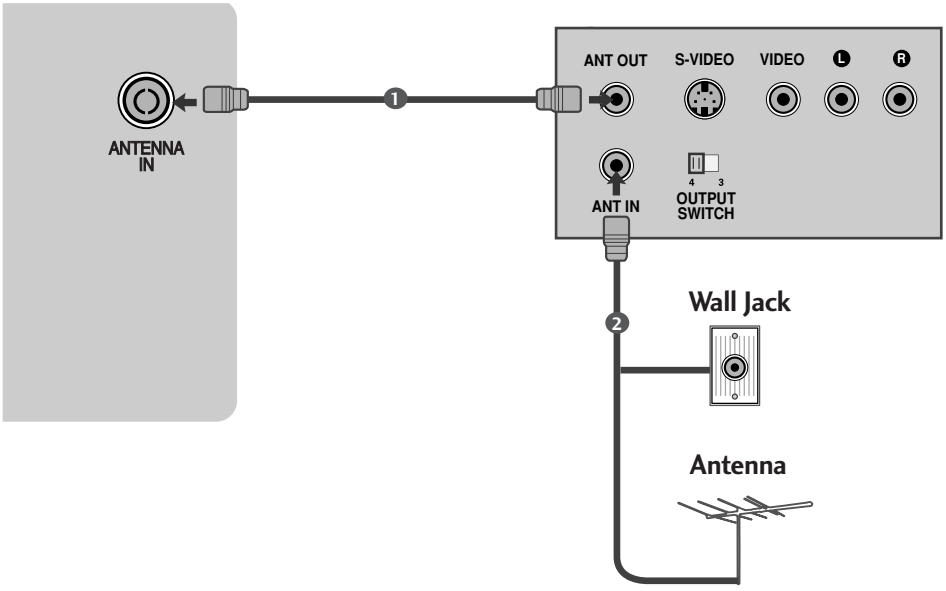
For further information, see p.39.



# VCR SETUP

- To avoid picture noise (interference), allow adequate distance between the VCR and TV.
- If 4:3 picture format is used for an extended period the fixed images on the sides of the screen may remain visible.

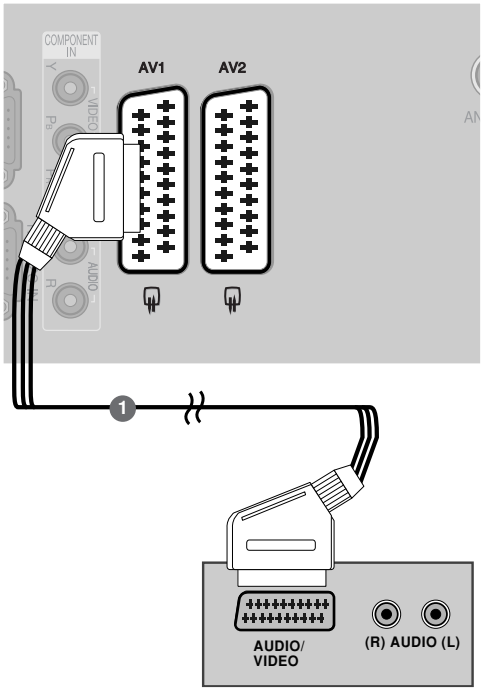
## Connecting with a RF cable




1. Connect the **ANT OUT** socket of the VCR to the **ANTENNA IN** socket on the TV.
2. Connect the antenna cable to the **ANT IN** socket of the VCR.
3. Press the **PLAY** button on the VCR and match the appropriate programme between the TV and VCR for viewing.

## Connecting with a Euro Scart

1. Connect the Euro scart socket of the VCR to the **AV1** Euro scart socket on the TV.
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
3. Select **AV1** input source using the **INPUT** button on the remote control.
4. If connected to **AV2** Euro scart socket, select **AV2** input source.

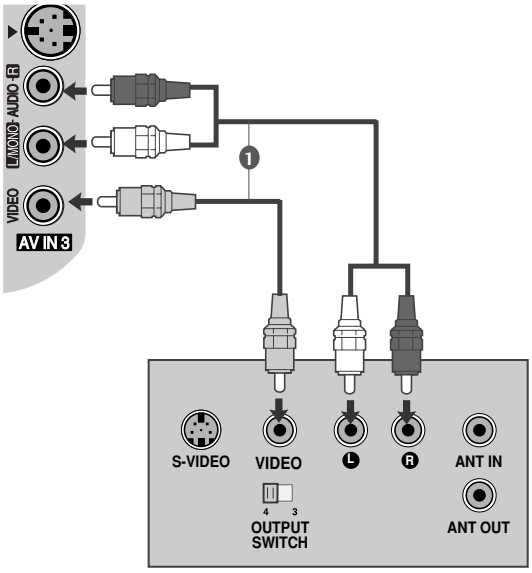



**NOTE**

- Any Euro Scart cable used must be signal shielded.

## Connecting with an RCA cable

1. Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red)
2. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
3. Select **AV3** input source using the **INPUT** button on the remote control.

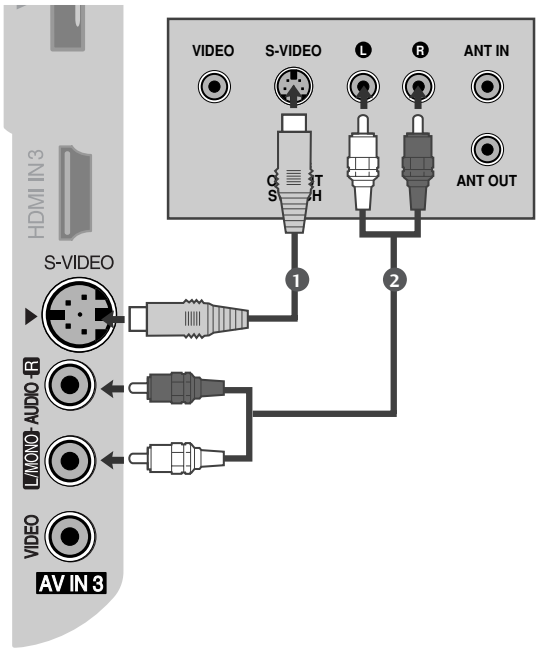



**NOTE**

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

## Connecting with a S-Video cable

1. Connect the S-VIDEO output of the VCR to the **S-VIDEO** input on the TV. The picture quality is improved; compared to normal composite (RCA cable) input.
2. Connect the audio outputs of the VCR to the **AUDIO** input jacks on the TV.
3. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
4. Select **AV3** input source using the **INPUT** button on the remote control.



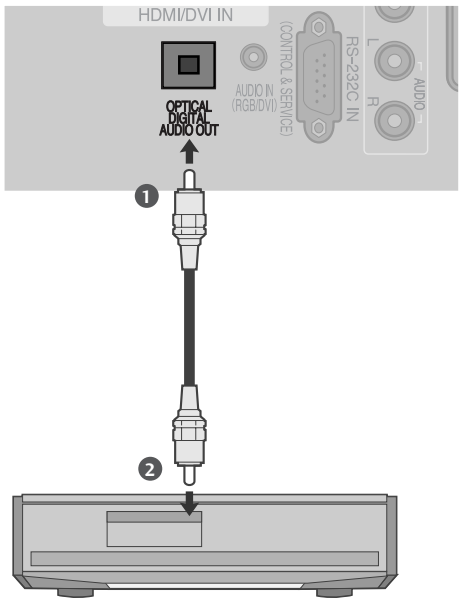

**NOTE**

- If both S-VIDEO and VIDEO sockets have been connected to the S-VHS VCR simultaneously, only the S-VIDEO can be received.

# DIGITAL AUDIO OUT SETUP

**Sending the TV's audio signal to external audio equipment via the Digital Audio Output (Optical) port.**

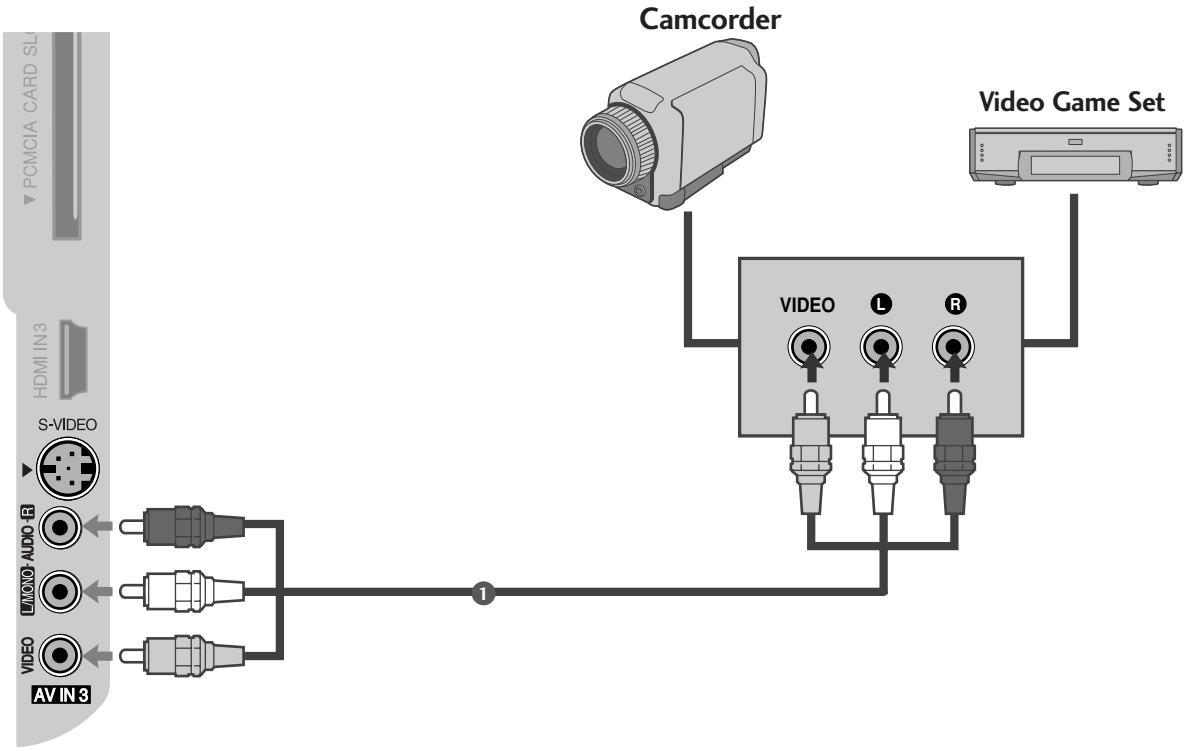
1. Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
2. Connect the other end of the optical cable to the digital audio (optical) input on the audio equipment.
3. Set the "TV Speaker option - Off" in the AUDIO menu. (▶p.84). Refer to the external audio equipment instruction manual for operation.




**CAUTION**

- Do not look into the optical output port. Looking at the laser beam may damage your vision.

# OTHER A/V SOURCE SETUP




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

2. Select **AV3** input source using the **INPUT** button on the remote control.

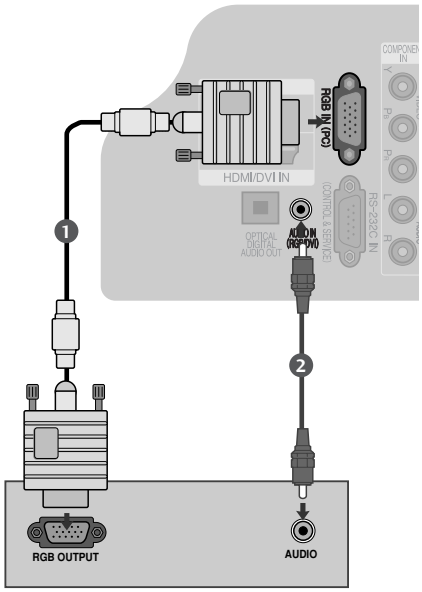
3. Operate the corresponding external equipment.
   Refer to external equipment operating guide.

# PC SETUP

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

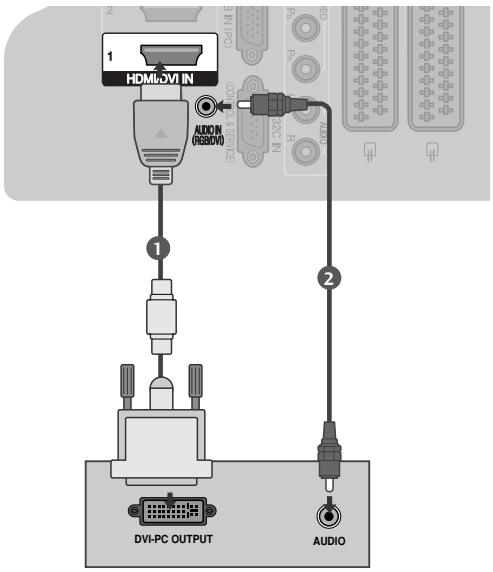
## Connecting with a D-sub 15 pin cable

1. Connect the RGB output of the PC to the **RGB IN (PC)** jack on the TV.
2. Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
3. Turn on the PC and the TV.
4. Select **RGB** input source using the **INPUT** button on the remote control.




## Connecting with a HDMI to DVI cable

1. Connect the DVI output of the PC to the **HDMI/DVI IN1** jack on the TV.
2. Connect the PC audio output to the **AUDIO IN (RGB/DVI)** jack on the TV.
3. Turn on the PC and the TV.
4. Select **HDMI1** input source using the **INPUT** button on the remote control.




**NOTE**

- If the PC has a DVI output and no HDMI output, a separated audio connection is necessary.
- If the PC does not support Auto DVI, you need to set the output resolution appropriately.

## NOTE

- ▶ To enjoy vivid picture and sound, connect the PC to the TV.
- ▶ Avoid keeping a fixed image on the TV 's screen for prolonged periods of time.The fixed image may become permanently imprinted on the screen;use a screen saver when possible.
- ▶ Connect the PC to the RGB (PC) or HDMI IN (or HDMI/DVI IN) port of the TV; change the resolution output of PC accordingly.
- ▶ There may be interference relating to resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode to another resolution or change the refresh rate to another rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult the manufacturer of the PC graphic card.
- ▶ RGB input only supports the separate horizontal and vertical synchronization pulses in separate channels.
- ▶ Connect the signal cable from the monitor output port of the PC to the RGB (PC/DTV) port of the TV or the signal cable from the HDMI output port of the PC to the HDMI IN (or HDMI/DVI IN) port on the TV.
- ▶ Connect the audio cable from the PC to the Audio input on the TV. (Audio cables are not included with the TV).
- ▶ If using a sound card, adjust PC sound as required.
- ▶ This TV uses a VESA Plug and Play Solution. The TV provides EDID data to the PC system with a DDC protocol. The PC adjusts automatically when using this TV.
- ▶ DDC protocol is preset for RGB (Analogue RGB), HDMI (Digital RGB) mode.
- ▶ If required, adjust the settings for Plug and Play functionality.
- ▶ If the graphic card on the PC does not output analogue and digital RGB simultaneously, connect only one of either RGB or HDMI IN (or HDMI/DVI IN) to display the PC output on the TV.
- ▶ If the graphic card on the PC does output analogue and digital RGB simultaneously, switch the TV to either RGB or HDMI; (the other mode is set to Plug and Play automatically by the TV.)
- ▶ DOS mode may not work depending on the video card if you use a HDMI to DVI cable.
- ▶ If you use too long an RGB-PC cable, there may be interference on the screen. We recommend using under 5m of cable. This provides the best picture quality.

## Supported Display Resolution

### RGB[PC] / HDMI[PC] mode

| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|---|---|---|
| 720x400 | 31.468 | 70.08 |
| 640x480 | 31.469 | 59.94 |
| | 37.500 | 75.00 |
| 800x600 | 37.879 | 60.31 |
| | 46.875 | 75.00 |
| 832x624 | 49.725 | 74.55 |
| 1024x768 | 48.363 | 60.00 |
| | 56.470 | 70.00 |
| | 60.023 | 75.03 |
| 1280x768 | 47.693 | 59.99 |
| 1360x768 | 47.649 | 59.94 |

### HDMI[DTV] mode

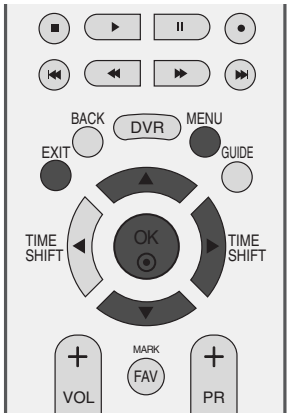
| Resolution | Horizontal Frequency(KHz) | Vertical Frequency(Hz) |
|---|---|---|
| 640x480 | 31.469 | 59.94 |
| | 31.469 | 60.00 |
| 720x480 | 31.47 | 59.94 |
| | 31.50 | 60.00 |
| 720x576 | 31.25 | 50.00 |
| 1280x720 | 37.50 | 50.00 |
| | 44.96 | 59.94 |
| | 45.00 | 60.00 |
| 1920x1080 | 33.72 | 59.94 |
| | 33.75 | 60.00 |
| | 28.125 | 50.00 |
| | 27.000 | 24.00 |
| | 56.250 | 50.00 |
| | 67.433 | 59.94 |
| | 67.500 | 60.00 |

# Screen Setup for PC mode

## Auto Configure (RGB [PC] mode only)

Automatically adjusts picture position and minimizes image instability.

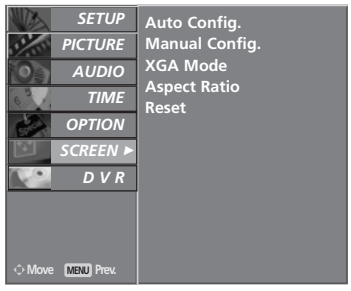
After adjustment, if the image is still not correct, your TV is functioning properly but needs further adjustment.




### Auto configure

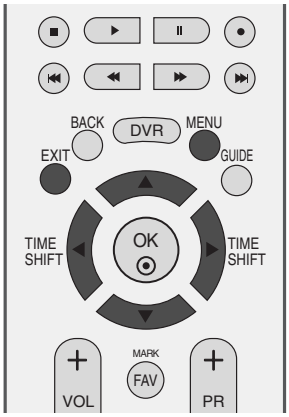
This function is for automatic adjustment of the screen position, clock, and phase. The displayed image will be unstable for a few seconds while the auto configuration is in progress.

1. Press the **MENU** button and then use ▲ or ▼ button to select the **SCREEN** menu.
2. Press the ► button and then use ▲ or ▼ button to select **Auto Config.**.
3. 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 again after Auto adjustment in RGB (PC), you can adjust the **Manual Config.**.
4. Press the **EXIT** button to return to normal TV viewing.




1

2 3




## Adjustment for screen Phase, Clock, Position

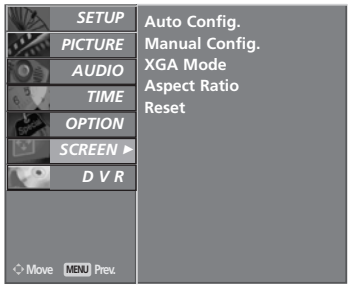
If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

To correct the screen size, adjust **Clock**.

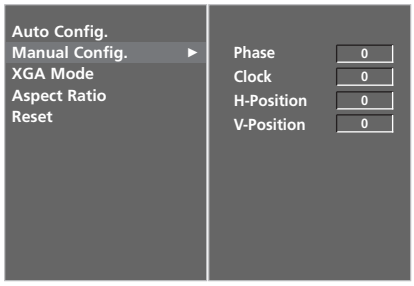
This function works in the following mode : RGB[PC].

**Clock** This function is to minimize any vertical bars or stripes visible on the screen background 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



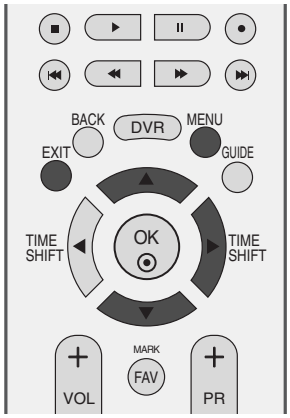

2 3 4

1. Press the **MENU** button and then use ▲ or ▼ button to select the **SCREEN** menu.
2. Press the ► button and then ▲ or ▼ button to select **Manual Config.**.
3. Press the ► button and then ▲ or ▼ button to select **Phase**, **Clock**, **H-Position** or **V-Position**.
4. Press the ◄ or ► button to make appropriate adjustments.
5. Press the **EXIT** button to return to normal TV viewing.

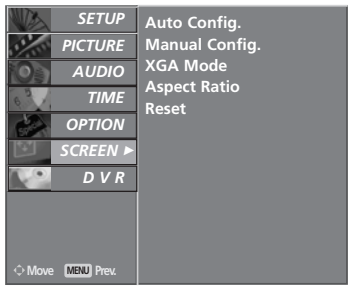
# Selecting Wide XGA mode

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

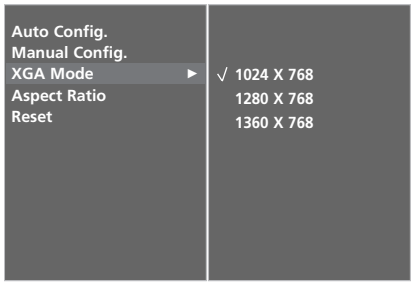
This function works in the following mode: RGB[PC] mode




1. Press the **MENU** button and then use ▲ or ▼ button to select the **SCREEN** menu.
2. Press the ► button and then use ▲ or ▼ button to select **XGA Mode**.
3. Press the ► button and then use ▲ or ▼ button to select the desired XGA resolution.
4. Press the **EXIT** button to return to normal TV viewing.



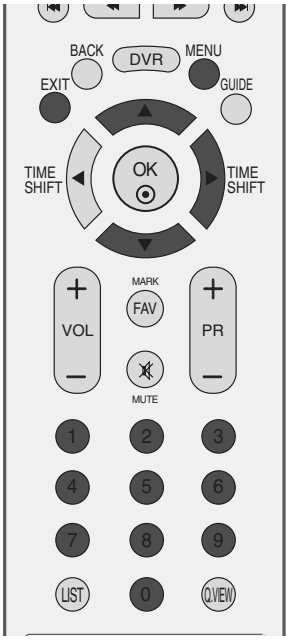

1




2 3

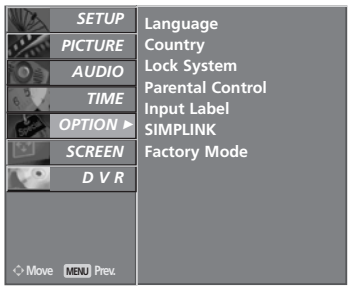
## Initialising
## (Reset to original factory settings)

This function operates in current mode.
To initialise the adjusted value

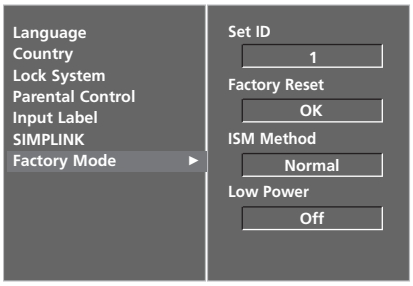



1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.
2. Press the ► button and then ▲ or ▼ button to select **Factory Mode**.
3. Press the ► button and then ▲ or ▼ button to select **Factory Reset**.
4. Press the ► button.

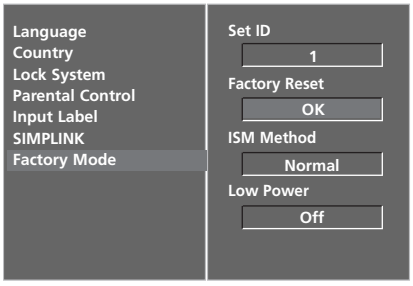
   The message "**If you enter a password, all user setting will be reset**" will appear.
5. Use NUMBER buttons to input a 4-digit password.
   The TV is set up with the initial password "0-0-0-0".




