LG

LCD TV

OWNER'S MANUAL

MODEL: 32LX2D

DVB®

Digital **V**ideo
Broadcasting

DVB is a registered trademark of the DVB Project

**Please read Information Manual included together
before reading this manual and operating your set.**

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

Accessories

Ensure that the following accessories are included with your TV. If any accessory is missing, please contact the dealer from where you purchased the product.
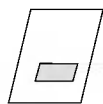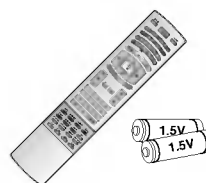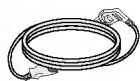
Owner's Manual

Twister Holder
Arrange the wires
with the twister holder.

Polishing Cloth
Polish the screen with the cloth.

Remote Control /
Batteries

Power Cord

D-sub 15 pin cable

PC Sound Cable

2-TV Bracket Bolts

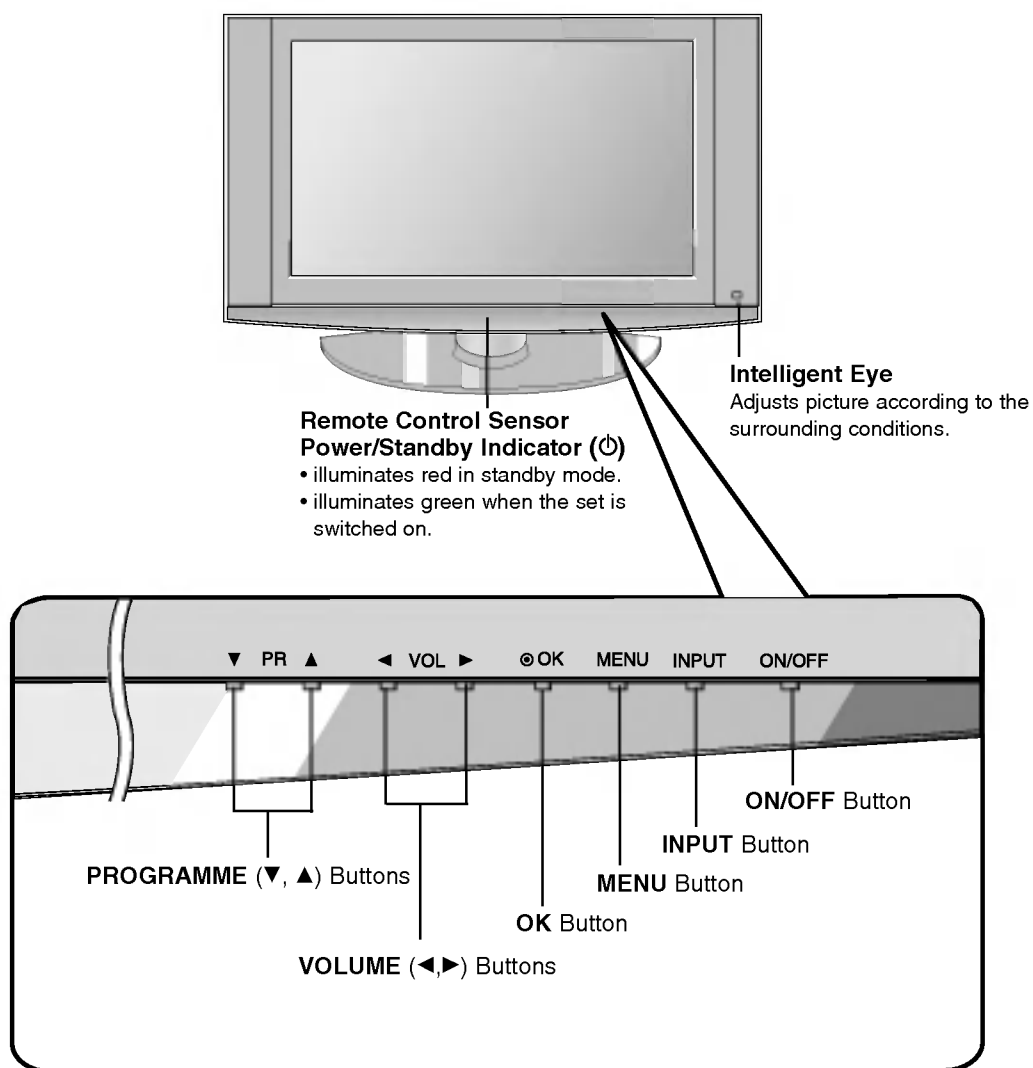2-TV Brackets,
2-Wall Bracket

Contents

Operation

Reference

Introduction
Controls

- This is a simplified representation of the front panel.
- What is shown here may be somewhat different from your TV.

Intelligent Eye
Adjusts picture according to the surrounding conditions.

Remote Control Sensor
Power/Standby Indicator (⏻)
• illuminates red in standby mode.
• illuminates green when the set is switched on.

▼ PR ▲   ◄ VOL ►   ⊚ OK   MENU   INPUT   ON/OFF

ON/OFF Button

INPUT Button

MENU Button

PROGRAMME (▼, ▲) Buttons

OK Button

VOLUME (◄,►) Buttons

Connection Options

S-VIDEO

AV2 Input

Audio Input

COMPONENT2
(VIDEO Input)

AC IN

DIGITAL AUDIO OUTPUT
/ DVI INPUT
/ COMPONENT1 INPUT

MONITOR OUT

HDMI/DVI Port

AV1 (Audio/Video) Input

AC IN

HDMI/DVI

DIGITAL AUDIO
(OPTICAL)

OUTPUT

REMOTE
CONTROL

RS-232C INPUT
(CONTROL/SERVICE)

DVI
INPUT

PC AUDIO
INPUT

RGB INPUT
(PC/DTV INPUT)

COMPONENT1
INPUT

AUDIO   VIDEO

MONITOR
OUT

S-VIDEO

AV1