1




2

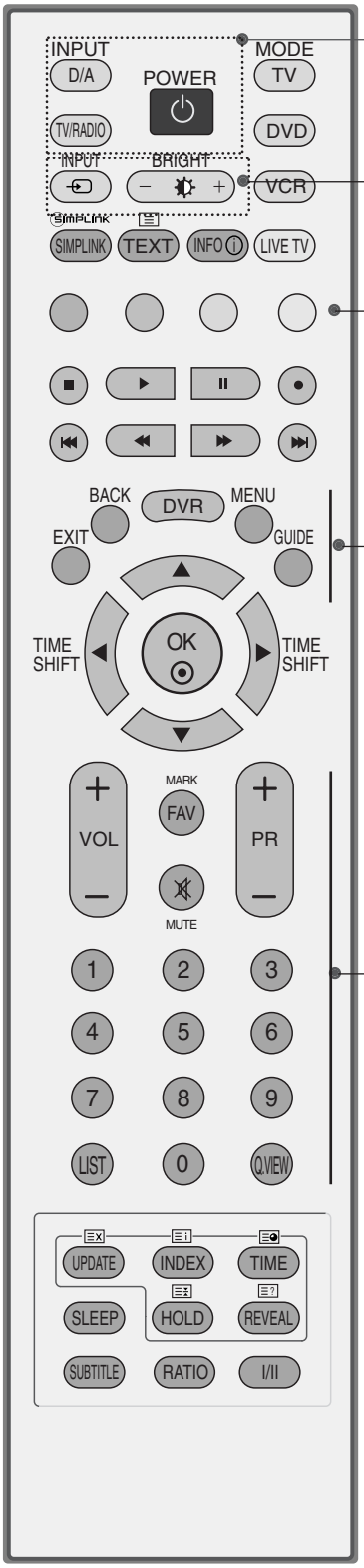



3 4

# WATCHING TV /PROGRAMME CONTROL

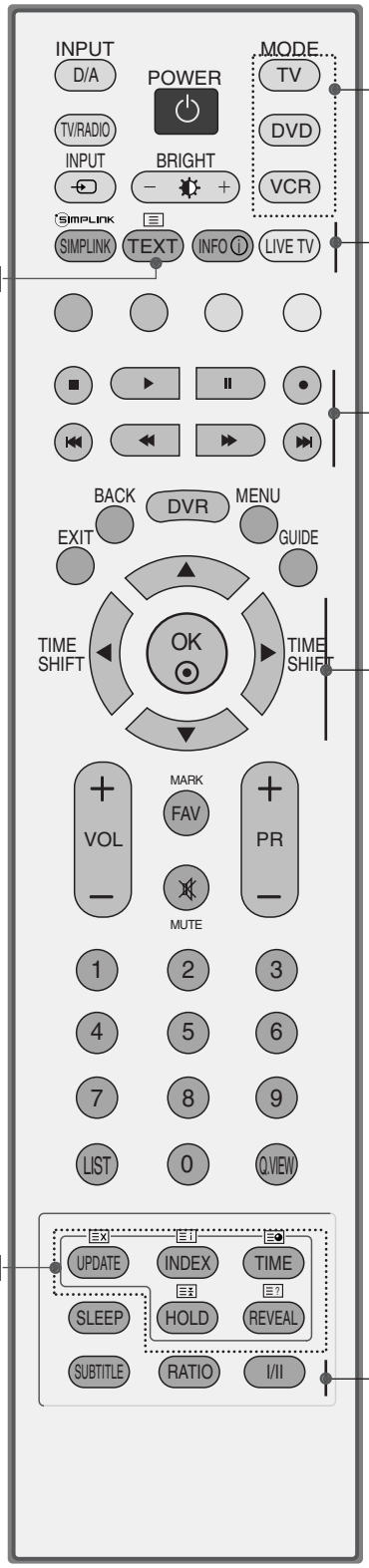
## REMOTE CONTROL KEY FUNCTIONS

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



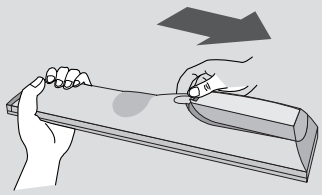

| | |
|---|---|
| POWER | Switches the TV on from standby or off to standby. |
| D/A INPUT | Selects digital or analogue mode.<br>Switches the TV on from standby. |
| TV/RADIO | Selects Radio or TV channel in digital mode. |
| INPUT | External input mode rotate in regular sequence.<br>Switches the TV on from standby. |
| Brightness adjustment | Adjusts screen brightness.<br>This returns to the default settings brightness by changing mode source. |
| Coloured buttons | These buttons are used for teletext (on **TELETEXT** models) or **Programme edit**. |
| EXIT | Clears all on-screen displays and returns to TV viewing from any menu. |
| BACK | Allows the user to move back one step in an interactive application, EPG or other user interaction function. |
| DVR | Call up the Home menu. |
| MENU | Selects a menu. |
| GUIDE | Shows programme schedule. |
| VOLUME UP /DOWN | Adjusts the volume. |
| FAV/MARK | Displays the selected favourite programme.<br>Check and un-check programmes in the recorded TV menu. |
| MUTE | Switches the sound on or off. |
| Programme UP/DOWN | Selects a programme. |
| 0~9 number button | Selects a programme.<br>Selects numbered items in a menu. |
| LIST | Displays the programme table. |
| Q.VIEW | Returns to the previously viewed programme. |

# WATCHING TV /PROGRAMME CONTROL




| | |
|---|---|
| MODE | Selects the remote operating modes. |
| SIMPLINK | See a list of AV devices connected to TV. When you toggle this button, the Simplink menu appears at the screen. |
| 1 TELETEXT BUTTONS | These buttons are used for teletext. For further details, see the 'Teletext' section. |
| INFO ⓘ | Shows the present screen information. (In Digital Mode only) |
| LIVE TV | In Delayed mode, the screen returns to Live programme from DTV, TV, AV1, AV2 and AV3 modes. |
| DVR/VCR/DVD control buttons | Controls video cassette recorders or DVD players when you select DVD or VCR mode button. Control connected AV devices by pressing the ▲ or ▼ or ◀ or ▶, **OK** buttons and buttons for play, stop, pause, fast reverse, fast forward, chapter skip. (The ⊙ button does not provide such functions.) Use for DVR record or trick play. |
| ▲ / ▼ or ◀ / ▶ (TIME SHIFT) | Allows you to navigate the on-screen menus and adjust the system settings to your preference. |
| OK | Accepts your selection or displays the current mode. |
| SLEEP | Sets the sleep timer. |
| SUBTITLE | Recalls your preferred subtitle in digital mode. |
| RATIO | Selects your desired picture format. |
| I/II | Selects the sound output. |

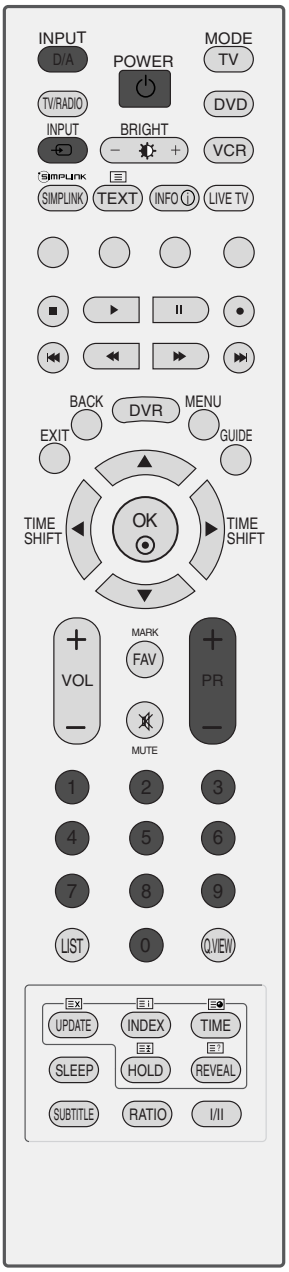
## Installing Batteries



- Open the battery compartment cover on the back and install the batteries matching correct polarity (+with +,-with -).
- Install two 1.5V AA batteries. Do not mix old or used batteries with new ones.
- Close cover.

# TURNING ON THE TV

- **When your TV is turned on, you will be able to use its features.**




1. Firstly, connect the power cord correctly.
   At this stage, the TV switches to standby mode.

2. In standby mode to turn TV on, press the ⏻ / **I**, **INPUT** or **PR ▲** or **▼** button on the TV or press the **POWER**, **INPUT**, **D/A**, **PR +** or **-** or **NUMBER** button on the remote control and the TV will switch on.

**Initializing setup**

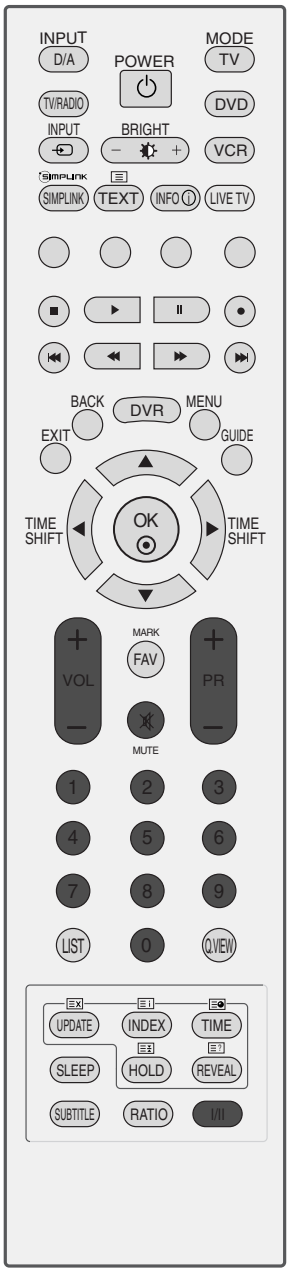
If the OSD (On Screen Display) is displayed on the screen after turning on the TV, you can adjust the Language, Select Mode, Country, Time Zone, Auto programme tuning.

***Note:***

*a. It will automatically disappear after approx. 40 seconds unless a button is pressed.*
*b. Press the **BACK** button to change the current OSD to the previous OSD.*
*c. For those countries without confirmed DTV broadcasting standards, some DTV features might not work, depending on the DTV broadcasting environment.*
*d. "Home" mode is the optimal setting for home environments, and is the TV's default mode.*
*e. "In Store" mode is the optimal setting for store environments." If a user modifies image quality data, "In Store" mode initializes the product to the image quality set by us after a certain period of time.*
*f. The mode (Home, In Store) can be changed by executing Factory Reset in the OPTION menu.*

# PROGRAMME SELECTION

1 Press the **PR +** or **-** or **NUMBER** buttons to select a programme number.




# VOLUME ADJUSTMENT

1 Press the **VOL +** or **-** button to adjust the volume.

If you wish to switch the sound off, press the MUTE button.

You can cancel this function by pressing the **MUTE**, **VOL +** or **-**, or **I/II** button.

# ON SCREEN MENUS SELECTION AND ADJUSTMENT

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

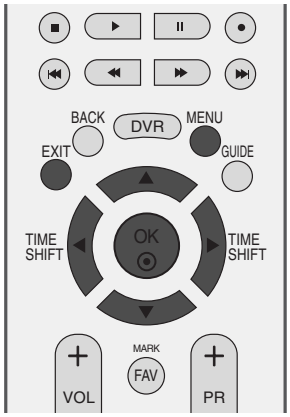
1. Press the **MENU** button and then ▲ or ▼ button to display each menu.
2. Press the ▶ button and then ▲ or ▼ button to select a menu item.
3. Change the setting of an item in the sub or pull-down menu with ◀ or ▶ button.
   You can move to a higher level menu by pressing the **OK** or **MENU** button.

*: This feature is not available in all countries.

## NOTE

- In Analogue mode, **5V Antenna Power**, **Booster**, **Software Update**, **Diagnostics** and **CI Information** will not be displayed.
- When you play recorded programmes, some of **SETUP** functions are not activated.

# AUTO PROGRAMME TUNING (IN DIGITAL MODE)




Use this to automatically find and store all available programmes.

When you start auto programming in digital mode, all previously stored service information will be deleted.

It is not possible to use this function while recording a programme.

1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.

2. Press the ► button and then ▲ or ▼ button to select **Auto Tuning**.

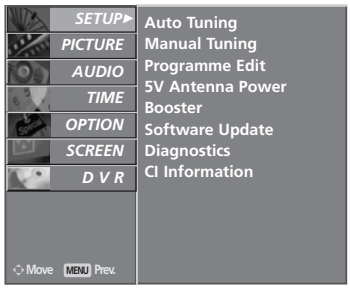
3. Press the ► button to begin auto tuning.
   Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

   The message "**All service-information will be updated. Continue?**" will appear.

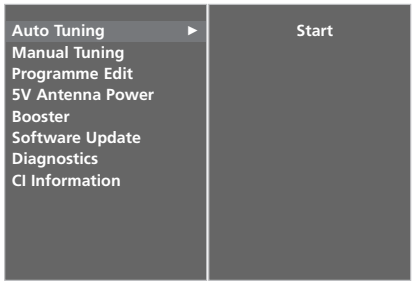
   If you want to keep on auto tuning select **YES** with using the ◄ or ► button. Then, press the **OK** button. Otherwise select **NO**.

   To stop auto tuning, press the **MENU** button.

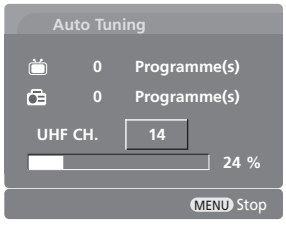
4. Press the **EXIT** button to return to normal TV viewing.




1



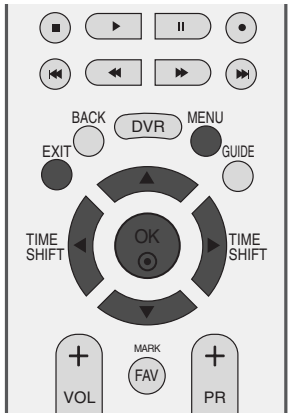

2




3

# MANUAL PROGRAMME TUNING (IN DIGITAL MODE)

Manual Tuning lets you manually add a programme to your programme list.




1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.

2. Press the ▶ button and then ▲ or ▼ button to select **Manual Tuning**.

3. Press the ▶ button and then ▲ or ▼ button or NUMBER buttons to select the desired channel number. Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

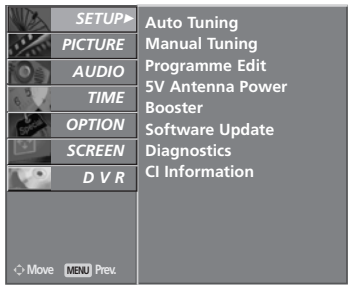
4. Press the **OK** button to save.

   When the channel number you want to add is already in the programme list, the message "**Setup information for the channel will be updated. Continue?**" will appear.

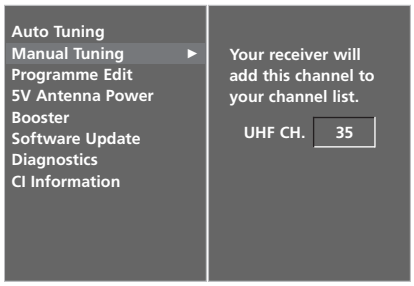
   If you wish to continue manual tuning, select **YES** using the ◀ or ▶ button.

   Then, press the **OK** button. Otherwise select **NO**.

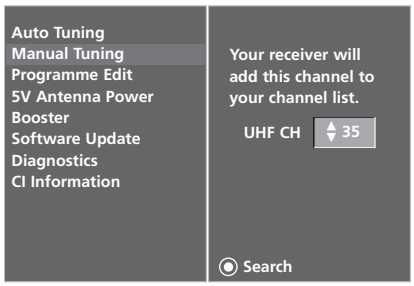
5. Press the **EXIT** button to return to normal TV viewing.




1




2




3 4

# PROGRAMME EDIT (IN DIGITAL MODE)

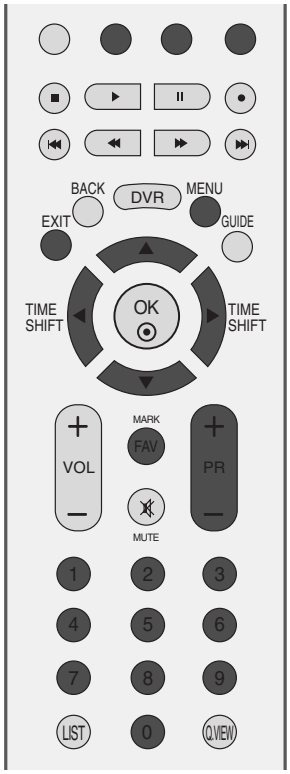
When a programme number is skipped, it means that you will be unable to select it using **PR** + or - button during TV viewing.

If you wish to select the skipped programme, directly enter the programme number with the **NUMBER** buttons or select it in the Programme edit menu.

This function enables you to skip the stored programmes.

In some countries it is possible to move a programme number by using the **YELLOW** button only.

It is not possible to use this function while recording a programme.




1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.

2. Press the ► button and then ▲ or ▼ button to select **Programme Edit** menu.

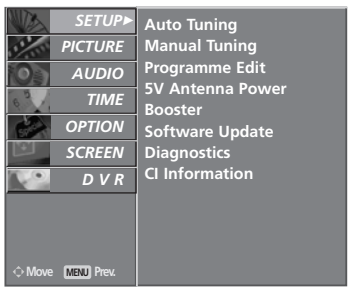
3. Press the ► button to enter the **Programme Edit** menu.
   Use NUMBER buttons to input a 4-digit password in **Lock System** '**On**'.

4. Select a programme to be stored or skipped with the ▲ or ▼ or ◄ or ► button.

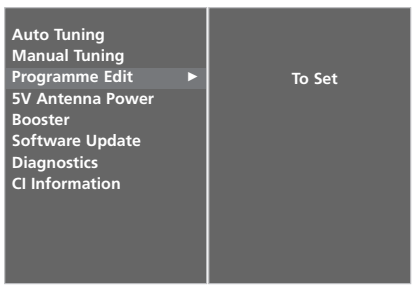
5. Press the **BLUE** button repeatedly to have the programme skipped or stored.

   When programmes are to be skipped, skipped programme shows in blue and these programmes will not be selected by the **PR** + or - buttons during TV viewing.

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




1




2 3

**Mini Glossary**

| | |
|---|---|
| Displayed with a DTV Programme. | Displayed with a Teletext Programme. |
| Displayed with a Locked Programme. | Displayed with a Subtitle Programme. |
| Displayed with a Radio Programme. | Displayed with an Scramble Programme. |
| MHEG Displayed with a MHEG Programme. | Displayed with a Dolby Programme. |

## ■ Skipping a programme number

1. Select a programme number to be skipped with the ▲ or ▼ or ◄ or ► button.
2. Press the **BLUE** button. The skipped programme number turns to blue.
3. Press the **BLUE** button again to release the skipped programme.

   When a programme number is skipped it means that you will be unable to select it using the **PR** + or - button during normal TV viewing.

   If you wish to select a skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or EPG.
4. Press the **EXIT** button to return to TV viewing.

## ■ Locking a programme (In Lock System On mode only)

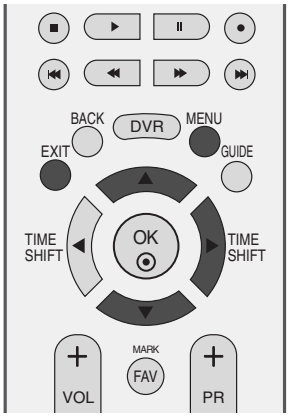
1. Select a programme to be locked with the ▲ or ▼ or ◄ or ► button.
2. Press the **GREEN** button. The lock symbol will appear in front of that programme number.
3. Press the **GREEN** button again to release this function.

**Note :**
- ► To watch a locked programme, input a 4-digit password in Lock system. Be sure to remember this number!
- ► If you forget your password, press '7', '7', '7', '7' on the remote control handset.
- ► If you select another programme after releasing a locked programme and then return to the locked programme within 1 minute, there is no need to input a password to select the locked programme.

## ■ Selecting favourite programme

1. Select your favourite programme number by pressing ▲ or ▼ or ◄ or ► button and then press the **FAV** button on your remote control handset.

   It will automatically include the selected programme into your favourite programme list.



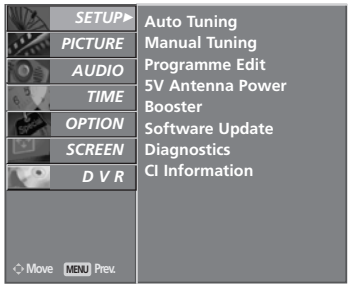

# 5V ANTENNA POWER (IN DIGITAL MODE ONLY)

Even if there is not a special 5V adapter power in the external antenna, this function can output 5V in the TV.

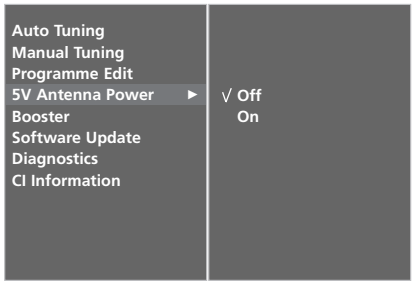
1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ or ▼ button to select **5V Antenna Power**.
3. Press the ► button and then use ▲ or ▼ button to select **On** or **Off**.

   In **5V Antenna Power On**, if the TV is overloaded (short circuits), it will automatically return to **Off**.

   The message "**Antenna feed overloaded. Automatically switched off.**" will appear.
4. Press the **EXIT** button to return to normal TV viewing.




1

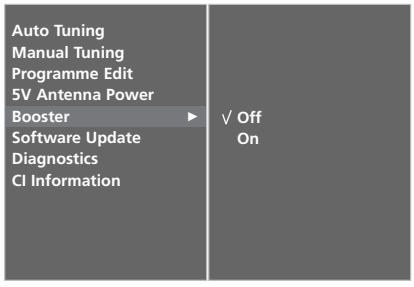



2 3

# BOOSTER (IN DIGITAL MODE ONLY)

If reception is poor select **Booster** to **On**.
If TV signal is strong, select Booster to Off.

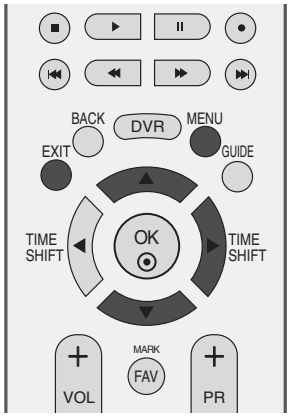
1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then use ▲ or ▼ button to select **Booster**.
3. Press the ► button and then use ▲ or ▼ button to select **On** or **Off**.
4. Press the **EXIT** button to return to normal TV viewing.



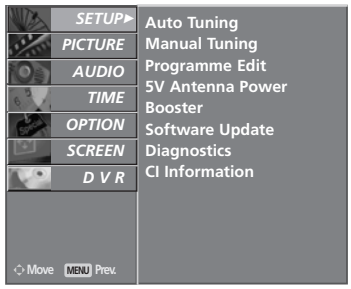

2 3

# SOFTWARE UPDATE (IN DIGITAL MODE ONLY)

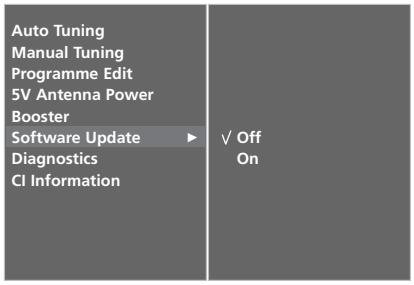
Software Update means software can be downloaded through the digital terrestrial broadcasting system.
After a Software Update, HDD formatting may be necessary. In this case, the HDD Failure message is displayed in the DVR Home menu.




1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Software update**.
3. Press the ▶ button and then ▲ or ▼ button to select **Off** or **On**.
   - If you select **On**, a user confirm message box will be displayed to notify that new software is found.
4. Press the **EXIT** button to return to normal TV viewing.




1




2 3

### * When setting "Software Update"

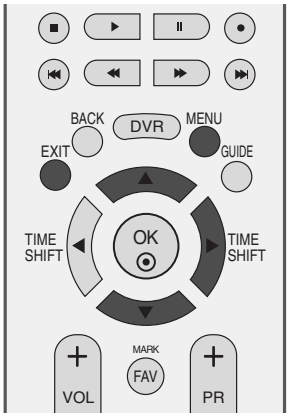
Occasionally, a transmission of updated digital software information will result in the following menu on the TV screen.

Select **YES** using the ◀ or ▶ button and you will see the following picture.

After the Software Update is complete, the System takes about one minute to restart.

**- During Progress of a Software Update, please note the following:**

- Power to the TV must not be interrupted.
- The TV must not be switched off.
- The antenna must not be disconnected.
- During this time, you should not switch off the power to the TV.
- At this time, you should not work power On/Off.
- After Software Update, you can confirm the updated software version in Diagnostics menu.
- OTA cannot be performed while the DVR function(recording, playback) is running.




# DIAGNOSTICS (IN DIGITAL MODE ONLY)

This function enables you to view information on the Manufacturer, Model/Type, Serial Number and Software Version.

This displays the information and signal strength of the tuned MUX.
This displays the signal information and service name of the selected MUX.

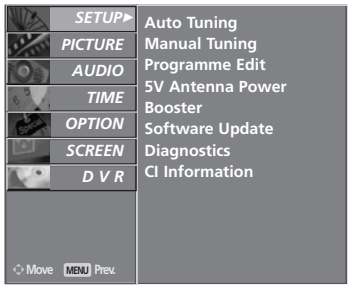


1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.

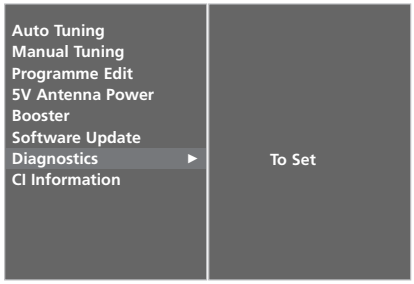
2. Press the ► button and then use ▲ or ▼ button to select **Diagnostics**.

3. Press the ► button to display Manufacturer, Model/Type, Serial Number and Software Version.

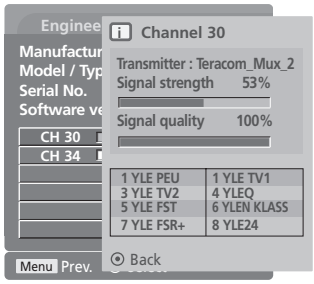
4. Press the **EXIT** button to return to normal TV viewing.




1

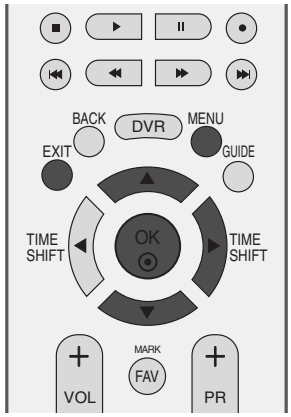



2




3

# CI [COMMON INTERFACE] INFORMATION (IN DIGITAL MODE ONLY)

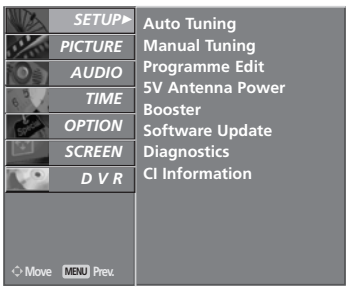



This function enables you to watch some scrambled services (pay services). If you remove the CI Module, you cannot watch pay services.
When the module is inserted into the CI slot, you can access the module menu.
To purchase a module and smart card, contact your dealer. Do not repeatedly insert or remove a CAM module from the TV. This may cause a malfunction. When the TV is turned on after inserting a CI Module, you may not have any sound output.

This may be incompatible with the CI module and smart card.

CI (Common Interface) functions may not be possible depending upon the country broadcasting circumstances.

1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then ▲ or ▼ button to select **CI Information**.
3. Press the ► button and then **OK** button.
4. Press the ▲ or ▼ button to select the desired item: Module information, smart card information, language, or software download etc.
5. Press the **OK** button.
6. Press the **EXIT** button to return to normal TV viewing.

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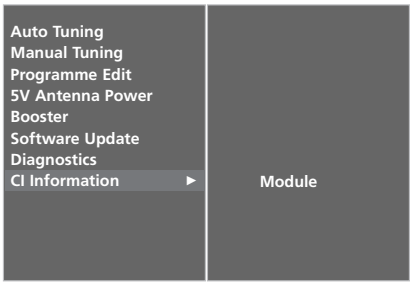
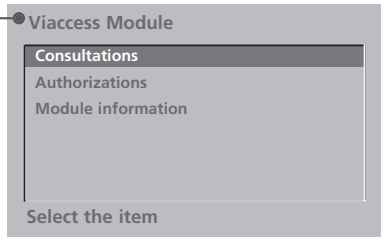



2 3

- This OSD is only for illustration and the menu options and screen format will vary according to the Digital pay services provider.
- It is possible for you to change CI (Common Interface) menu screen and service by consulting your dealer.

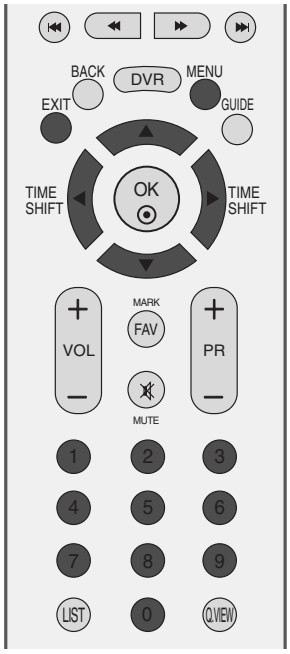



4 5

# AUTO PROGRAMME TUNING (IN ANALOGUE MODE)

All stations which can be received are stored by this method. It is recommended that you use Auto tuning during installation of this TV.

It is not possible to use this function while recording a programme.




1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.

2. Press the ► button and then ▲ or ▼ button to select **Auto Tuning**.

3. Press the ► button to select **System**. Select a TV system with the ◄ or ► button;

   **L** : SECAM L/L' (France)
   **BG** : PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa / Australia)
   **I** : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
   **DK** : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)

4. Press the ▼ button to select **Storage From**.

   Select the initial programme number with the ◄ or ► button or NUMBER buttons on the **Storage From** menu.

5. Press the ▼ button to select **Start**.

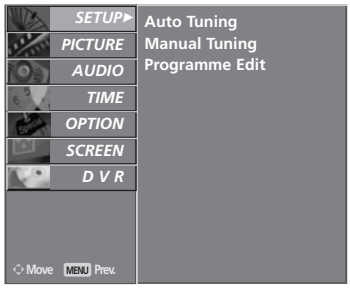
   The station name is stored for stations which broadcast VPS (Video Programme Service), PDC (Programme Delivery Control) or TELETEXT data.

   If no station name can be assigned to a station, the channel number is assigned and stored as **C** (V/UHF 01-69) or **S** (Cable 01-47), followed by a number.

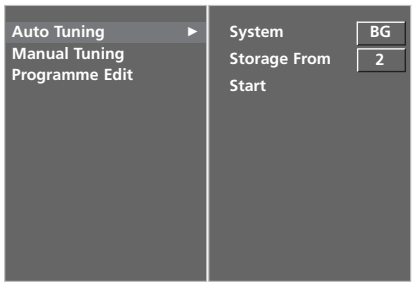
   To stop auto tuning, press the **MENU** button.

   When auto tuning is complete, the **Programme Edit** menu appears on the screen.

See the '**Programme Edit**' section to edit the stored programme.




1



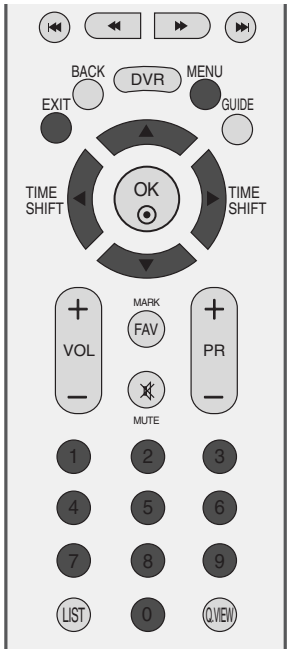

2 3 4 5

# MANUAL PROGRAMME TUNING (IN ANALOGUE MODE)

Manual Tuning lets you manually tune and arrange the stations in whatever order you desire.

It is not possible to use this function with TimeShift Mode On.

It is not possible to use this function while recording a programme.

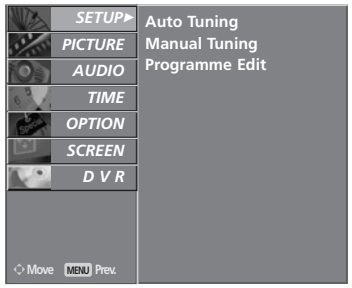



1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Manual Tuning**.
3. Press the ▶ button to select **Storage**.

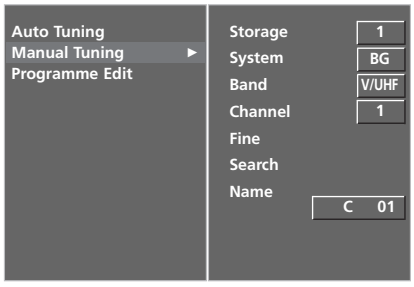
   Select the desired programme number with the ◀ or ▶ button or NUMBER buttons on the **Storage** menu.
4. Press the ▼ button to select **System**. Select a TV system with the ◀ or ▶ button;

   **L** : SECAM L/L' (France)
   **BG** : PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa / Australia)
   **I** : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
   **DK** : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
5. Press the ▼ button to select **Band**. Press the ◀ or ▶ button to select **V/UHF** or **Cable** as required.
6. Press the ▼ button to select **Channel**. You can select the desired channel number with the ◀ or ▶ button or NUMBER buttons.

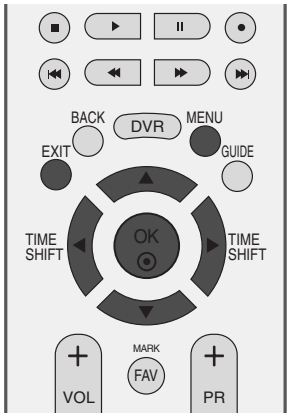
   If possible, select the channel number directly with the NUMBER buttons.
7. Press the ▼ button to select **Search**. Press the ◀ or ▶ button to commence searching. If a station is found the search will stop.
8. Press the **OK** button to store settings.
9. To store another station, repeat steps 3 to 8.
10. Press the **EXIT** button to return to normal TV viewing.




1



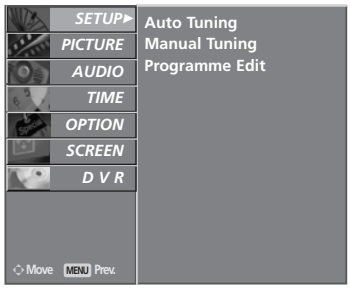

2 3 4 5 6 7 8 9




# FINE TUNING (IN ANALOGUE MODE)

Normally fine tuning is only necessary if reception is poor.

1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then ▲ or ▼ button to select **Manual Tuning**.
3. Press the ► button and then ▲ or ▼ button to select **Fine**.
4. Press the ► button and then ◄ or ► button to fine tune for the best picture and sound.
5. Press the **OK** button to store settings.
6. Press the **EXIT** button to return to normal TV viewing.

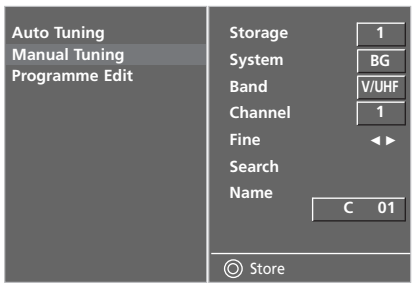



1

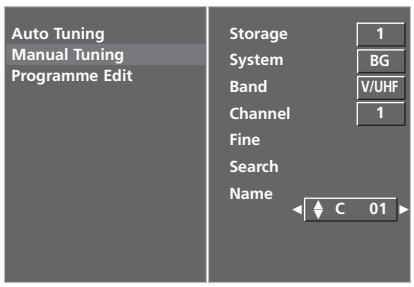
# ASSIGNING A STATION NAME (IN ANALOGUE MODE)

You can assign a station name to each programme number.

1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then ▲ or ▼ button to select **Manual Tuning**.
3. Press the ► button and then ▲ or ▼ button to select **Name**.
4. Press the ► button and then ▲ or ▼ button. You can use the alphabet **A** to **Z**, numbers **0** to **9**, +/ -, and blank.
5. Press the ◄ or ► button to select the position and make your choice of the second character, and so on.
6. Press the **OK** button to store settings.
7. Press the **EXIT** button to return to normal TV viewing.




2 3 4 5

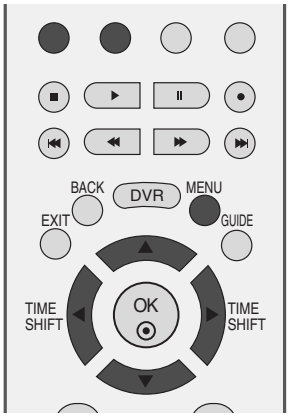



2 3 4 5 6

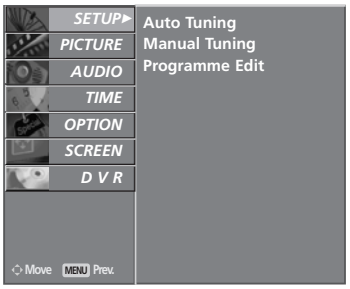
# PROGRAMME EDIT (IN ANALOGUE MODE)

This function enables you to delete or skip stored programmes. You can also move some programmes to other programme numbers or copy blank programme data into a selected programme number.

It is not possible to use this function while recording a programme.




1. Press the **MENU** button and then ▲ or ▼ button to select the **SETUP** menu.
2. Press the ► button and then ▲ or ▼ button to select **Programme Edit**.
3. Press the ► button to display the Programme Edit menu.




1

■ **Deleting a programme**

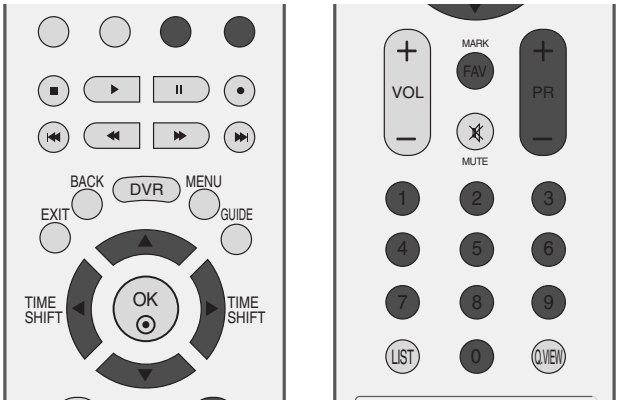
a. Select a programme to be deleted with the ▲ or ▼ or ◄ or ► button.
b. Press the **RED** button twice. The selected programme is deleted, all the following programmes are shifted up one position.

2

■ **Copying a programme**

a. Select a programme to be copied with the ▲ or ▼ or ◄ or ► button.
b. Press the **GREEN** button. All the following programmes are shifted down one position.

# WATCHING TV /PROGRAMME CONTROL






## ■ Moving a programme

a Select a programme to be moved with ▲ or ▼ or ◄ or ► button.

b Press the **YELLOW** button.

c Move the programme to the desired programme number with the ▲ or ▼ or ◄ or ► button.

d Press the **YELLOW** button again to release this function.

## ■ Skipping a programme number

a Select a programme number to be skipped with ▲ or ▼ or ◄ or ► button.

b Press the **BLUE** button. The skipped programme number turns to blue.

c Press the **BLUE** button to release the skipped programme.

d When a programme number is skipped it means that you will be unable to select it using the **PR** + or - button during normal TV viewing.

If you wish to select the skipped programme, directly enter the programme number with the NUMBER buttons or select it in the programme edit or table menu.

## ■ Selecting a Favourite Programme

a Select your favourite programme number with ▲ or ▼ or ◄ or ► button.

b Press the **FAV** button.

The selected programme will be added to the favourite programme list.

# SELECTING THE PROGRAMME TABLE

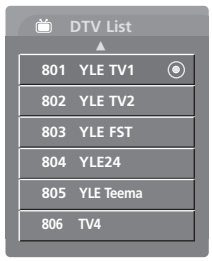
You can check which programmes are stored in the memory by displaying the programme table.

## ■ Displaying programme LIST

1. Press the **LIST** button to display the **PROGRAMME LIST** menu.

   The programme list appears on the screen.

- You may find some blue programmes.
  These have been set up to be skipped by auto programming or in the programme edit mode.
- Some programmes with the channel number shown in the programme LIST indicate there is no station name assigned.




< In Digital Mode >

## ■ Selecting a programme in the programme list

1. Select a programme with the ▲ or ▼ button.
2. Press the **OK** button. The TV switches to the chosen programme number.

< In Analogue Mode >

## ■ Paging through a programme list

Programme LIST pages contain 100 programmes in total.

1. Press the ▲ or ▼ button repeatedly to turns the pages.
2. Press the **LIST** button to return to normal TV viewing.

## ■ Displaying the favourite programme table

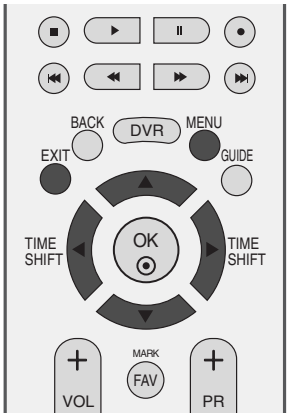
Press the **FAV** button to display the Favourite Programme table menu.

**Mini Glossary**

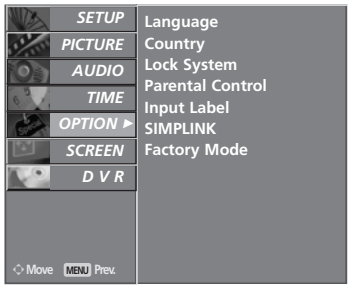
🔒 Displayed when the Locked Programme.

# INPUT SOURCE SELECTION

**Selects a label for each input source which is not in use.**




1. Press the **MENU** button and then use ▲ or ▼ button to select the **OPTION** menu.

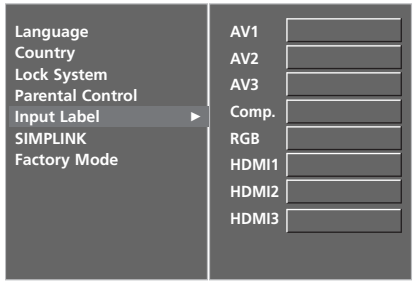



1

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, AV3, Comp., RGB, HDMI1, HDMI2 or HDMI3.

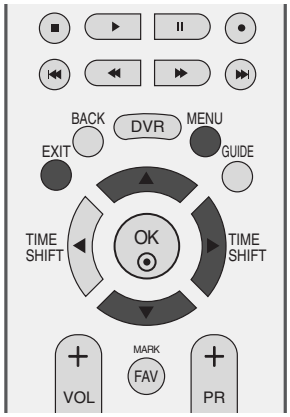
4. Press the ◄ or ► button to select the label.




2 3 4

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

# SIMPLINK FUNCTION



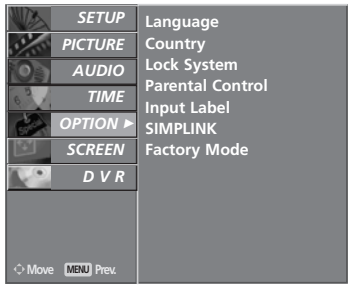

**This fundtion operates only with devices with the SIMPLINK logo. Please check the SIMPLINK logo.**

This TV might not function properly when using it with other products with HDMI-CEC function.

**This allows you to control and play other AV devices connected to the display through HDMI cable without additional cables and settings.**

**If you require the SIMPLINK menu, select "On".**

**SIMPLINK function is not supported by HDMI IN 3 input.**



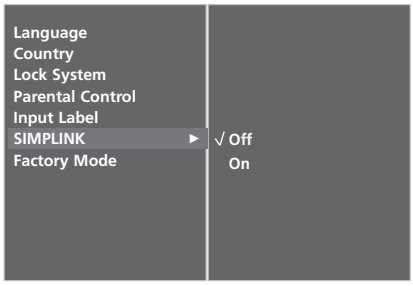

1

1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.

2. Press the ▶ button and then ▲ or ▼ button to select **SIMPLINK**.

3. Press the ▶ button and then ▲ or ▼ button to select **Off** or **On**.

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




2 3

## SIMPLINK Functions

### Disc playback

Control connected AV devices by pressing the ▲ or ▼ or ◀ or ▶, OK, ▶, ■, ❚❚, ◀◀, ▶▶, ⏮ and ⏭ buttons.

### Direct play

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

### Select AV device

Enables you to select one of the AV devices connected to the TV and operate it.

### Power off all devices

When you switch off the TV, all connected devices are turned off.

### Switch audio-out

Offers an easy way to switch audio-out.

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

## SIMPLINK Menu

Press the ▲ or ▼ or ◀ or ▶ button and then **OK** button to select the desired SIMPLINK source.

❶ **TV viewing :** Switch to the previous TV programme regardless of the current mode.

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

❸ **VCR playback :** control the connected VCR.

❹ **HDD Recordings playback :** control recordings stored in HDD.

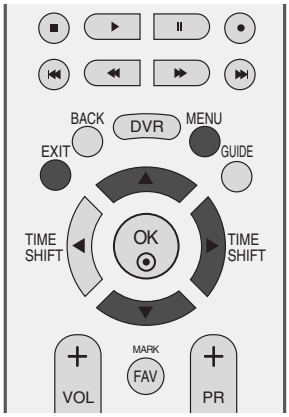
❺ **Audio Out to Home theatre/Audio Out to TV:** Select Home theatre or TV speaker for Audio Out.

**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.
- ▶ After connecting the HDMI terminal for the home theatre with the SIMPLINK function using the above method, connect the DIGITAL AUDIO OUT terminal on the back of the TV to the DIGITAL AUDIO IN terminal on the back of the SIMPLINK device with the OPTICAL cable.
- ▶ When operating an external device with SIMPLINK, press the TV button from the MODE buttons on the remote control.
- ▶ When you switch the Input source using the INPUT button on the remote control, you can stop the operation of a device controlled by SIMPLINK.
- ▶ When you select or operate a media device with home theatre function, the speaker automatically switches to home theatre speaker (HT speaker).
- ▶ If SIMPLINK is operated, the keys such as stop / play / pause / fast reverse / fast forward / chapter skip are used for driving the SIMPLINK device, but are not used for the DVR feature.

# DVR (DIGITAL VIDEO RECORDER)

## TIMESHIFT MODE (PAUSE & REPLAY OF LIVE TV)




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

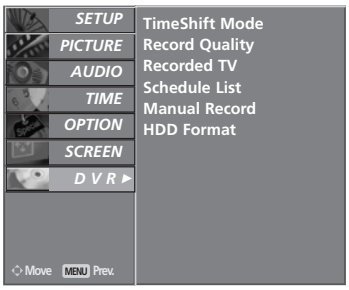
With the TimeShift Mode turned on, you may pause and rewind normal TV viewing at any time without missing any of the live broadcast.
(TimeShift Mode and Recording functions may not work if the signal strength is weak.)