COMPONENT1

AUDIO   VIDEO

Antenna
(75Ω)

RS-232C INPUT (CONTROL/SERVICE) /
RGB INPUT (PC/DTV INPUT)

ANTENNA Input

PC AUDIO INPUT

REMOTE CONTROL Port

COMPONENT1 (VIDEO / AUDIO INPUT)

Remote Control Key Functions

POWER
Switches the set between ON and STANDBY.

D/A TV (Digital TV / Analogue TV)
Selects digital or analogue mode.

INPUT
External input modes rotate in regular sequence: Digital, Analogue, AV1-2, Component 1-2, RGB-DTV (or RGB-PC), HDMI/DVI).

TV, DVD, VCR,
Selects the remote operating mode: TV, VCR, DVD. Select other operating modes, for the remote to operate external devices.

MENU
Selects a menu.

EXIT
Returns to TV viewing from any menu.

OK
Accepts your selection or displays the current mode.

▲ / ▼ / ◄ / ►
Adjusts menu settings.
Selects menu item.

NUMBER BUTTONS

LIST (Refer to p.29)
Displays the programme table.

Q.VIEW
Returns to the previously viewed programme.

PSM (Picture Status Memory) (Refer to p.31)
Adjust the factory preset picture according to the room.

SSM (Sound Status Memory) (Refer to p.34)
To select the sound appropriate to your viewing programme.

APM (Adaptive Picture Mode) (Refer to p.31)
Concurrently, compare with the Dynamic, Standard, Mild and User on the screen.

GUIDE (In Digital mode only) (Refer to p.49)
Shows a programme schedule.

ARC (Aspect Ratio Control) (Refer to p.42)
Selects your desired picture format.

SLEEP (Refer to p.39)
Sets the sleep timer.

VCR/DVD BUTTONS
Control some video cassette recorders or DVD players ("RECORD" button is not available for DVD player).

INFO (In Digital mode only)
Displays channel information on top of the screen while watching the TV.

COLOURED BUTTONS
They are used as per the indications or functions displayed on the TV screen in the case of Text displays (Teletext, EPG) and programme edit.