1. Press the **MENU** button and then use ▲ / ▼ button to select the **DVR** menu.

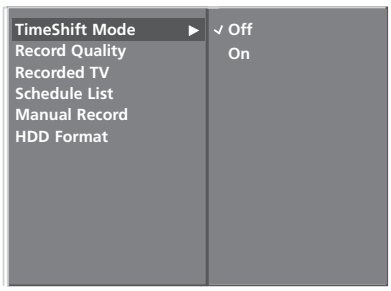
2. Press the ▶ button and then use ▲ / ▼ button to select the **TimeShift Mode**.

3. Press the ▶ button and then use ▲ / ▼ button to select **On** or **Off**.

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

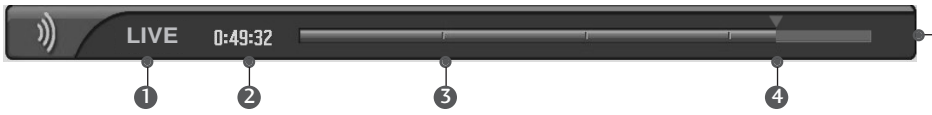



❶




❷ ❸

## Using the TimeShift Mode function




**1** After selecting **TimeShift Mode On**, press the **OK** button.

- As soon as TimeShift Mode 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 **OK** button to display the 'Progress Bar'.
- This function is preserved even when changing a programme or progressing the TimeShift Mode.

**2** When finishinging with the TimeShift Mode function, enter the option menu and turn **TimeShift Mode Off**.

**The 'Progress Bar'?**

This function indicates what DVR reviewing is possible,a current on-screen and live broadcasting position.

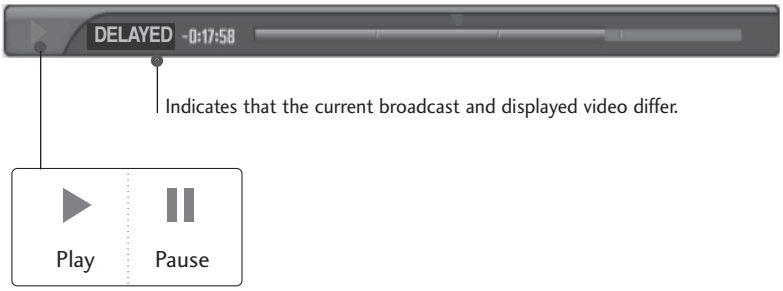
1. Status of current displayed video.
2. Current save time.
3. 15 minute intervals from TimeShift Mode start time. (Total - one hour).
4. Indicates current TimeShift Mode position.

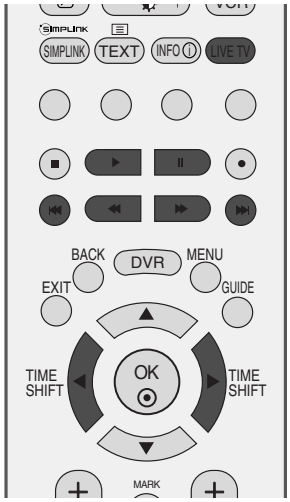
### NOTE

- DVR (Digital Video Recorder) : A device which records and plays broadcast programme contents onto a hard disk in TV or SET TOP BOX.
- The total storage space of the hard-disk is 160 GB. 4 GB minimum is reserved for TimeShift Mode.
- When turning power on, it may take up to a maximum of 3 minutes to initialise the HDD.
- The Recording function will not initiate for a copy-protected programme.
- Because an analogue broadcast is converted to a digital signal, video which contains rapid movement may show "cross stripes". This happens when the analogue signal is compressed and then restored in the digital signal. The unit will attempt to reduce excessive picture interference.
- TimeShift Mode is available in DTV, TV, AV1, AV2, AV3 mode.
- TimeShift Mode is available for Audio only channels.
- When pressing the **Pause(II)** button in TimeShift Off mode, TimeShift starts. TimeShift remains active even when you change channels.
- In the case of DTV, the maximum DTV recording duration displayed as Free space may be slightly different from the actual maximum recording duration.

## Using the TimeShift Mode function, play

**When in TimeShift Mode, the following options are available.**




## Using the remote control

**You can shift playback to any point within the recorded programme.**

| | |
|---|---|
| ◀◀ or ▶▶ | When playing,<br>repeatedly, press the **REW(◀◀)** button to speed up ◀ -> ◀◀ -> ◀◀◀ -> ◀◀◀◀ -> ◀◀◀◀◀ .<br>repeatedly, press the **FF(▶▶)** button to speed up ▶▶-> ▶▶▶ -> ▶▶▶▶ -> ▶▶▶▶▶ .<br>■ Pressing these buttons repeatedly increases the fast forward/reverse speed. |
| I◀◀ or ▶▶I | Press the ▶▶I button to jump about 20 seconds forward.<br>■ Press the I◀◀ button to jump about 8 seconds back. |
| II | During playback, press the **Pause(II)** button.<br>■ Still screen is displayed.<br>■ Repetedly press the **Pause(II)** button to advance frame by frame.<br>■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion (the I▶ icon is displayed.) |
| ◀ or ▶ | ■ 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. |

# INSTANT RECORDING

**Use this function to record the programme you are watching on the main screen (Analogue or Digital broadcast).**

## Instant Record

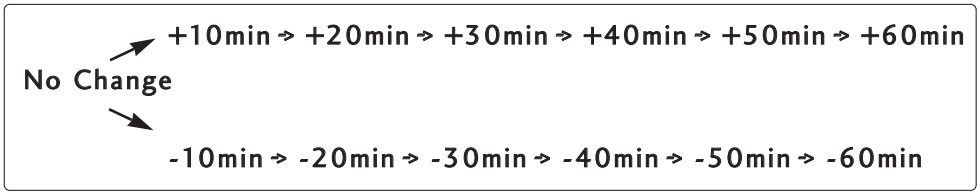
This function records the currently displayed programme.

1. Select the programme you wish to record and then press the ● button. During recording REC is displayed. Use this feature to record up to 2 hours of programming.

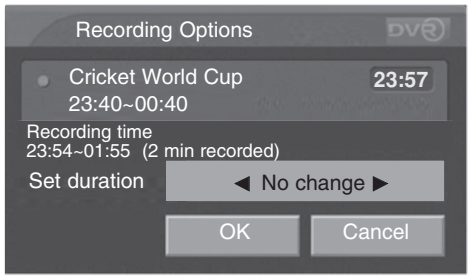
2. If you wish to stop recording, press the ■ button.

- While recording, if you press the ■ button before 10 seconds of recording time has passed, this message is displayed.
  - Recording failed. Length is less than 10 seconds.
- While Audio recording, if you press the ■ button before 30 seconds of recording time has passed, this message is displayed.
  - Recording failed. Length is less than 30 seconds.
- If you press the ■ button after more than 10 seconds of recording time has passed, this message is displayed.
  - Recording completed.

3. You can increase or decrease the 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.



The extra recording time added to the existing setting equals the final recording time.




3

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

- Press the **EXIT** button to hide the Status bar. Press the **OK** 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 TimeShift Mode feature remains active.

## NOTE

- When recording, if the available storage space is not sufficient, the recording will automatically Stop.
- In Radio mode, recordings of less than 30 seconds will not be saved. In other modes, recordings of less than 10 seconds will not be saved.
- No data will be saved on paid channels with no CI Card or expired period of validity of CI Card, in invalid services and in data only channels (ex. MHEG) In order to save disk space.
- The recording function will not initiate for a copy-protected programme.
- The displayed time differs slightly from the actual time.
- When there is no signal or a film source is being viewed, the displayed time may differ slightly from the actual time.
- Recording is not possible with copy-protected programmes.
  - When Instant Recording, this message is displayed.

    Cannot record due to copy protection.

  - When Manual Recording, this message is displayed.

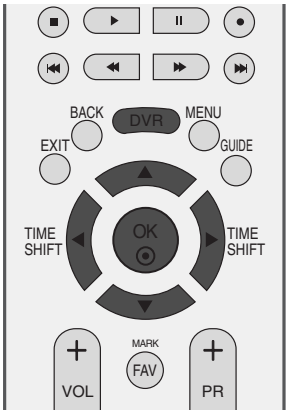
    Schedule recording cannot start.
    Copy protected.

- When a poor quality external source is recorded (for example old VHS tape) the quality of the recording will not be optimal.
- Programmes are stored separately according to the colour system used. e.g. PAL/NTSC.
- Recording is based on the currently being viewed source. The Auto AV source is recorded while viewing the SCART Auto AV, but the Analog TV source is recorded while viewing the Analog TV source. When reserved recording is performed, even if the channel is set to the Analog TV, if the Scart Auto AV operates, the Auto AV source is recorded.
- When the programme switch key is pressed while recording the Analog TV source, the channel is switched to the Digital TV source. However, when the numeric key is pressed, it is not switched.
- The maximum schedule recording duration is 12 hours. The maximum number of schedule recording is 60 in the UK and 30 in the rest of the world.
- When Manual Recording, the default sound settings apply.
- When the recording time conflicts with that of existing recordings, the Collision message is displayed in a Popup window in the UK and recording is not registered in the rest of the world.
- When recording a DTV source, you cannot watch Scrambled channels (paid channel).
- When you choose an scrambled channel (paid channel), the following message is displayed.

  Cannot watch a scrambled programme.
  while recording another DTV programme.

- When you change channels while recording an Analog TV source, the channel will be switched to the DTV mode.
- 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 RECORDING




This function is used to perform reserved recording.

This function is available in the DVR menu.

When Manual Recording,the default sound of the TV is stored.

1 Press the **DVR** button to display **Home** menu. Use the ▲ or ▼ button to select the **Manual Record** and then use the **OK** or ▶ button.

❶

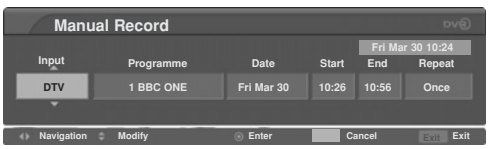
2 The **Manual Record** screen is displayed as shown below. Use the ▲ or ▼ or ◀ or ▶ button to set the **Input**, **Programme**, **Date**, **Start/End**, **Repeat**.

- **Input** : Select the input source from the DTV, RADIO, TV, AV1, AV2, AV3.
- **Programme** : Select either the current programme or a scanned programme.
- **Date** : You can select a date up to one month in advance.
- **Start/End** : Ensure you have set these correctly.
- **Repeat** : Choose either Once, Daily, Weekly, Weekend, Weekday.

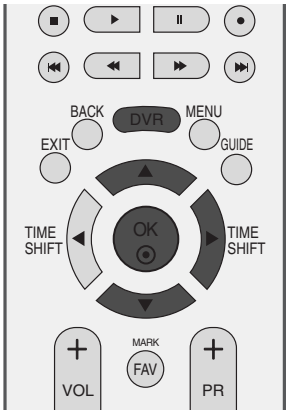
3 After setting the **Manual Record** , press the **OK** button.

## Button Function in Manual Record Mode

| Remote Control Buttons | Function |
|---|---|
| ▲ or ▼ | Select required items with Up/down button. |
| ◀ or ▶ | Selects the required fields. |
| EXIT | OSD disappears. |
| ◉ | Displays the reservation list after the recording has been registered. |



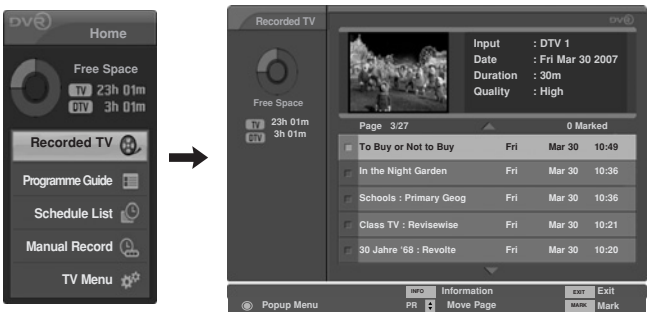

❷




# RECORDED TV PROGRAMME LIST

**You can view the recorded programme list at a glance.**
**This function is also available in the DVR menu.**
**Information function is only applicable when the country selected is UK.**

1. Press the **DVR** button to display **HOME** menu.
   Use the ▲ or ▼ button to select **Recorded TV** and then use the **OK** or ▶ button.

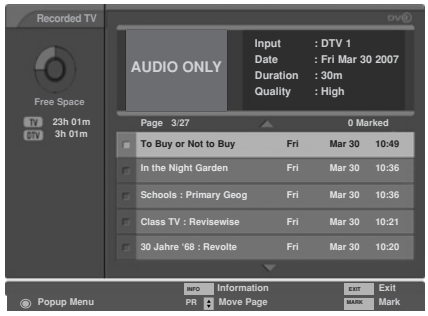



1

2. When the highlighted recording is a locked programme or a rated programme, the preview window displays 'LOCKED SERVICE' instead of the Play screen.
   If you wish to play locked or rated recordings, you must enter the password.

2

3. In the case of recording an Audio only programme the preview window displays 'AUDIO ONLY' instead of the Play screen.



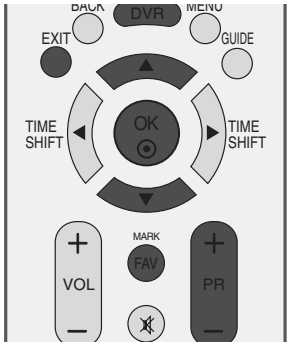

3

4. When scheduled recording fails for various reasons such as signal strength, it is registered in the Recorded TV List and the Preview window displays the OSD as shown in the diagram. When you press the OK button to execute the failed recording, a message is displayed as shown in the picture.

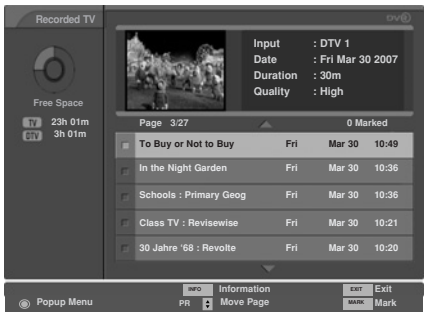
3

# Recorded programme Selection and Popup Menu

**The preview recorded list is shown above.**




1 Use the PR + or PR - button for page up/down navigation.




1

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 navigate the appropriate thumbnail photo, then press the **OK** button to open the Pop-up Menu.

- ▶ **Play** : Begin playback of the selected recording.
- ▶ **Mark All** : mark all recordings on the screen.
- ▶ **Unmark All** : Change marked recordings to unmarked recordings.
- ▶ **Delete** : Delete the selected recording.
- ▶ **Rename** : Edit the recorded programme title.
- ▶ **Cancel** : Close the Pop-up Menu.

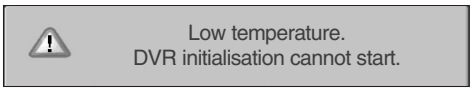
2

3

4 Repeatedly, press the **EXIT** button to return to TV viewing or press the **DVR** 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 DVR functions.

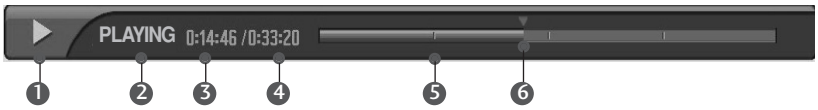



4

## Playing recorded programmes

- **You can play a selected programme from the recorded programme list.**

1. Play a recorded programme.
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 **OK** button to display the progress bar
   - To stop displaying the recorded programmes icon, press the **EXIT** button.




**The 'Progress Bar'?**
This function indicates what DVR reviewing is possible ,a current on-screen and live broadcasting position, a section of section-recording.

1. Indicates progress of recorded programme.
2. Indicates status of recorded programme.
3. Indicates elapsed playback time.
4. Indicates total playback time.
5. Indicates a quarter of programme runtime.
6. Indicates current playback position.

## Using the remote control

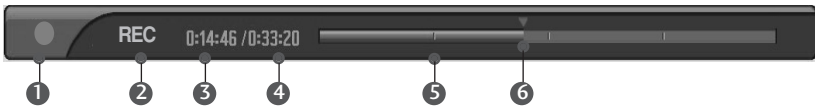
**You can shift playback to any point within the recorded programme.**

| | |
|---|---|
| ◀◀ or ▶▶ | When playing,<br>repeatedly, press the **REW(◀◀)** button to speed up ◀ -> ◀◀ -> ◀◀◀ -> ◀◀◀◀ -> ◀◀◀◀◀ .<br>repeatedly, press the **FF(▶▶)** button to speed up ▶▶-> ▶▶▶ -> ▶▶▶▶ -> ▶▶▶▶▶ .<br>■ Pressing these buttons repeatedly increases the fast forward/reverse speed. |
| I◀◀ or ▶▶I | Press the ▶▶I button to jump about 20 seconds forward.<br>■ Press the I◀◀ button to jump about 8 seconds back. |
| II | During playback, press the **Pause(II)** button.<br>■ Still screen is displayed.<br>■ Repetedly press the **Pause(II)** button to advance frame by frame.<br>■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion (as showing the I▶ .) |
| ◀ or ▶ | ■ When using the ◀ or ▶ button during playback the cursor 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. |
| ■ | ■ If you press the **STOP(■)** button, you can view live TV. |

## Chase playback

During recording, you can “Trick play” a programme that is being recorded without interrupting recording by using the Progress Bar.

1. Record a programme.
2. While recording, You will see a playback screen as shown below.
   - Initially, an icon showing the current playback mode is displayed REC. Press the **OK** button to display the progress bar
   - To stop displaying the recorded programmes icon, press the **EXIT** button.




**The ‘Progress Bar’?**

This function indicates what DVR reviewing is possible ,a current on-screen and live broadcasting position, a section of section-recording.

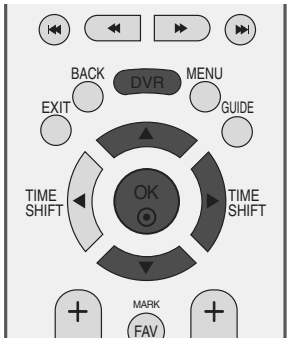
1. Indicates progress of recorded programme.
2. Indicates status of recording programme.
3. Indicates elapsed recording time.
4. Indicates total recording time.
5. Indicates a quarter of programme runtime.
6. Indicates current playback position.

## Using the remote control

**You can shift playback to any point while recording programme.**

| | |
|---|---|
| ◀◀ or ▶▶ | When playing,<br>repeatedly, press the **REW(◀◀)** button to speed up ◀ -> ◀◀ -> ◀◀◀ -> ◀◀◀◀ -> ◀◀◀◀◀ .<br>repeatedly, press the **FF(▶▶)** button to speed up ▶▶-> ▶▶▶ -> ▶▶▶▶ -> ▶▶▶▶▶ .<br>■ Pressing these buttons repeatedly increases the fast forward/reverse speed. |
| I◀◀ or ▶▶I | Press the ▶▶I button to jump about 20 seconds forward.<br>■ Press the I◀◀ button to jump about 8 seconds back. |
| II | During recording, press the **Pause(II)** button.<br>■ Still screen is displayed.<br>■ Repetedly press the **Pause(II)** button to advance frame by frame.<br>■ Press the **Pause(II)** button and then use the **FF(▶▶)** button for slow motion (as showing the I▶ .) |
| ◀ or ▶ | ■ When using the ◀ or ▶ button during recording the cursor 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. |
| ■ | ■ If you press the **STOP(■)** button, you can view live TV. |

# SCHEDULE LIST




**This function is used to show scheduled recordings.**
**This function is available in the DVR menu.**

**You can store up to 30 programmes.**
**60 programmes can be stored in the United Kingdom.**

1 Press the **DVR** button to display **Home** menu. Use the ▲ or ▼ button to select the **Schedule List** and then use the **OK** or ▶ button.

1

2 The **Schedule List** screen is displayed as shown below. Use the ▲ or ▼ button to select a recorded programme.

## Button Function in Schedule List Mode

| Remote Control Buttons | Function |
|---|---|
| ▲ or ▼ | Select programmes Up/down. |
| ◉ | Display Popup window |
| EXIT | OSD disappears. |
| YELLOW | Enter Manual record mode. |
| BLUE | Change to Guide mode. |
| PR ▲ or ▼ | Page Up/Down |

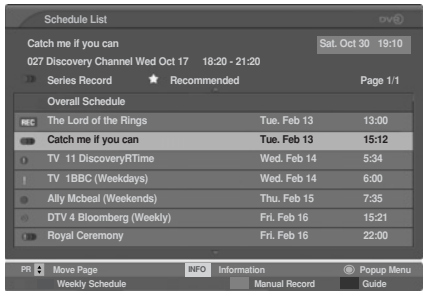
2

**In UK, this function is available for use in the Overall Schedule mode.**

| Popup Menu | Function |
|---|---|
| Modify | Modify to the Schedule Recording. |
| Delete | Delete Schedule Recording. |
| Delete All | Delete All Schedule Recording. |
| Cancel | Delete Popup window. |

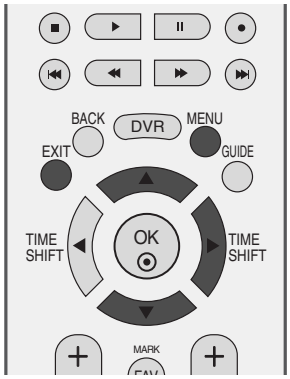
**The contents below are only applicable when country selected is the UK.**

| Remote Control Buttons | Function |
|---|---|
| RED | Select Overall Schedule/Weekly Schedule in turn. |
| INFOⓘ | Detail information on or off. |

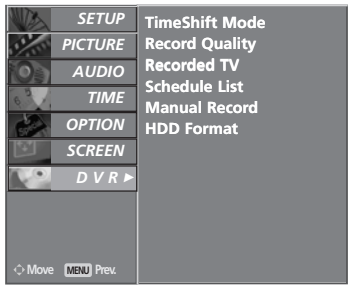


# RECORD QUALITY

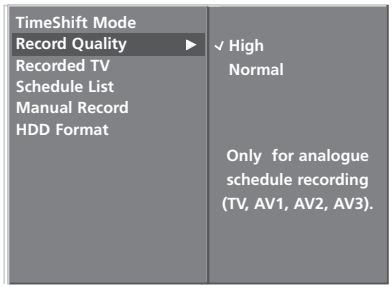
This function is not available while a recording is taking place.
(Only for analogue schedule recording)




1. Press the **MENU** button and then use ▲ / ▼ button to select the **DVR** menu.
2. Press the ► button and then use ▲ / ▼ button to select **Record Quality**.
3. Press the ► button and then use ▲ / ▼ button to select **High** or **Normal**.
4. Press the **EXIT** button to return to normal TV viewing.



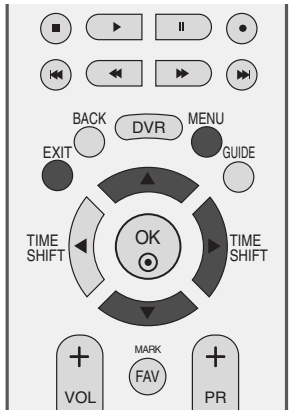

❶




❷ ❸

# FORMAT HARD DISK

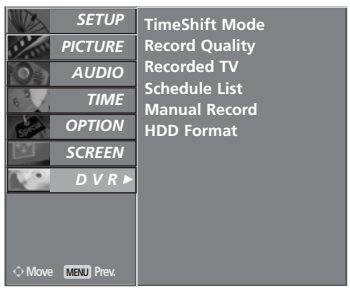
**Erases all programmes and initialises the hard drive.**



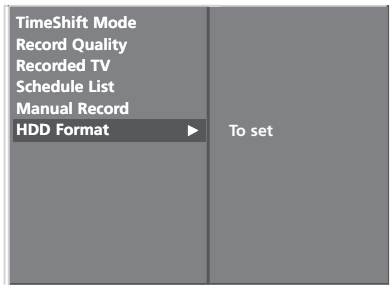

1. Press the **MENU** button and then use ▲ / ▼ button to select the **DVR** menu.

2. Press the ▶ button and then use ▲ / ▼ button to select **HDD Format**.

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

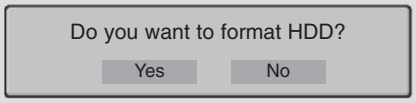



❶

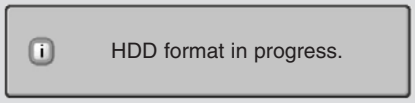



❷ ❸

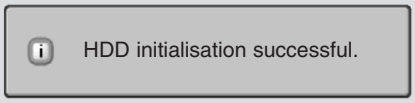
- if you press the ▶ button, this message is displayed.




- if you select Yes, this message is displayed.




- When completing, this message is displayed.




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

# EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.

The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in the EPG (the availability and amount of these programme details will vary, depending on the particular broadcaster).

This function can be used only when the EPG information is broadcast by broadcasting companies.

The EPG displays the programme details for next 8 days.

## Switch on/off EPG

1. Press the **GUIDE** button to switch on EPG.
2. Press the **GUIDE** or **EXIT** button again to switch off EPG and return to normal TV viewing.

## Select a programme

1. Press the ▲ or ▼, ◄ or ►, **PR** + or - button to select the desired programme, then the **OK** button, the popup window to select the function is displayed.

## Button Function in NOW/NEXT Guide Mode

| Remote Control Buttons | Function |
|---|---|
| RED | Change EPG mode |
| YELLOW | Enter Manual Record setting mode |
| BLUE | Enter Schedule list mode |
| ◉ | Display Popup window |
| ◄ or ► | Select NOW or NEXT Programme |
| ▲ or ▼ | Select the Broadcast Programme |
| PR + or - | Page Up/Down |
| GUIDE/EXIT | Switch off EPG |
| TV/RADIO | Select TV or RADIO Programme |
| INFO ⓘ | Detail information on or off. |
| RECORD | Select Record/delete the highlighted programme in turn. |
| FAV | Select the Favourite programme/all Programmes in turn. |

# EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

## Button Function in 8 Days Guide Mode

| Remote Control Buttons | Function |
|---|---|
| RED | Change EPG mode |
| GREEN | Enter Date setting mode |
| YELLOW | Enter Manual Record setting mode |
| BLUE | Enter Schedule list mode |
| ◉ | Display Popup window |
| ◀ or ▶ | Select NOW or NEXT Programme |
| ▲ or ▼ | Select the Broadcast Programme |
| PR + or - | Page Up/Down |
| GUIDE/EXIT | Switch off EPG |
| TV/RADIO | Select TV or RADIO Programme |
| INFO ⓘ | Detail information on or off. |
| FAV | Select the Favourite programme/all Programmes in turn. |
| ◀◀ | Move to the left every one and a half hours. |
| ▶▶ | Move to the right every one and a half hours. |
| I◀◀ | Turn to the left every six hours. |
| ▶▶I | Turn to the right every six hours. |
| RECORD | Select Record/delete the highlighted programme in turn. |

| Icon | Function |
|---|---|
| REC | Recording |
| (Blue colour) | Reminder |
| (Red colour) | Schedule Recording |

**The contents below are only applicable when country selected is the UK.**

| Remote Control Buttons | Function |
|---|---|
| RECORD | Select Schedule Recording/Schedule Recording Series/highlighted programmes in turn. |

| Icon | Function |
|---|---|
| REC | Recording |
| (Red colour) | Record Single Episode |
| | Record Single Episode Conflict |
| | Record Series |
| | Record Series Conflict |
| (Blue colour) | Reminder |

## Button Function in Date Change Mode

| Remote Control Buttons | Function |
|---|---|
| GREEN | Switch off Date setting mode |
| ◉ | Change to the selected date |
| ◀ or ▶ | Select a date |
| ▼ | Switch off Date setting mode |
| GUIDE/EXIT | Switch off EPG |

## Button Function in Extended Description Box

| Remote Control Buttons | Function |
|---|---|
| ▲ or ▼ | Text Up/Down |
| INFO ⓘ | Detail information on or off. |
| GUIDE/EXIT | Switch off EPG |
| YELLOW | Enter Manual Record setting mode. |
| BLUE | Enter schedule list mode. |

**The contents below are only applicable when country selected is the UK.**
* Recommended : Recommended programmes which are related to selected programmes

| Remote Control Buttons | Function |
|---|---|
| ◉ | With a recommended programme in place, the display shows a pop-up of record setting which helps you set up or delete a Recommended Timer Record Series/Record Single Episode. |
| ▲ or ▼ | Recommended programme Up/Down. |

# EPG (ELECTRONIC PROGRAMME GUIDE) (IN DIGITAL MODE)

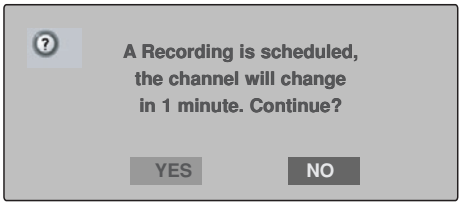
## Record Popup

* You can set up and activate the Record Series only when the country is set to the UK.
* You cannot activate a reminder during power off mode.

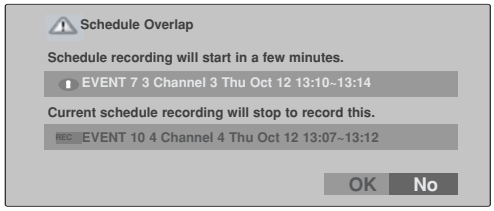
| Remote Control Buttons | Function |
|---|---|
| EXIT/BACK | Delete the pop-up. |
| ▲ or ▼ | Move the highlighted field. |
| ◉ | Follow the order of functions of the selected button. |

| Popup Menu | Function |
|---|---|
| Record series | Set up Record Series operation for selected programme. |
| Record programme | Set up Record Programme operation for selected programme. |
| Watch this pro. | Move to selected channel. |
| Set reminder | When the selected programme is not broadcasted, set up Schedule Recording operation. |
| Delete this | Delete Recording or Reminder mode. |
| Delete series | Delete series Recording mode |
| Cancel | Delete the pop-up. |

When the current channel being viewed is different from the scheduled recording channel, a message as shown below will appear on the screen 1 minute before the scheduled recording.



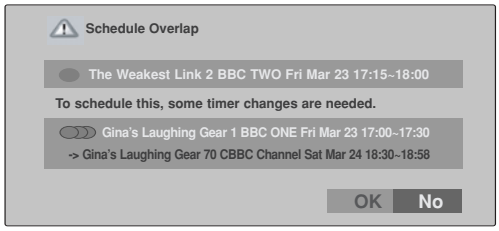

When the next timer recording is scheduled to start before the end of a programme being recorder a message as shown below will appear on the screen one minute before the scheduled start time of the next recording (UK Only)




## Conflict pop-up

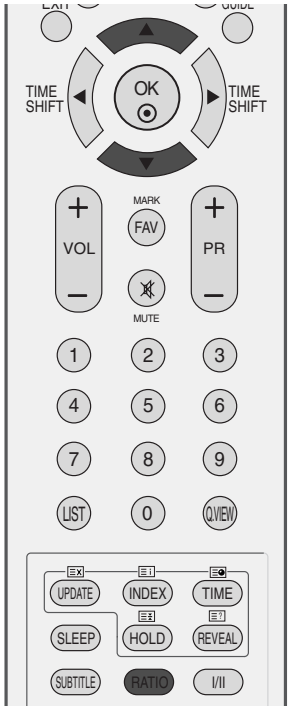
*** The contents below are only applicable when country selected is the UK.**

| Remote Control Buttons | Function |
|---|---|
| EXIT | Delete the pop-up. |
| ◄ or ► | Move the highlighted field. |
| ▲ or ▼ | List of conflicts. |
| ◉ | When you press the OK button it is possible to delete the conflicts or to switch the mode to rerun and set up the Record operation. When you press the NO button, you can delete the Recording pop-up. |



# PICTURE CONTROL

## PICTURE SIZE (ASPECT RATIO) CONTROL




You can watch the screen in various picture formats; **16:9**, **Original**, **4:3**, **14:9** and **Zoom1/2**.

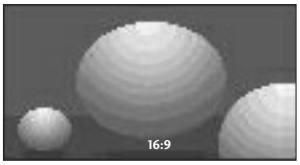
If a fixed image is displayed on the screen for a long time, that fixed image may become imprinted on the screen and remain visible.

You can adjust the enlarge proportion using ▲ or ▼ button.

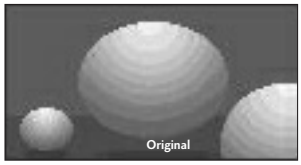
This function works in the following signal.

1 Press the **RATIO** button repeatedly to select the desired picture format.
You can also adjust **Aspect Ratio** in the **SCREEN** menu.

• **16:9**
The following selection will allow you to adjust the picture horizontally, in linear proportion, to fill the entire screen(useful for viewing 4:3 formatted DVDs).

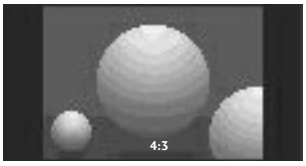



• **Original**
When your TV receives a wide screen signal it will automatically change to the picture format broadcast.



• **4:3**

The following selection will allow you to view a picture with an original 4:3 aspect ration, grey bars will appear on both the left and right of the screen.

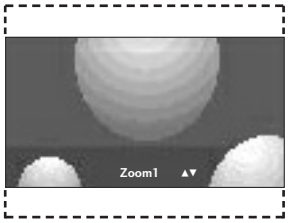



• **14:9**

You can view a picture format of 14:9 or a general TV programme in the 14:9 mode. The 14:9 screen is viewed in the same way as in 4:3, but is magnified to the left and right.

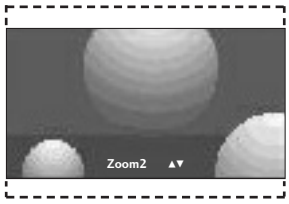
• **Zoom1**

The following selection will allow you to view the picture without any alteration, while filling the entire screen. However, the top and bottom of the picture will be cropped.




• **Zoom2**

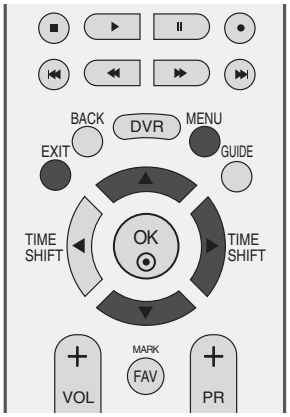
Choose Zoom 2 when you wish the picture to be altered, both horizontally extended and vertically cropped. The picture adopting a compromise between alteration and screen coverage.




**NOTE**

- ▶ You can only select **16:9** (Wide), **4:3**, Zoom 1/2 in Component, HDMI mode.
- ▶ You can only select **16:9** (Wide), **4:3**, in RGB mode only.
- ▶ You can only select **16:9** (Wide), **4:3**, **14:9**, Zoom 1/2 in a delayed mode and during the playback of recordings of TV, AV1, AV2 and AV3 input.
- ▶ Aspect ratio control of the delayed mode and the playback is managed separately with the normal input mode.

# PRESET PICTURE SETTINGS




## Picture Mode-Preset

**Vivid** Select this option to display a sharp image.

**Standard** The most general and natural screen display status.

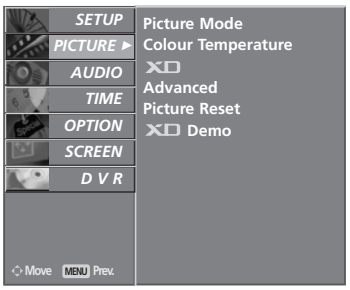
**Cinema** Select this option to display a mild image.

**User 1/2** Select this option to use a user defined setting.

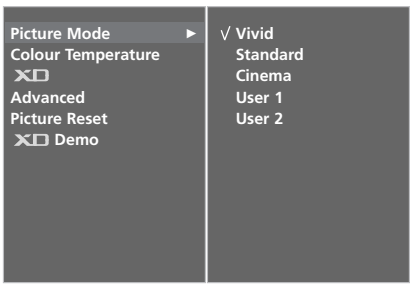
1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Picture Mode**.
3. Press the ▶ button and then ▲ or ▼ button to select **Vivid**, **Standard**, **Cinema**, **User 1**, or **User 2**.
4. Press the **EXIT** button to return to normal TV viewing.

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

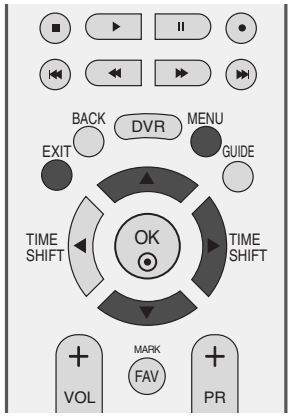
**Vivid**, **Standard** and **Cinema** are programmed for optimum picture reproduction at the factory and cannot be changed.




1




2 3



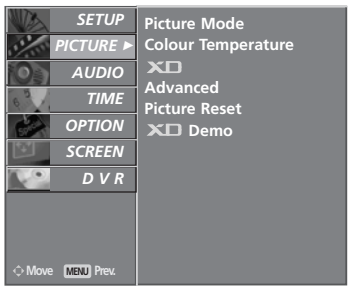

## Auto Colour Tone Control (Warm/Medium/Cool)

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

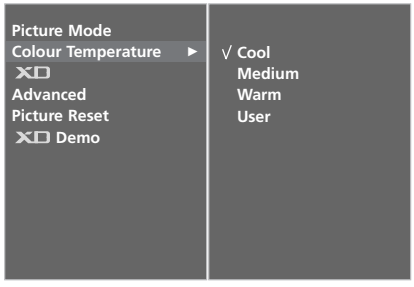
**Choose one of three automatic colour adjustments. Set to warm to enhance hotter colours such as red, or set to cool to see less intense colours with more blue.**

This menu is activated after selecting **User1** or **User2** in the **Picture Mode**.

1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.
2. Press the ► button and then ▲ or ▼ button to select **Colour Temperature**.
3. Press the ► button and then ▲ or ▼ button to select either **Cool**, **Medium**, **Warm**, or **User**.
4. Press the **EXIT** button to return to normal TV viewing.




1

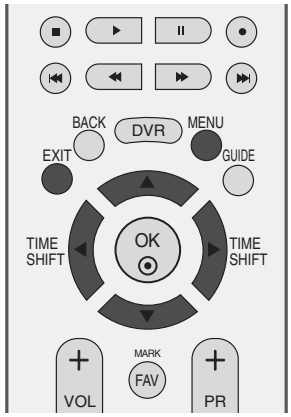



2 3

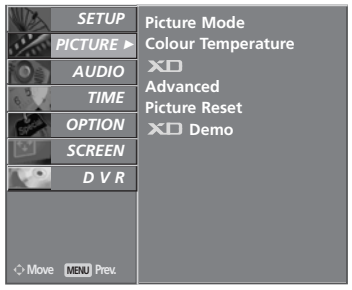
# MANUAL PICTURE ADJUSTMENT

## Picture Mode-User option

| | |
|---|---|
| **Contrast** | Adjusts the difference between light and dark levels in the picture. |
| **Brightness** | Increases or decreases the amount of white in the picture. |
| **Colour** | Adjusts intensity of all colours. |
| **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. |



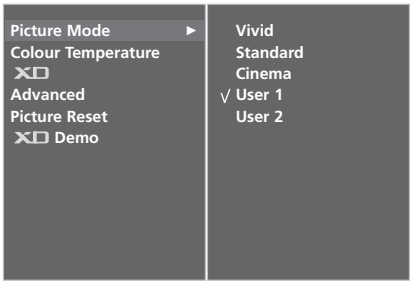

1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.




1

2. Press the ▶ button and then ▲ or ▼ button to select **Picture Mode**.

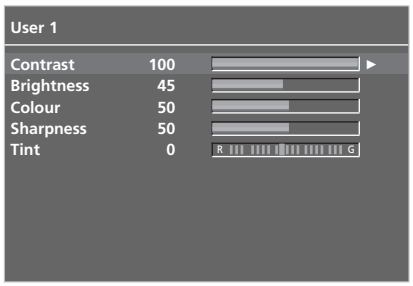
3. Press the ▶ button and then ▲ or ▼ button to select **User 1** or **User 2**.




2 3

4. Press the ▶ button and then ▲ or ▼ button to select the desired picture option (**Contrast**, **Brightness**, **Colour**, **Sharpness** and **Tint**).

5. Press the ◀ or ▶ button to make appropriate adjustments.

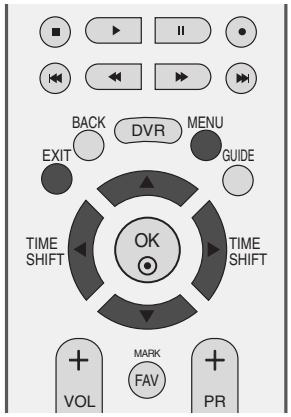



4 5

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

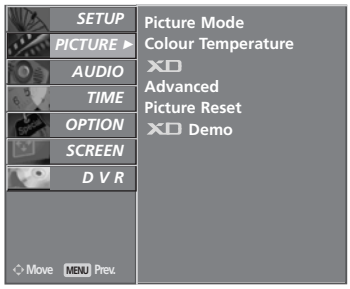
**NOTE**

▶ You cannot adjust colour, sharpness and tint in the RGB-PC mode.



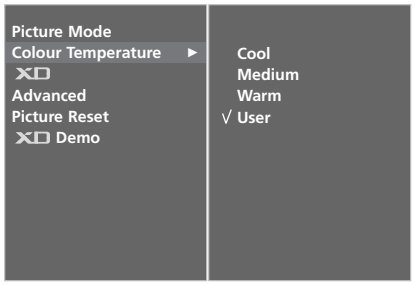

## Colour Tone - User option

**To adjust red, green, blue to any colour temperature you prefer.**



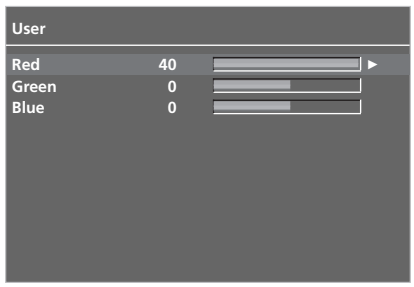

1

1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Colour Temperature**.
3. Press the ▶ button and then ▲ or ▼ button to select **User**.



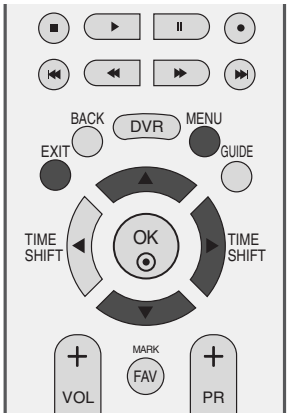

2 3

4. Press the ▶ button and then ▲ 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.




4 5

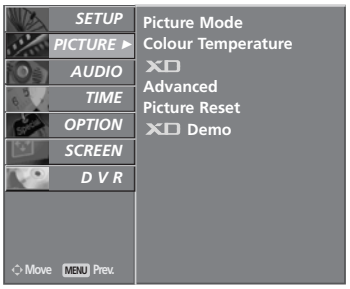
# XD - PICTURE IMPROVEMENT TECHNOLOGY




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

**It is not possible to use this function in RGB-PC mode.**

1. Press the MENU button and then ▲ or ▼ button to select the **PICTURE** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **XD**.
3. Press the ▶ button and then ▲ or ▼ button to select **Auto** or **Manual**.
4. Press the **EXIT** button to return to normal TV viewing.

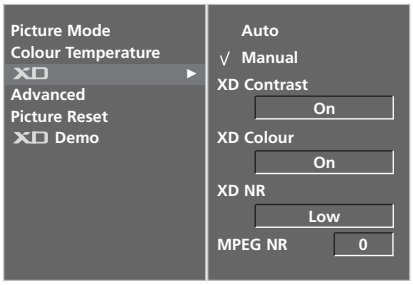



1

## * Manual Selection

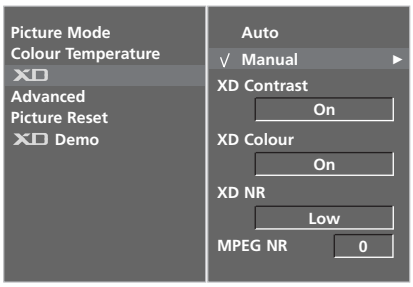
This menu is activated after selecting the **User1** or **User2** of **Picture Mode**.

1. Press the ▶ button and then ▲ or ▼ button to select **XD Contrast**, **XD Colour**, **XD NR** or **MPEG NR**.
2. Press the ▶ button and then ▲ or ▼ button to select **On** or **Off**.
3. Press the **EXIT** button to return to normal TV viewing.



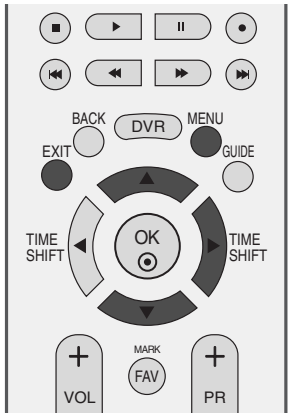

2

- ■ **XD Contrast :** Optimises the contrast automatically according to the brightness of the reflection.
- ■ **XD Colour :** Adjusts the colour of the reflection automatically to reproduce as close as possible natural colours.
- ■ **XD NR** : Removes interference up to the point where it does not damage the original picture.
- ■ **MPEG NR** : Reduces interference which may appear on the screen while watching TV.




3

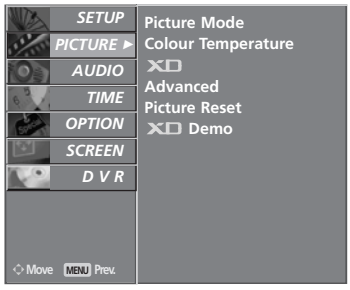
## XD DEMO



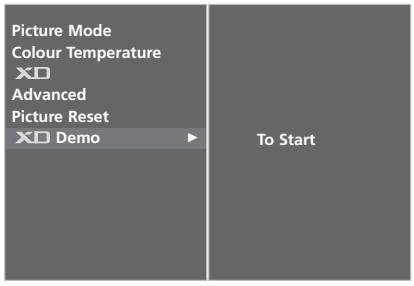

**Use it to see the difference between XD Demo on and XD Demo off.**

**It is not possible to use this function in RGB[PC],HDMI[PC] mode.**

1. Press the MENU button and then ▲ or ▼ button to select the **PICTURE** menu.
2. Press the **MENU** button and then ▲ or ▼ button to select **XD Demo.**
3. Press the ▶ button to begin **XD Demo**.
4. To stop **XD Demo**, press the **MENU** or **EXIT** button.



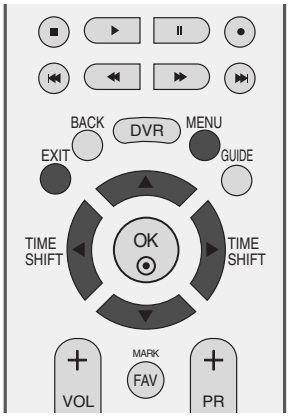

1




2 3

• **XD Demo**

# ADVANCED - CINEMA

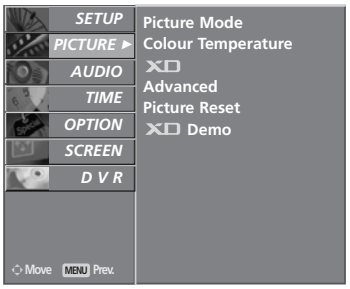



**To set the TV up for the best picture quality for viewing films.**

**This feature operates only in TV, AV, S-Video and Component 480i/576i mode.**

**It is not possible to use this function while playing a recorded programme.**

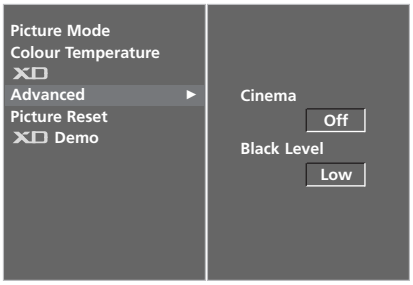
1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.




1

2. Press the ▶ button and then ▲ or ▼ button to select **Advanced**.

3. Press the ▶ button and then ▲ or ▼ button to select **Cinema**.



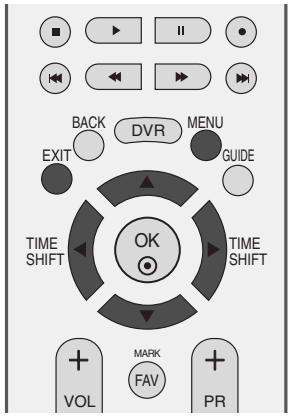

2

4. Press the ▶ button and then ◀ or ▶ button to select **On** or **Off.**

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

3

## ADVANCED - BLACK(DARKNESS) LEVEL

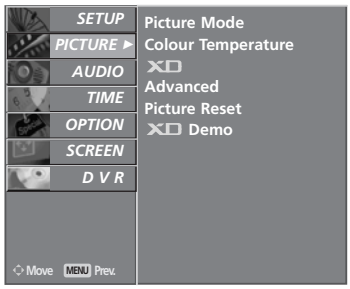



When you view a film this function adjusts the TV to best picture quality. Adjusting the contrast and the brightness of the screen using the black level of the screen.

This function works in the following mode: AV (NTSC-M), S-Video (NTSC-M) or HDMI.

It is not possible to use this function while playing a recorded programme

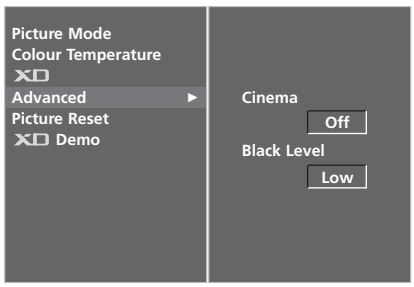
1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.




1

2. Press the ▶ button and then ▲ or ▼ button to select **Advanced**.

3. Press the ▶ button and then ▲ or ▼ button to select **Black Level**.

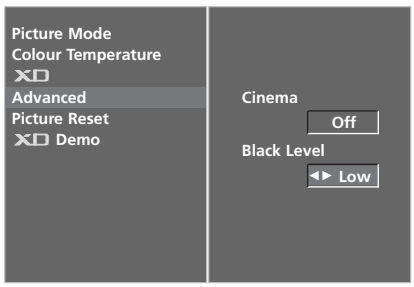



2

4. Press the ▶ button and then ◀ or ▶ button to select **Low** or **High**.

   - **Low :** The black level of the screen gets darker.
   - **High :** The black level of the screen gets brighter.

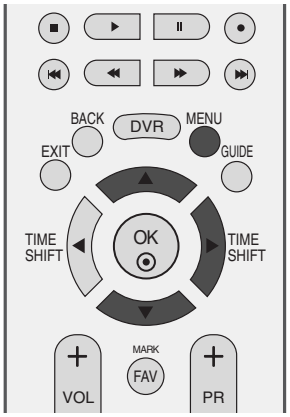
5. Press the **EXIT** button to return to normal TV viewing.




3 4

# PICTURE RESET

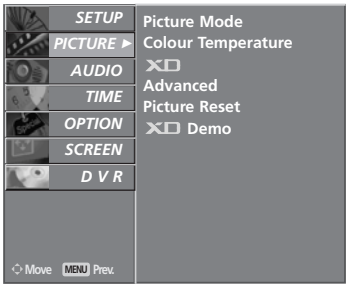
**Returns to the default factory setting for Picture Mode, Colour, Temperature, XD and Advanced.**




1. Press the **MENU** button and then ▲ or ▼ button to select the **PICTURE** menu.

2. Press the ▶ button and then ▲ or ▼ button to select **Picture Reset**.

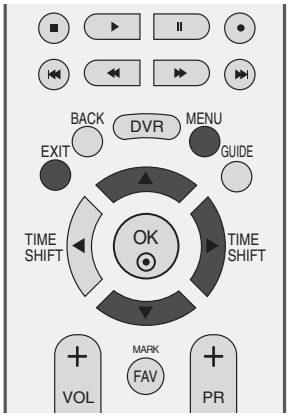
3. Press the ▶ button to initialise the adjusted value.




1

2 3

# IMAGE STICKING MINIMIZATION (ISM) METHOD




A frozen or 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 screen for prolonged periods.

### White wash

White wash removes permanent images from the screen.

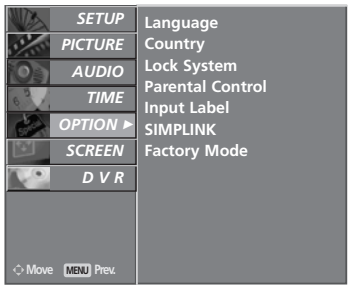
Note: An excessive permanent image may be impossible to clear entirely with White Wash.

### Orbiter

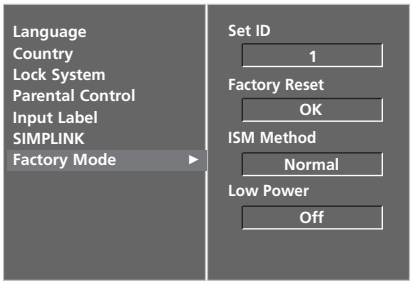
Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.

### Inversion

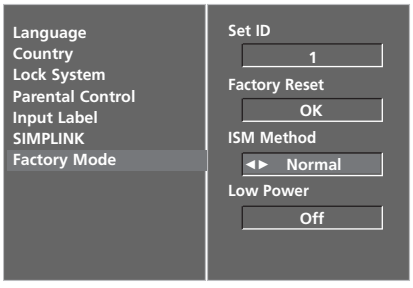
This function inverts the panel colour of the screen. The panel colour is automatically inverted every 30 minutes.




1




2

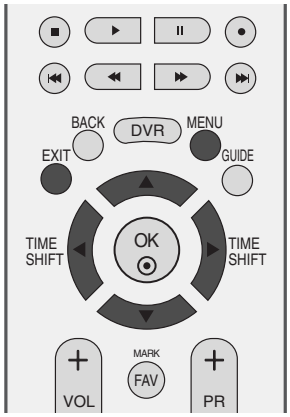



3 4

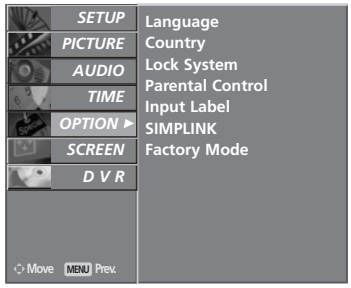
1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Factory Mode**.
3. Press the ▶ button and then ▲ or ▼ button to select **ISM Method**.
4. Press the ▶ button and then ▲ or ▼ button to select either **Normal**, **Orbiter**, **White wash** or **Inversion**. If you do not need this function, set **Normal**.
5. Press the **EXIT** button to return to normal TV viewing.

# LOW-POWER PICTURE MODE

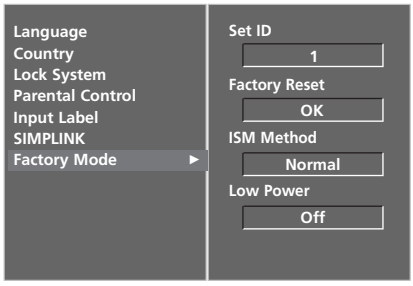
This function allows you to reduce the power consumption of the TV.




1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Factory Mode**.
3. Press the ▶ button and then ▲ or ▼ button to select **Low Power**.
4. Press the ▶ button and then ◀ or ▶ button to select **Off** or **On**.
5. Press the **EXIT** button to return to normal TV viewing.




1

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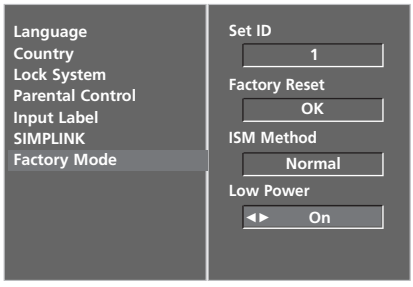
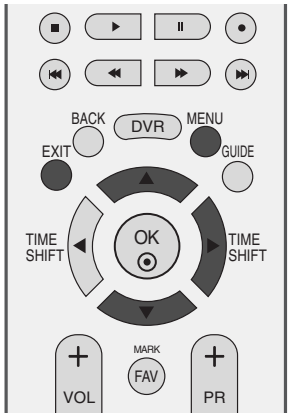



3 4

**NOTE**

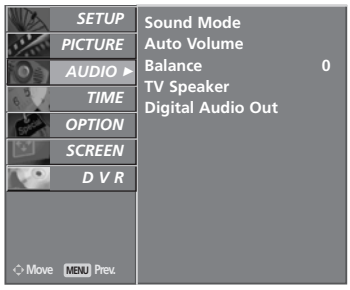
- The default factory setting complies with the **Energy star** requirements and the **Low Power** is set to **On**, making it suitable to be viewed at home.
  You can increase the brightness of your screen by setting the **Low Power** to **Off** or by setting the **Picture Mode**.

## AUTO VOLUME LEVELER

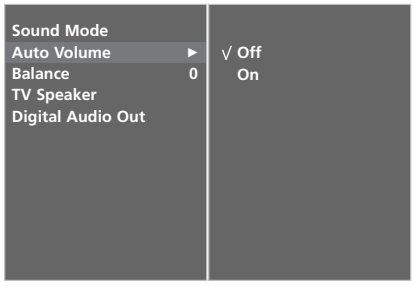



AVL automatically remains on the same level of volume if you change programmes.

1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.
2. Press the ► button and then ▲ or ▼ button to select **Auto Volume**.
3. Press the ► button and then ▲ or ▼ button to select **Off** or **On**.
4. Press the **EXIT** button to return to normal TV viewing.

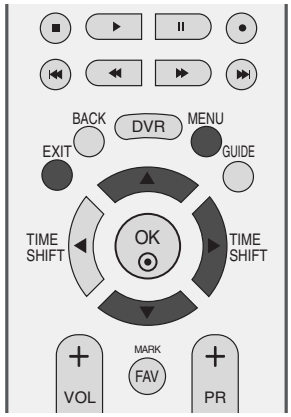



1




2 3

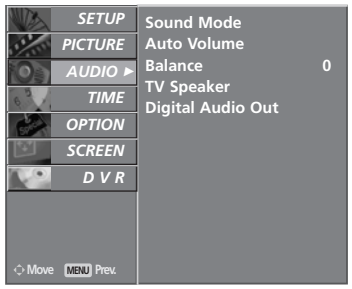
# PRESET SOUND SETTINGS-SOUND MODE




You can select your preferred sound setting; Surround MAX, Standard, Music, Cinema or Sport and you can also adjust the frequency of the equalizer.

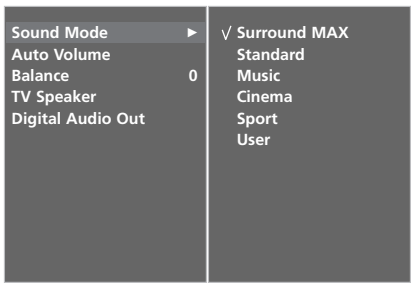
Sound Mode lets you enjoy the best sound without any Special adjustment as the TV sets the appropriate sound options based on the programme content.

**Surround MAX, Standard, Music, Cinema** and **Sport** are preset for optimum sound quality at the factory and are not adjustable.




1

**Surround MAX** Select this option for the most realistic sound.
**Standard** Commanding and natural audio.
**Music** Select this option to enjoy the original sound when listening to music.
**Cinema** Select this option to enjoy sublime sound.
**Sport** Select this option to watch sports broadcasting.
**User** Select this option for user-defined audio settings.




2 3

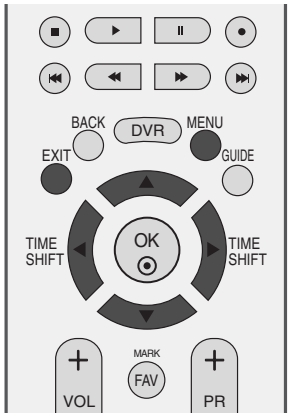
1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.

2. Press the ▶ button and then ▲ or ▼ button to select **Sound Mode**.

3. Press the ▶ button and then ▲ or ▼ button to select **Surround MAX**, **Standard**, **Music**, **Cinema**, **Sport** or **User**.

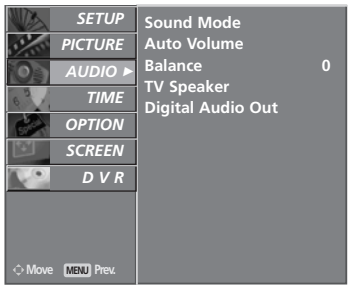
4. Press the **EXIT** button to return to normal TV viewing.

## SOUND SETTING ADJUSTMENT -USER MODE




**Adjusting the audio equalizer.**

1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.

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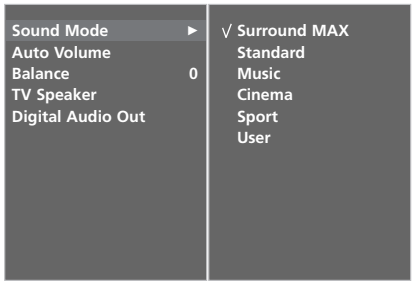
2. Press the ▶ button and then ▲ or ▼ button to select **Sound Mode**.

3. Press the ▶ button and then ▲ or ▼ button to select **User**.




2 3

4. Press the ▶ button.

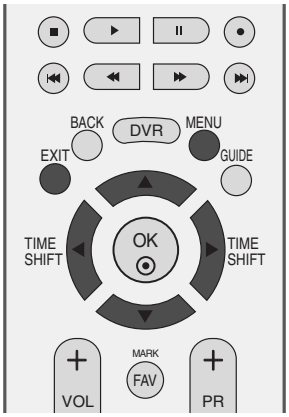
5. Select a frequency band by pressing the ◀ or ▶ button. Set the desired sound level with the ▲ or ▼ button.

4 5

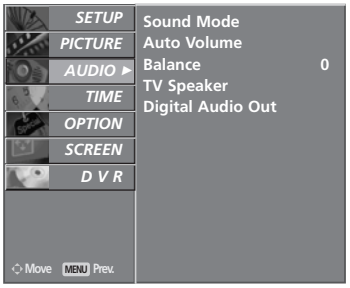
6. Press the **EXIT** button to return to normal TV viewing.

# BALANCE

You can adjust the sound balance of the speakers to preferred levels.




1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.
2. Press the ► button and then ▲ or ▼ button to select **Balance**.
3. Press the ► button and then ◄ or ► button to make desired adjustment.
4. Press the **EXIT** button to return to normal TV viewing.

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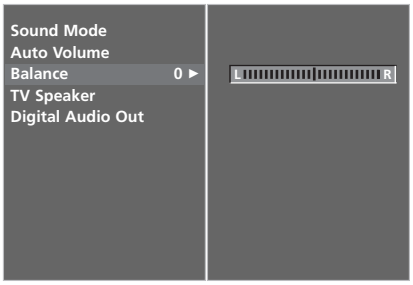
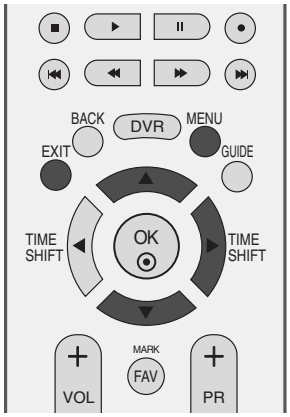



2 3

# TV SPEAKERS ON/ OFF SETUP

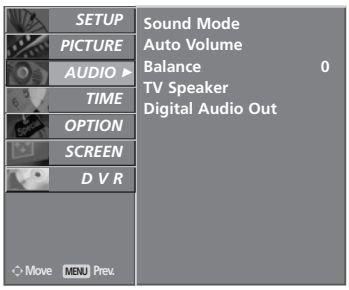



You can adjust the internal speaker status.

In **AV1, AV2, AV3, COMPONENT, RGB** and **HDMI** with **HDMI** to **DVI** cable, the TV speaker can be operational even when there is no video signal.

If you wish to use an external hi-fi system, turn off the TV internal speakers.

1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.
2. Press the ► button and then ▲ or ▼ button to select **TV Speaker**.
3. Press the ► button and then ▲ or ▼ button to select **Off** or **On**.
4. Press the **EXIT** button to return to normal TV viewing.

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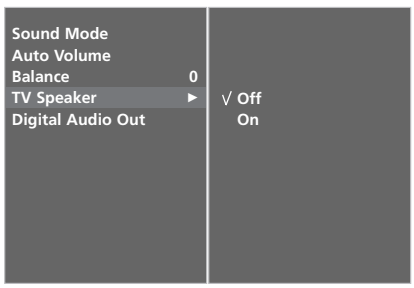
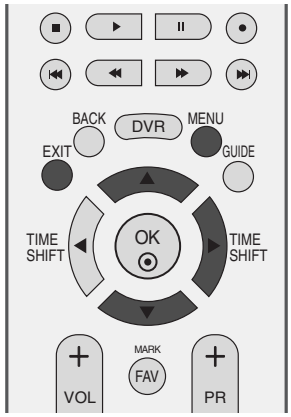



2 3

# SELECTING DIGITAL AUDIO OUT

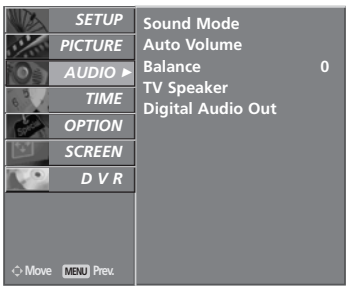



This function allows you to select your preferred Digital Audio Output.
The TV can only output Dolby Digital if a channel is broadcast with Dolby Digital Audio.
When Dolby digital is available, selecting Dolby Digital in the Digital Audio Out menu will set SPDIF output to Dolby Digital.
If Dolby Digital is selected in the digital audio out menu when dolby digital is not available, SPDIF output will be PCM.
Even if both Dolby Digital and Audio language have been set in a channel which broadcast Dolby Digital Audio, only Dolby Digital will be played.
This function is not displayed in the Analogue mode.

DOLBY DIGITAL PLUS

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

1. Press the **MENU** button and then ▲ or ▼ button to select the **AUDIO** menu.
2. Press the ► button and then ▲ or ▼ button to select **Digital Audio Out**.
3. Press the ► button and then ▲ or ▼ button to select **Dolby Digital** or **PCM**.
4. Press the **EXIT** button to return to normal TV viewing.

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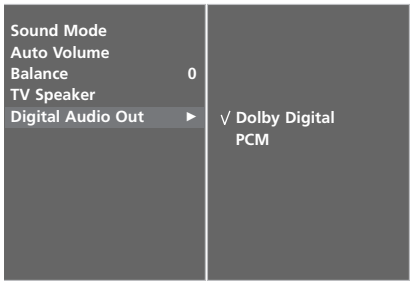



2 3

# I/II

## Stereo/Dual Reception (In Analogue Mode Only)

When a programme is selected, the sound information for the station appears after the programme number and station name disappear.

| Broadcast | On Screen Display |
|---|---|
| Mono | MONO |
| Stereo | STEREO |
| Dual | DUAL I |

■ **Mono sound selection**

If the stereo signal is weak in stereo reception, you can switch to mono by pressing the **I/II** button twice. In mono reception, the clarity of sound is improved. To switch back to stereo, press the I/I I button twice.

■ **Language selection for dual language broadcast**

If a programme can be received in two languages (dual language), you can switch to DUAL I, DUAL II or DUAL I+II by pressing the **I/II** button repeatedly.

| | |
|---|---|
| DUAL I | Sends the primary broadcast language to the loudspeakers. |
| DUAL II | Sends the secondary broadcast language to the loudspeakers. |
| DUAL I+II | Sends a separate language to each loudspeaker. |

## NICAM Reception (In Analogue Mode Only)

**If the TV is equipped with a receiver for NICAM reception, high quality NICAM (Near Instantaneous Companding Audio Multiplex) digital sound can be received.**

**Sound output can be selected according to the type of broadcast received by pressing the I/II button repeatedly.**

1. When **NICAM mono** is received, you can select **NICAM MONO** or **FM MONO**.

2. When **NICAM** stereo is received, you can select **NICAM STEREO** or **FM MONO**.
   If the stereo signal is weak, switch to **FM mono**.

3. When NICAM dual is received, you can select **NICAM DUAL I**, **NICAM DUAL II** or **NICAM DUAL I+II** or **MONO**.

## Speaker Sound Output Selection

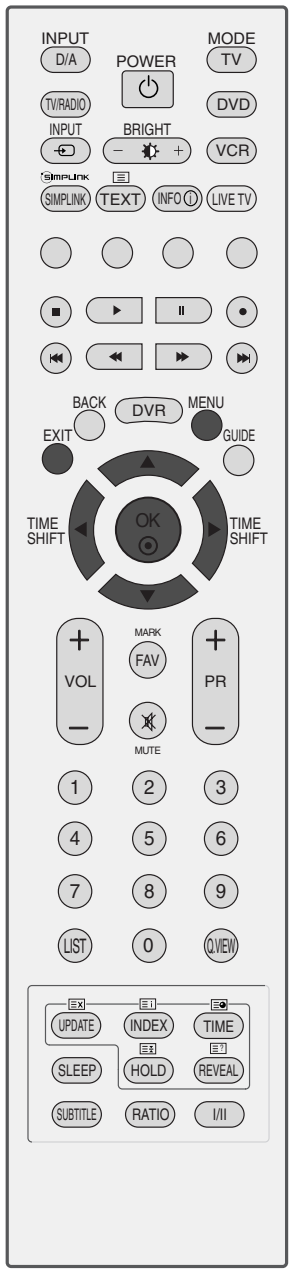
**In AV, S-Video, Component, RGB and HDMI mode, you can select output sound for the left and right loudspeakers.**

**Repeatedly press the I/II button to select the sound output.**

**L+R: Audio signal from audio L input is sent to the left loud speaker and audio signal from audio R input is sent to the right loud speaker.**
**L+L: Audio signal from audio L input is sent to left and right loud speakers.**
**R+R: Audio signal from audio R input is sent to left and right loud speakers.**

# ON-SCREEN MENU LANGUAGE / COUNTRY SELECTION

The installation guide menu appears on the TV screen when it is switched on for the first time.




1. Press the ▲ or ▼ or ◄ or ► button and then, **OK** button to select your desired language.
2. Press the ▲ or ▼ button and then, **OK** button to select your country.

*** If you want to change Language/ Country selection**

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 **Language**. The menus can be shown on the screen in the selected language.
   Or, Press the ► button and then use ▲ or ▼ button to select **Country**.
3. Press the ► button and then use ◄ or ► button to select your desired language or country.
4. Press the **OK** button.
5. Press the **EXIT** button to return to normal TV viewing.

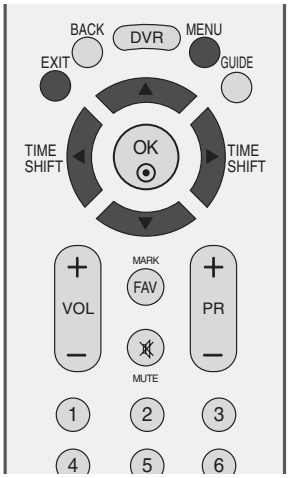
**NOTE**

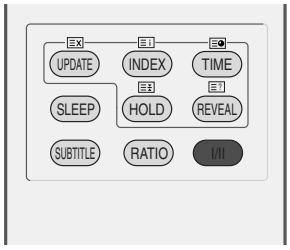
- ► If you do not finish the set-up **Installation Guide** by pressing **EXIT** or if you time out on the OSD (On Screen Display) the installation menu will continuously appear until the set up is completed whenever the TV is switched on
- ► If you select the wrong local country, teletext may not appear correctly on the screen and some problems may occur during teletext operation.
- ► The CI (Common Interface) function may not be applied based on country broadcasting circumstances.
- ► DTV mode control buttons may not function based on country broadcasting circumstances.
- ► In country that Digital broadcasting regulation isn't fixed, some DTV function may not work depending on digital broadcasting circumstances.
- ► The Country Setting "UK" should only be activated in UK.

# LANGUAGE SELECTION (IN DIGITAL MODE ONLY)

The **Audio** function allows selection of a preferred language. If audio data in a selected language is not broadcast, the default language audio will be played.

Use the **Subtitle** function when two or more subtitle languages are broadcast. If subtitle data in a selected language is not broadcast, the default language subtitle will be displayed.




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 **Language**.
3. Press the ▶ button and then use ▲ or ▼ button to select **Audio**, **Subtitle** or **Subtitle Hard of hearing**.
4. Press the ▶ button and then use ◀ or ▶ button to select your desired language.
5. Press the **EXIT** button to return to normal TV viewing.

## NOTE

< **Audio Language Selection** >

- ▶ When two or more audio languages are broadcast, you can select the audio language with the I/II button on the remote control.
- ▶ Press the ▲ or ▼ button to select an audio language.
- ▶ Press the ◀ or ▶ button to select **L+R**, **L+L** or **R+R**.

Audio Language OSD Information

| Display | Status |
|---|---|
| N.A | Not Available |
| MPEG | MPEG Audio |
| DD | Dolby Digital Audio |
| | Audio for “Visual Impaired” |
| ABC | Audio for “Hearing Impaired” |

< **Subtitle Language Selection** >

- ▶ When two or more subtitle languages are broadcast, you can select the subtitle language with the **SUBTITLE** button on the remote control.
- ▶ Press the ▲ or ▼ button to select a subtitle language.

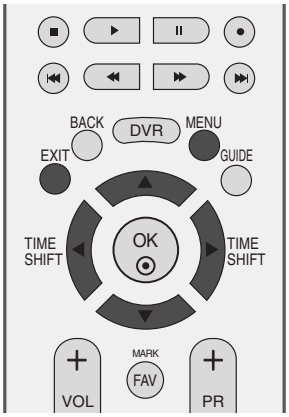
Subtitle Language OSD Information

| Display | Status |
|---|---|
| N.A | Not Available |
| TEXT | Teletext Subtitle |
| ABC | Subtitle for “Hard of Hearing” |

- The audio/subtitles can be displayed in a simpler form with 1 to 3 characters broadcast by the service provider.
- When you select supplementary Audio (Audio for “Visual/Hearing Impaired”) the TV may output a part of the Main audio.

# TIME SETTING

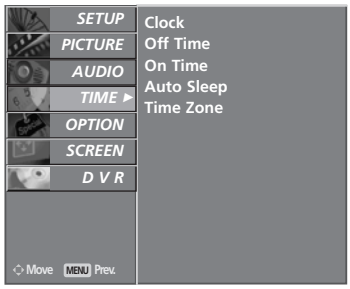
## CLOCK SETUP




The clock is set automatically when receiving a digital signal. (You can set the clock manually only if the TV has no DTV signal.) You must set the time correctly before using on/off timer function.

1. Press the **MENU** button and then ▲ or ▼ button to select the **TIME** menu.
2. Press the ► button and then ▲ or ▼ button to select **Clock**.
3. Press the ► button and then ◄ or ► button to select either the year, date, or time option.

   Once selected, use the ▲ or ▼ button to set the year, date, and time options.
4. Press the **EXIT** button to return to normal TV viewing.

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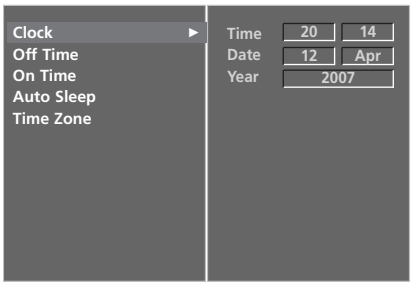
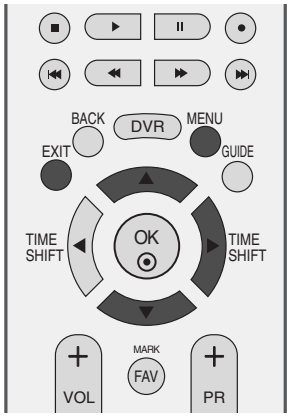
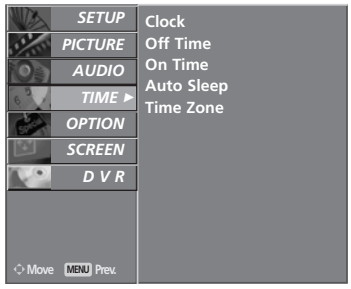



2 3

# AUTO ON/OFF TIMER SETTING




The Off time function automatically switches the TV to standby at a preset time.
Two hours after the TV 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.
The Off time function overrides the On timer function if both are set to the same time.
The TV must be in standby mode for the On time function to work.

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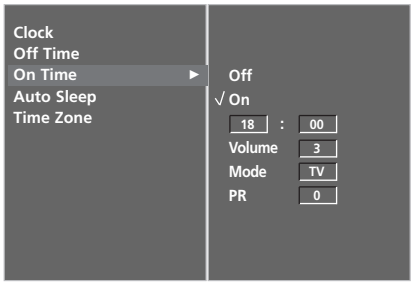
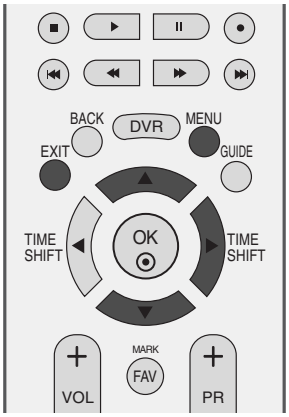



2 3 4 5 6

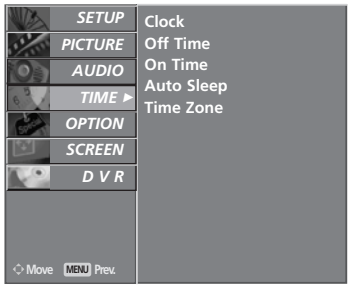
1. Press the **MENU** button and then ▲ or ▼ button to select the **TIME** menu.
2. Press the ► button and then ▲ or ▼ button to select **Off Time/On Time**.
3. Press the ► button and then ▲ or ▼ button to select **On**.
   - To cancel **On/Off Time** function, select **Off**.
4. Press the ► button and then ▲ or ▼ button to set the hour.
5. Press the ► button and then ▲ or ▼ button to set the minutes.
6. **For On Time function only**
   - **Programme:** Press the ► button and then ▲ or ▼ button to select **TV**, **DTV** or **Radio** in the **Mode** menu. And then, Press the ► button and then ▲ or ▼ button to select the programme.
   - **Volume:** Press the ► button and then ▲ or ▼ button to adjust volume level at switch-on.
7. Press the **EXIT** button to return to normal TV viewing.




## AUTO SHUT-OFF SETTING

If the TV is switched on and there is no input signal, it will switch off automatically after 10 minutes.

1. Press the **MENU** button and then ▲ or ▼ button to select the **TIME** menu.
2. Press the ► button and then ▲ or ▼ button to select **Auto Sleep**.
3. Press the ► button and then ▲ or ▼ button to select **Off** or **On**.
4. Press the **EXIT** button to return to normal TV viewing.

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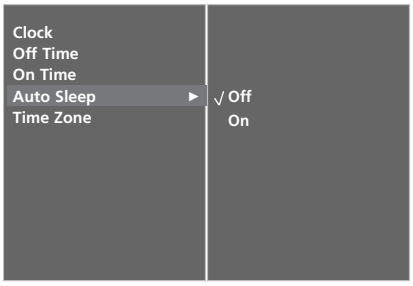
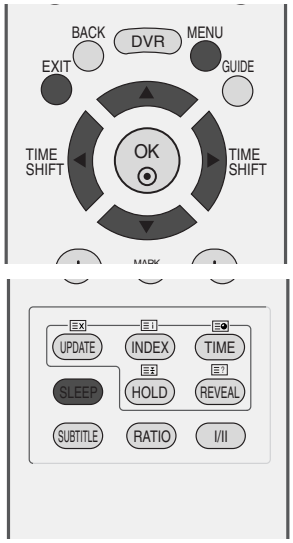


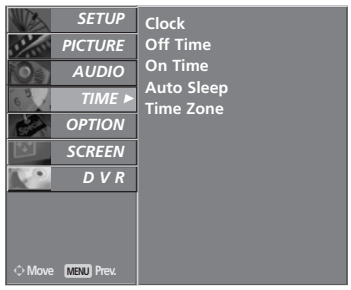

2 3

# TIME ZONE SETUP

When you select a Time Zone city, the TV time is set by the time offset information based on Time Zone and GMT (Greenwich Mean Time) which is received with the broadcast signal and the time is set automatically by a digital signal.




1. Press the **MENU** button and then ▲ or ▼ button to select the **TIME** menu.
2. Press the ▶ button and then ▲ or ▼ button to select **Time Zone**.
3. Press the ▶ button and then ◀ or ▶ button to select your viewing area time zone.
4. Press the **EXIT** button to return to normal TV viewing.




1

# SLEEP TIMER SETTING

You do not have to remember to switch the TV off before you go to sleep.
The sleep timer automatically switches the TV to standby after the preset time has elapsed.

2 3

a. Press the **SLEEP** button repeatedly to select the number of minutes.

   The display ' - - - Min ' will appear on the screen, followed by **10**, **20**, **30**, **60**, **90**, **120**, **180** and **240**.

b. When the number of minutes required is displayed on the screen, the timer begins to count down from the number of minutes selected.

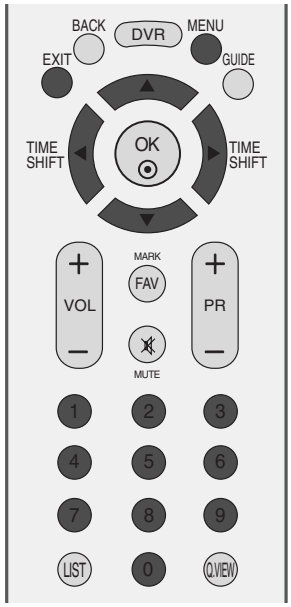
c. To view the remaining sleep time, press the **SLEEP** button once.

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

e. When you switch the TV off, the preset sleep time is cancelled.

# PARENTAL CONTROL / RATINGS

## SET PASSWORD & LOCK SYSTEM




Enter the password, press '0', '0', '0', '0' on the remote control handset.

1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.

2. Press the ▶ button and then ▲ or ▼ button to select **Lock System**.

3. Press the ▶ button and then ◀ or ▶ button to select **On**.

   **To set the password**

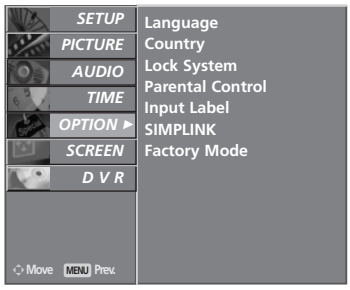
   Press the ▶ button and then use the NUMBER buttons to input a 4-digit password.

   Be sure to remember this number!

   Re-enter new password for confirm.

   If you forget your password, press '7', '7', '7', '7' on the remote control handset.

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

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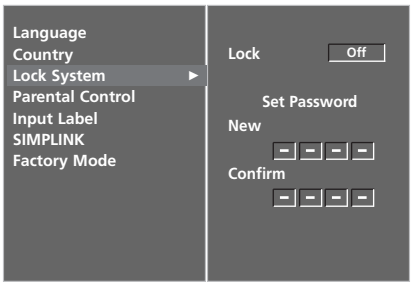



2 3

# PARENTAL CONTROL

This function operates according to information from the broadcasting station.
Therefore if the signal has incorrect information, this function does not operate.

This allows you to set up blocking schemes to block specific channels and ratings.

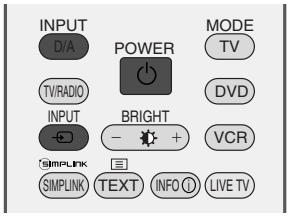
A password is required to gain access to this menu.

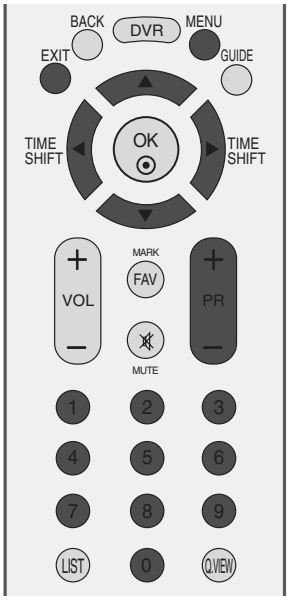
This TV is programmed to remember which option it was last set to even if you switch the TV off.

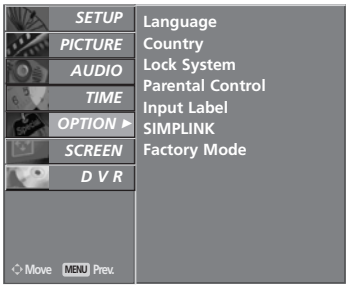
Recording and TimeShift Mode can be accessed even when locked or rated.

When a programme is locked or rated with delayed state, the message “locked program” is displayed without displaying the password window.

When recording a locked or rated programme, the recorded programme will be locked unless you enter the password before the recording is finished. If you wish to play the locked programme, you should enter the password.



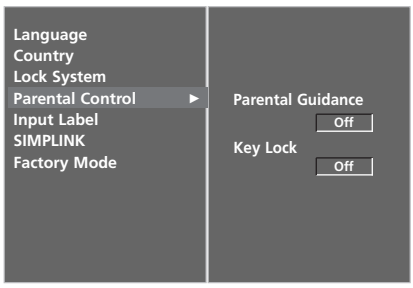




1

1. Press the **MENU** button and then ▲ or ▼ button to select the **OPTION** menu.
2. Press the ► button and then ▲ or ▼ button to select **Parental Control**.
   Then, press the ► button to enter the password as requested.
   The TV is set up with the initial password “0-0-0-0”.
3. Press the ► button and then ◄ or ► button to select **Parental Guidance** or **Key Lock**.

   **Parental Guidance** (In Digital mode only)
   Prevents children from watching certain adult’s TV programmes, according to the ratings limit set.
   **Key Lock**
   The TV can be set so that the remote control is required to control it. This feature can be used to prevent unauthorised viewing.
4. Press the ▲ or ▼ button to make appropriate adjustments.
5. Press the **EXIT** button to return to normal TV viewing.




2 3 4

In **Key Lock** ‘**On**’, if the TV is turned off, press the ⏻ / I, **INPUT**, **PR** ▲ or ▼ button on the TV or **POWER**, **INPUT**, **D/A**, **PR** + or - or NUMBER buttons on the remote control.

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 TV.

# TELETEXT

**This feature is not available in all countries.**

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

**The teletext decoder of this TV can support the SIMPLE, TOP and FASTEXT systems. SIMPLE (standard teletext) consists of a number of pages which are selected by directly entering the corresponding page number. TOP and FASTEXT are more modern methods allowing quick and easy selection of teletext information.**

## SWITCH ON/OFF

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

## SIMPLE TEXT

### ■ Page selection

❶ Enter the desired page number as a three digit number with the NUMBER buttons. If during selection you press a wrong number, you must complete the three digit number and then re-enter the correct page number.
❷ The **PR+** or - button can be used to select the preceding or following page.

## TOP TEXT

The user guide displays four fields-red, green, yellow and blue at the bottom of the screen. The yellow field denotes the next group and the blue field indicates the next block.

### ■ Block / group / page selection

❶ With the blue button you can progress from block to block.
❷ Use the yellow button to proceed to the next group with automatic overflow to the next block.
❸ With the green button you can proceed to the next existing page with automatic overflow to the next group. Alternatively the **PR+** button can be used.
❹ The red button returns to the previous selection. Alternatively the PR- button can be used.

### ■ Direct page selection

As with SIMPLE teletext mode, you can select a page by entering it as a three digit number using the NUMBER buttons in TOP mode.

# FASTEXT

The teletext pages are colour coded along the bottom of the screen and are selected by pressing the corresponding coloured button.

### ■ Page selection

❶ Press the button to select the index page.
❷ You can select the pages which are colour coded along the bottom line with corresponding coloured buttons.
❸ AS with SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
❹ The **PR+** or - button can be used to select the preceding or following page.

# SPECIAL TELETEXT FUNCTIONS

### ■ REVEAL

Press this button to display concealed information, such as solutions to riddles or puzzles.
Press this button again to remove the information from the display.

### ■ UPDATE

Displays the TV picture on the screen while waiting for a new teletext page. The display will appear at the top left hand corner of the screen. When the updated page is available then display will change to the page number. Press this button again to view the updated teletext page.

### ■ TIME

When viewing a TV programme, press this button to display the time at the top right hand corner of the screen. Press this button again to remove the display. In the teletext mode, press this button to select a sub page number. The sub page number is displayed at the bottom of the screen. To hold or change the sub page, press the RED/GREEN, **PR+** or - or NUMBER buttons.
Press again to exit this function.

### ■ HOLD

Stops the automatic page change which will occur if a teletext page consists of 2 or more sub pages. The number of sub pages and the sub page displayed is, usually, shown on the screen below the time. When this button is pressed the stop symbol is displayed at the top left-hand corner of the screen and the automatic page change is inactive. To continue press this button again.

# DIGITAL TELETEXT

***This function works in UK only.**

The TV gives you access to digital teletext which is greatly improved in various aspects such as text, graphics etc.
This digital teletext can access special digital teletext services and specific services which broadcast digital teletext.
You should select off in the subtitle language menu to display teletext by pressing the SUBTITLE button.
If the digital teletext service or the digital teletext only service is on, then Trick Play is not supported.
The immediate recording feature is not supported in the digital teletext only service.
Digital teletext service is not supported in the delayed mode.

## TELETEXT WITHIN DIGITAL SERVICE

1. Press the numeric or **PR +** or **-** button to select a digital service which broadcasts digital teletext.
   To know which are digital teletext services, refer to the EPG service list.
2. Follow the indications on digital teletext and move onto the next step by pressing **TEXT**, **OK**, ▲ or ▼, ◄ or ►, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons etc.
3. To change digital teletext service, select a different service by the numeric or **PR +** or **-** button.

   If pressing the **MENU**, **GUIDE** or **INFO** ⓘbutton causes the teletext service disappear temporarily, press these buttons again to return to teletext.

## TELETEXT IN DIGITAL SERVICE

1. Press the numeric or **PR +** or **-** button to select a certain service which broadcasts digital teletext.
2. Press the **TEXT** or coloured button to switch on teletext.
3. Follow the indications on digital teletext and move onto the next step by pressing **OK**, ▲ or ▼, ◄ or ►, **RED**, **GREEN**, **YELLOW**, **BLUE** or **NUMBER** buttons and so on.
4. Press the **TEXT** or colour button to switch off digital teletext and return to TV viewing.

   Some services may allow you to access text services by pressing the **RED** button.

   If pressing the **MENU**, **GUIDE** or **INFO** ⓘbutton causes the teletext service disappear temporarily. Press these buttons again to return to the teletext.

# TROUBLESHOOTING

| The TV does not operate properly | |
|---|---|
| The remote control does not work | ■ Check to see if there is any object between the TV and the remote control causing an obstruction. Ensure you are pointing the remote control directly at the TV.<br>■ Ensure that the batteries are installed with correct polarity (+ to +, - to -).<br>■ Ensure that the correct remote operating mode is set: DVD, VCR etc.<br>■ Install new batteries. |
| Power is suddenly turned off | ■ Is the sleep timer set?<br>■ Check the power control settings. Has the Power supply been interrupted.<br>■ Is **Auto sleep** activated on this station. |

| The video function does not work. | |
|---|---|
| No picture & No sound | ■ Check whether the TV is switched on.<br>■ Try another channel. The problem may be with the broadcast.<br>■ Is the power cord inserted correctly into the mains?<br>■ Check your antenna direction and/or location.<br>■ Test the mains outlet by plugging another TV into the same outlet. |
| Picture appears slowly after switching on | ■ This is normal, the image is muted during the TV startup process. Please contact your service centre, if the picture has not appeared after five minutes. |
| No or poor colour or poor picture | ■ Adjust Colour in menu option.<br>■ Allow a sufficient distance between the TV and the VCR.<br>■ Try another channel. The problem may be with the broadcast.<br>■ Are the video cables installed properly?<br>■ 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 channel experiencing problems, tune to another station.<br>■ Station signal is weak, reposition the antenna to receive weaker stations.<br>■ Check for sources of possible interference. |
| Lines or streaks in pictures | ■ Check antenna (Change the position of the antenna). |
| No picture when connecting HDMI | ■ Check HDMI cable over version 1.2.<br>If the HDMI cables don't support HDMI version 1.2, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.2. |

| The audio function does not work. | |
|---|---|
| Picture OK & No sound | ■ Press the **VOL +** or **-** button.<br>■ Sound muted? Press **MUTE** button.<br>■ Try another channel. The problem may be with the broadcast.<br>■ Are the audio cables installed properly? |
| No output from one of the speakers | ■ Adjust **Balance** in menu option. |
| Unusual sound from inside the TV | ■ A change in ambient humidity or temperature may result in an unusual noise when the TV is switched on or off and does not indicate a fault with the TV. |
| No sound when connecting HDMI or USB | ■ Check HDMI cable over version 1.2.<br>■ Check USB cable over version 2.0.<br>*This feature is not available for all models. |

| The DVR function does not work. | |
|---|---|
| HDD Failure | ■ Format Hard Disk Drive.<br>Note that all the contents recorded on the HDD will be erased.<br>If this does not fix the problem, contact your nearest LG dealer. |
| Schedule Rec./Instant Rec. does not start. | ■ Check the Recording Space by pressing the DVR button.<br>If there is no remaining space for recording, delete any unnecessary programmes on the Recorded TV List.<br>■ Check the number of programmes on the Recorded TV List.<br>The Maximum number of recordings is 255 on the Recorded TV List. |

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

| There is a problem with PICTURE settings. | |
|---|---|
| When the user changes the picture settings, the TV automatically converts back to the initial settings after a certain period of time. | ■ It means that the TV is currently set to **In Store** mode.<br>To switch to **Home** mode you should do the followings:<br>From the TV Menu, choose **OPTION** -> **Factory Mode** -> **Factory Reset**(Use NUMBER buttons to input a 4-digit password. Wait for a few seconds for the TV to download again) -> OSD "**Installation Guide**" appears -> Choose **Language** -> Choose **Home** -> Select your **Country** and **Time Zone** -> Press **OK** button. Program search will begin automatically (You can stop the search by pressing the **OK** button). Now, you have completed switching to the **Home** mode. |

# MAINTENANCE

**Early malfunctions can be prevented. Careful and regular cleaning can prolong the life of your new TV.**
**Caution: Be sure to switch the power off and unplug the power cord before you begin any cleaning.**

## Cleaning the Screen

1. A good way to keep the dust off your screen for a while is to wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it is almost dry, and then use it to wipe the screen.
2. Ensure there is no excess water on the screen. Allow any water or dampness to evaporate before switching on.

## Cleaning the Cabinet

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

## Extended Absence

**⚠ CAUTION**

▶ If you expect to leave your TV dormant for prolonged periods (such as a holiday), unplug the power cord to protect against possible damage from lightning or power surges.

# PRODUCT SPECIFICATIONS

| MODELS | | 42PG69** | 50PG69** |
|---|---|---|---|
| | | 42PG6900-ZC/ 42PG6900-ZF<br>42PG6910-ZF | 50PG6900-ZC/ 50PG6900-ZF<br>50PG6910-ZF |
| Dimensions<br>(Width x Height x Depth) | with stand | 1044.4 x 735.4 x 308.0 mm<br>41.1 x 29.0 x 12.2 inches | 1235.6 x 849.3 x 364.1 mm<br>48.7 x 33.5 x 14.4 inches |
| | without stand | 1044.4 x 680.6 x 79.6 mm<br>41.1 x 26.8 x 3.2 inches | 1235.6 x 792.8 x 79.6 mm<br>48.7 x 31.3 x 3.2 inches |
| Weight | with stand<br>without stand | 28 kg / 61.7 lbs<br>25 kg / 55.1 lbs | 43.7 kg / 96.3 lbs<br>39.7 kg / 87.5 lbs |
| Power Requirement<br>Power Consumption | | AC100-240V~ 50/60Hz<br>310W | AC100-240V~ 50/60Hz<br>420W |
| Television System<br>Programme Coverage<br>External Antenna Impedance | | PAL/SECAM B/G/D/K, PAL I/II, SECAM L/L'<br>VHF: E2 ~ E12, UHF: E21 ~ E69, CATV: S1 ~ S20, HYPER: S21 ~ S47<br>75 Ω | |
| Environmental conditions | Operating Temperature<br>Operating Humidity | 0 ~ 40˚C / 32 ~ 104˚F<br>Less than 80% | |
| | Storage Temperature<br>Storage Humidity | -20 ~ 60˚C / -4 ~ 140˚F<br>Less than 85% | |

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

# PROGRAMMING THE REMOTE CONTROL

**The remote control is a multi brand or universal remote. It can be programmed. to operate most remote controlled devices from other manufacturers.**
**Note that the remote control may not control all models from 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 VCR and press the corresponding mode button (such as a **DVD** or **VCR**) on the remote control, while pointing at the component. Test the **POWER** and **PR + / -** 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 **DVD** or **VCR**) 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.

# PROGRAMMING CODE

## DVD

| Brand | Codes | Brand | Codes | Brand | Codes |
|---|---|---|---|---|---|
| APEX DIGITAL | 022 | MITSUBISHI | 002 | RCA | 005 006 |
| DENON | 020 014 | NAD | 023 | SAMSUNG | 011 015 |
| GE | 005 006 | ONKYO | 008 017 | SONY | 007 |
| HARMAN KARDON | 027 | PANASONIC | 003 009 | THOMPSON | 005 006 |
| JVC | 012 | PHILIPS | 013 | TOSHIBA | 019 008 |
| LG | 001 010 016 025 | PIONEER | 004 026 | YAMAHA | 009 018 |
| MAGNAVOX | 013 | PROCEED | 021 | ZENITH | 010 016 025 |
| MARANTZ | 024 | PROSCAN | 005 006 | | |

## VCR

| Brand | Codes |
|---|---|
| AIWA | 034 |
| AKAI | 016 043 046 124 125 146 |
| AMPRO | 072 |
| ANAM | 031 033 103 |
| AUDIO DYNAMICS | 012 023 039 043 |
| BROKSONIC | 035 037 129 |
| CANON | 028 031 033 |
| CAPEHART | 108 |
| CRAIG | 003 040 135 |
| CURTIS MATHES | 031 033 041 |
| DAEWOO | 005 007 010 064 065 108 110 111 112 116 117 119 |
| DAYTRON | 108 |
| DBX | 012 023 039 043 |
| DYNATECH | 034 053 |
| ELECTROHOME | 059 |
| EMERSON | 006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153 |
| FISHER | 003 008 009 010 |
| FUNAI | 034 |
| GE | 031 033 063 072 107 109 144 147 |
| GO VIDEO | 132 136 |
| HARMAN KARDON | 012 045 |
| HITACHI | 004 018 026 034 043 063 137 150 |
| INSTANTREPLAY | 031 033 |
| JCL | 031 033 |
| JCPENNY | 012 013 015 033 040 066 101 |
| JENSEN | 043 |
| JVC | 012 031 033 043 048 050 055 060 130 150 152 |
| KENWOOD | 014 034 039 043 047 048 |
| LG (GOLDSTAR) | 001 012 013 020 101 106 114 123 |
| LLOYD | 034 |
| LXI | 003 009 013 014 017 034 101 106 |
| MAGIN | 040 |
| MAGNAVOX | 031 033 034 041 067 068 |
| MARANTZ | 012 031 033 067 069 |
| MARTA | 101 |
| MATSUI | 027 030 |
| MEI | 031 033 |
| MEMOREX | 003 010 014 031 033 034 053 072 101 102 134 139 |
| MGA | 045 046 059 |
| MINOLTA | 013 020 |
| MITSUBISHI | 013 020 045 046 049 051 059 061 151 |
| MTC | 034 040 |
| MULTITECH | 024 034 |
| NEC | 012 023 039 043 048 |
| NORDMENDE | 043 |
| OPTONICA | 053 054 |
| PANASONIC | 066 070 074 083 133 140 145 |
| PENTAX | 013 020 031 033 063 |
| PHILCO | 031 034 067 |
| PHILIPS | 031 033 034 054 067 071 101 |
| PILOT | 101 |
| PIONEER | 013 021 048 |
| PORTLAND | 108 |
| PULSAR | 072 |
| QUARTZ | 011 014 |
| QUASAR | 033 066 075 145 |
| RCA | 013 020 033 034 040 041 062 063 107 109 140 144 145 147 |
| REALISTIC | 003 008 010 014 031 033 034 040 053 054 101 |
| RICO | 058 |
| RUNCO | 148 |
| SALORA | 014 |
| SAMSUNG | 032 040 102 104 105 107 109 112 113 115 120 122 125 |
| SANSUI | 022 043 048 135 |
| SANYO | 003 007 010 014 102 134 |
| SCOTT | 017 037 112 129 131 |
| SEARS | 003 008 009 010 013 014 017 020 031 042 073 081 101 |
| SHARP | 031 054 149 |
| SHINTOM | 024 |
| SONY | 003 009 031 052 056 057 058 076 077 078 149 |
| SOUNDESIGN | 034 |
| STS | 013 |
| SYLVANIA | 031 033 034 059 067 |
| SYMPHONIC | 034 |
| TANDY | 010 034 |
| TATUNG | 039 043 |
| TEAC | 034 039 043 |
| TECHNICS | 031 033 070 |
| TEKNIKA | 019 031 033 034 101 |
| THOMAS | 034 |
| TMK | 006 |
| TOSHIBA | 008 013 042 047 059 082 112 131 |
| TOTEVISION | 040 101 |
| UNITECH | 040 |
| VECTOR RESEARCH | 012 |
| VICTOR | 048 |
| VIDEO CONCEPTS | 012 034 046 |
| VIDEOSONIC | 040 |
| WARDS | 003 013 017 024 031 033 034 040 053 054 131 |
| YAMAHA | 012 034 039 043 |
| ZENITH | 034 048 056 058 072 080 101 |

# IR CODES

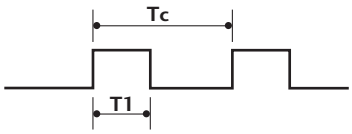
## 1. How to Connect

- 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



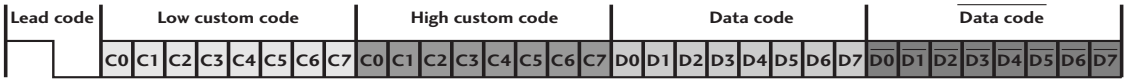

Carrier frequency

FCAR = 1/Tc = fOSC/12

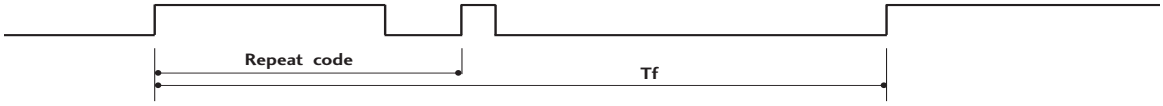
Duty ratio = T1/Tc = 1/3

### Configuration of frame

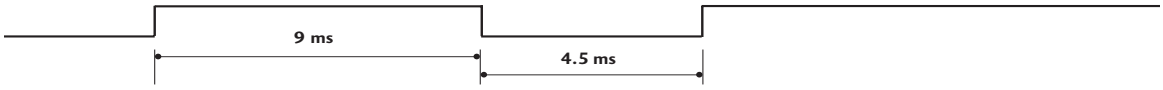
1st frame



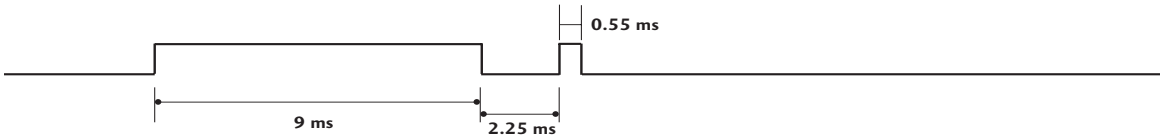

Repeat frame




### Lead code

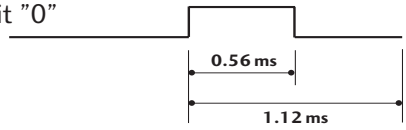



### Repeat code

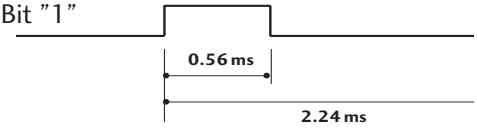



### Bit description

Bit "0"




Bit "1"




### Frame interval: Tf

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

| Code (Hexa) | Function | Note |
|---|---|---|
| 00 | PR + | R/C BUTTON |
| 01 | PR - | R/C BUTTON |
| 02 | VOL + | R/C BUTTON |
| 03 | VOL - | R/C BUTTON |
| 40 | Up (▲) | R/C BUTTON |
| 41 | Down (▼) | R/C BUTTON |
| 06 | Right (►) | R/C BUTTON |
| 07 | Left (◄) | R/C BUTTON |
| 08 | POWER | R/C BUTTON (POWER ON/OFF) |
| 09 | MUTE | R/C BUTTON |
| 10 | Number Key 0 | R/C BUTTON |
| 11 | Number Key 1 | R/C BUTTON |
| 12 | Number Key 2 | R/C BUTTON |
| 13 | Number Key 3 | R/C BUTTON |
| 14 | Number Key 4 | R/C BUTTON |
| 15 | Number Key 5 | R/C BUTTON |
| 16 | Number Key 6 | R/C BUTTON |
| 17 | Number Key 7 | R/C BUTTON |
| 18 | Number Key 8 | R/C BUTTON |
| 19 | Number Key 9 | R/C BUTTON |
| 0B | INPUT | R/C BUTTON |
| AA | INFO ⓘ | R/C BUTTON |
| AB | GUIDE | R/C BUTTON |
| 56 | SUBTITLE | R/C BUTTON |
| 5B | EXIT | R/C BUTTON |
| 1E | FAV | R/C BUTTON |
| 1A | Q.VIEW | R/C BUTTON |
| 50 | D/A | R/C BUTTON |
| F0 | TV/RADIO | R/C BUTTON |
| 7E | SIMPLINK | R/C BUTTON |
| E0 | BRIGHT + | R/C BUTTON |
| E1 | BRIGHT - | R/C BUTTON |
| 0A | I/II | R/C BUTTON |
| 0E | SLEEP | R/C BUTTON |
| 43 | MENU | R/C BUTTON |
| 44 | OK(◉) | R/C BUTTON |
| 53 | LIST | R/C BUTTON |
| 20 | TEXT | R/C BUTTON |
| 2A | REVEAL | R/C BUTTON |
| 26 | TIME | R/C BUTTON |
| 28 | BACK | R/C BUTTON |
| 62 | UPDATE | R/C BUTTON |
| 70 | INDEX | R/C BUTTON |
| 65 | HOLD | R/C BUTTON |
| 61 | BLUE Key | R/C BUTTON |
| 63 | YELLOW Key | R/C BUTTON |
| 71 | GREEN Key | R/C BUTTON |
| 72 | RED Key | R/C BUTTON |
| 79 | RATIO | R/C BUTTON |
| B0 | ► | R/C BUTTON |
| BA | II | R/C BUTTON |
| B2 | I◄◄ | R/C BUTTON |
| B3 | ►►I | R/C BUTTON |
| 8F | ◄◄ | R/C BUTTON |
| 8E | ►► | R/C BUTTON |
| B1 | ■ | R/C BUTTON |
| BD | ● | R/C BUTTON |
| 7C | DVR | R/C BUTTON |
| 9E | LIVE TV | R/C BUTTON |

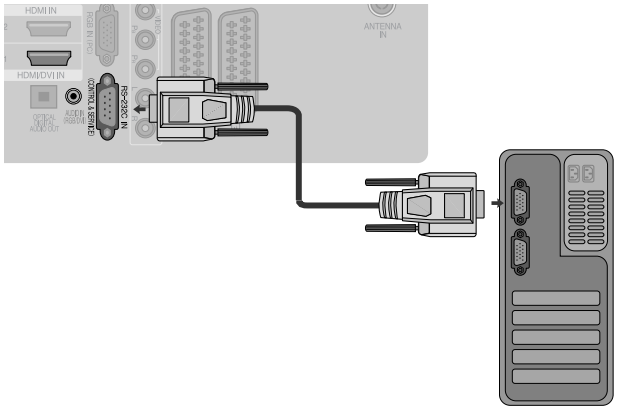
# EXTERNAL CONTROL DEVICE SETUP

## RS-232C Setup

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

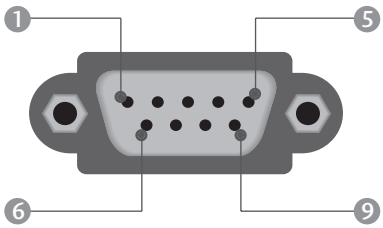
Connect the serial port of the control device to the RS-232C jack on the TV back panel.

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




## 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 |




## RS-232C Configurations

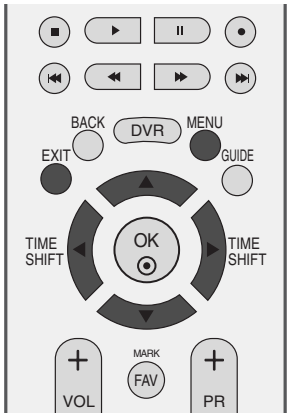
**7-Wire Configurations (Standard RS-232C cable)**

| | 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'. ▶ p.112

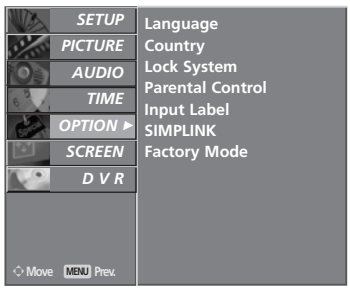
1. Press the **MENU** button and then use ▲ or ▼ button to select the **OPTION** menu.

2. Press the ▶ button and then use ▲ or ▼ button to select **Factory Mode**.

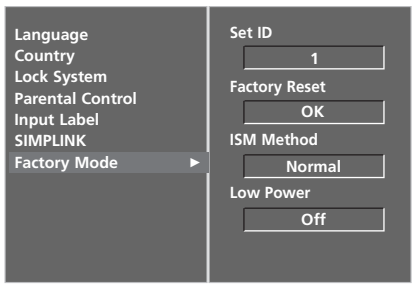
3. Press the ▶ button and then use ▲ or ▼ button to select **Set ID**.

4. 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.

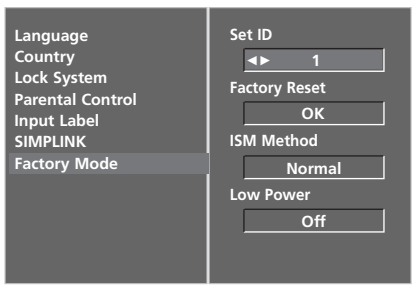
5. Press **EXIT** button to return to normal TV viewing.




1




2




3 4

## Communication Parameters

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

Command Reference List

| | COMMAND 1 | COMMAND 2 | DATA (Hexadecimal) |
|---|---|---|---|
| 01. Power | k | a | 00 ~ 01 |
| 02. Aspect Ratio | k | c | Refer to p. 110 |
| 03. Screen Mute | k | d | 00 ~ 01 |
| 04. Volume Mute | k | e | 00 ~ 01 |
| 05. Volume Control | k | f | 00 ~ 64 |
| 06. Contrast | k | g | 00 ~ 64 |
| 07. Brightness | k | h | 00 ~ 64 |
| 08. Colour | k | i | 00 ~ 64 |
| 09. Tint | k | j | 00 ~ 64 |
| 10. Sharpness | k | k | 00 ~ 64 |
| 11. OSD Select | k | l | 00 ~ 01 |
| 12. Remote control lock mode | k | m | 00 ~ 01 |
| 13. Balance | k | t | 00 ~ 64 |
| 14. Colour Temperature | k | u | 00 ~ 03 |
| 15. Red Adjustment | k | v | 00 ~ 50 |
| 16. Green Adjustment | k | w | 00 ~ 50 |
| 17. Blue Adjustment | k | $ | 00 ~ 50 |
| 18. Abnormal Status | k | z | 00 ~ 07 |
| 19. ISM Method | j | p | Refer to p. 112 |
| 20. Low Power | j | q | 00 ~ 01 |
| 21. Orbiter Time Setting | j | r | 01 ~ FE |
| 22. Orbiter Pixel Setting | j | s | 00 ~ 03 |
| 23. Auto Configure | j | u | 01 |
| 24. Channel Select Command | m | a | Refer to p. 113 |
| 25. Send IR Code | m | c | Key Code |
| 26. Input select (Main) | x | b | Refer to p. 113 |

* When setting the 18 ~ 26, a menu does not appear on screen.

Transmission / Receiving Protocol

*Transmission*

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

* [Command 1] : First command to control the TV. (j, k, m or x)
* [Command 2] : Second command to control the TV.
* [Set ID] : You can adjust the TV ID to choose desired monitor ID number in option menu.
  Adjustment range is 1 ~ 99.
  When selecting Set ID '0', every connected TV 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 TV 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 TV transmits ACK (acknowledgement) based on this format when receiving abnormal data from non-viable functions or communication errors.

Data 01: Illegal Code
02: not support function
03: Wait more time

### 01. Power (Command 2 : a)

▶ To control Power On/Off of the TV.

*Transmission*

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

Data 00 : Power Off 01 : 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]

* Similarly, 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.
You can also adjust the screen format using the ARC (Aspect Ratio Control) button on remote control or in the SCREEN menu.

*Transmission*

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

Data 00 : Normal screen (4:3)
01 : Wide screen (16:9)
02 : Zoom1
03 : Zoom2
04 : Original
05 : 14:9

*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 00 : Screen mute off (Picture on)
01 : 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 00 : Volume mute on (Volume off)
01 : 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 : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*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 : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*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 : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*Ack*

[h][ ][Set ID][ ][OK][Data][x]

### 08. Colour (Command 2 : i)

▶ To adjust the screen colour.
You can also adjust colour in the PICTURE menu.

*Transmission*

[k][i][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*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 : 00 ~ Green : 64
* Refer to 'Real data mapping 1'. See page 112.

*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 : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*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 00 : OSD off 01 : 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 00 : Lock off 01 : Lock on

*Ack*

[m][ ][Set ID][ ][OK][Data][x]

* If you are not using the remote control, use this mode. When main power is on/off, external control lock is released.

### 13. 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 : 00 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 112.

*Ack*

[t][ ][Set ID][ ][OK][Data][x]

### 14. Colour Temperature (Command 2 : u)

▶ To adjust colour temperature. You can also adjust Colour Temperature in the PICTURE menu.

*Transmission*

[k][u][ ][Set ID][ ][Data][Cr]

Data 00: Cool 01: Medium 02: Warm 03: User

*Ack*

[u][ ][Set ID][ ][OK][Data][x]

### 15. Red Adjustment (Command 2 : v)

▶ To adjust red in colour temperature.

*Transmission*

[k][v][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 112.

*Ack*

[v][ ][Set ID][ ][OK][Data][x]

### 16. Green Adjustment (Command 2 : w)

▶ To adjust green in colour temperature.

*Transmission*

[k][w][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 112.

*Ack*

[w][ ][Set ID][ ][OK][Data][x]

### 17. Blue Adjustment (Command 2 : $)

▶ To adjust blue in colour temperature.

*Transmission*

[k][$][ ][Set ID][ ][Data][Cr]

Data Min : 00 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 112.

*Ack*

[$][ ][Set ID][ ][OK][Data][x]

### 18. Abnormal State (Command 2 : z)

▶ To recognize an abnormal state.

*Transmission*

[k][z][ ][Set ID][ ][FF][ ][Cr]

Data FF : Read

*Ack*

[z][ ][Set ID][ ][OK][Data][x]

Data 00: Normal (Power on and signal exist)
01: No signal (Power on)
02: Turn the TV off by remote control
03: Turn the TV off by sleep time function
04: Turn the TV off by RS-232C function
05: 5V down
06: AC down
07: Turn the TV off by Fan Alarm function
08: Turn the TV off by Off time function
09: Turn the TV off by Auto sleep function

* This function is "read only".

### 19. ISM Method (Command 1 : j, Command 2 : p)

▶ To control the ISM method. You can also adjust ISM Method in OPTION menu.

*Transmission*

[j][p][ ][Set ID][ ][Data][Cr]

Data 00: Normal
01: White wash
02: Orbiter
03: Inversion

*Ack*

[p][ ][Set ID][ ][OK/NG][Data][x]

*** Real data mapping 1**

00 : 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**

00 : -40
01 : -39
02 : -38
⋮
28 : 0
⋮
4E : +38
4F : +39
50 : +40

### 20. Low Power (Command 1 : j, Command 2 : q)

▶ To reduce the power consumption of the TV. You can also adjust Low Power in OPTION menu.

*Transmission*

[j][q][ ][Set ID][ ][Data][ ][Cr]

Data 00 : Off
01 : On

*Ack*

[q][ ][Set ID][ ][OK/NG][Data][x]

### 21. Orbiter Time Setting (Command 1 : j, Command 2 : r)

▶ To adjust orbiter operation time term.

*Transmission*

[j][r][ ][Set ID][ ][Data][ ][Cr]

Data Min: 01 ~ Max: FE
* Refer to 'Real data mapping 1'.

*Ack*

[r][ ][Set ID][ ][OK/NG][Data][x]

### 22. Orbiter Pixel Setting (Command 1 : j, Command 2 : s)

▶ To adjust pixel number in orbiter function.

*Transmission*

[j][s][ ][Set ID][ ][Data][Cr]

Data Min: 01 ~ Max: 03
* Refer to 'Real data mapping 1'.

*Ack*

[s][ ][Set ID][ ][OK/NG][Data][x]

### 23. 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 01: To set

*Ack*

[u][ ][Set ID][ ][OK/NG][Data][x]

### 24. Channel Select Command (Command 1 : m, Command 2 : a)

▶ Select channel to following physical number.

*Transmission*

[m][a][ ][Set ID][ ][Data0][ ][Data1][ ][Data2][Cr]

Data00 : High channel data
Data01 : Low channel data
ex. No. 47 -> 00 2F (2FH)
No. 394 -> 01 88 (188H),
DTV No. 0 -> Don't care
Data02 0x00 : ATV Main
0x10 : DTV Main

Channel data range
Analogue - Min: 00 ~ Max: 63 (0~99)
Digital - Min: 00 ~ Max: 3E7 (0~999)

*Ack*

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

Data Min: 00 ~ Max: 7D

### 25. Send IR Code (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 106.

*Ack*

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

### 26. Input select (Command 1 : x, Command 2 : b)

▶ To select input source.

*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 | 0 | DTV |
| 0 | 0 | 0 | 1 | Analogue |
| 0 | 0 | 1 | 0 | AV |
| 0 | 0 | 1 | 1 | Component |
| 0 | 1 | 0 | 0 | RGB |
| 0 | 1 | 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/NG][Data][x]

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