VOL ▲ / ▼ (Volume Up/Down)
Increases/decreases sound level.

PR ▲ / ▼ (Programme Up/Down)
Selects a programme.

MUTE
Switches the sound on or off.

FAV (FAVOURITE)
Displays the selected favourite programmes.

TELETEXT BUTTONS (Refer to p.47~48)
These buttons are used for teletext.
* For further details, see the 'Teletext' section.

I/II (Refer to p.37)
Selects the sound output or the audio mode.
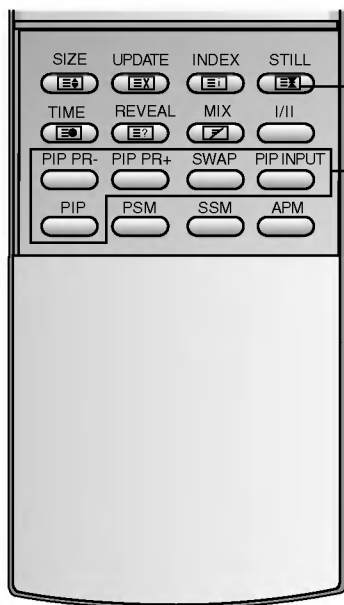
STILL
Freezes the currently-viewed picture.
Main picture is frozen in PIP/POP/Twin picture mode.

PIP PR +/- (Refer to p.45)
Selects a programme for the sub picture.

SWAP (Refer to p.46)
Alternates between main and sub picture in PIP/Twin picture mode.

PIP INPUT (Refer to p.45)
Selects the input mode for the sub picture.

PIP (Refer to p.45)
Switches between PIP, Twin picture and POP modes.

Installing Batteries

1 Open the battery compartment cover on the back side.
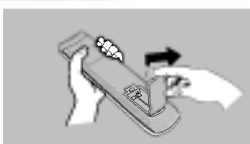
2 Insert two 1.5V batteries in correct polarity (+ with +, - with -). Don't mix old or used batteries with new ones.
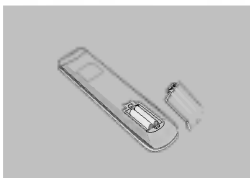
3 Close the cover.
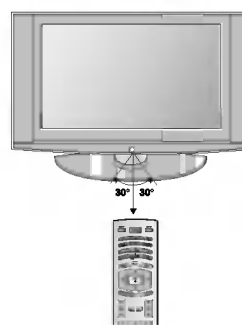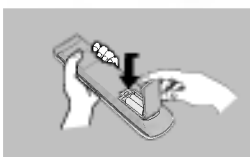
* Use a remote control 7 meter distance and 30 degree (left/right) within the receiving unit scope.

* Dispose of used batteries in a recycle bin to prevent environment.

Installation

Wall Mount: Horizontal installation
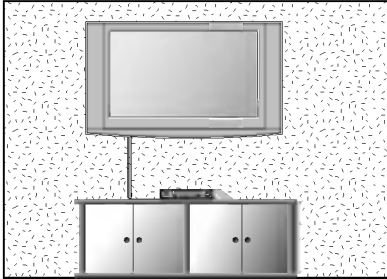
For proper ventilation, allow a clearance of 4" on each side and 4" from the wall. Detailed installation instructions are available from your dealer. See the optional Tilt Wall Mounting Bracket Installation and Setup Guide.
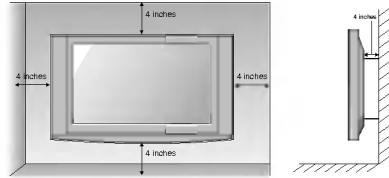
Desktop Pedestal Installation

For proper ventilation, allow a clearance of 4" on each side and 4" from the wall.
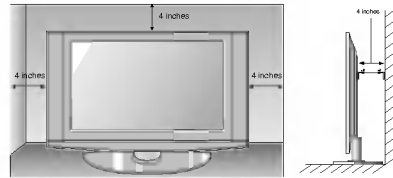
How to use back cover

1 Hold the cover with both hands and pull it backwards.
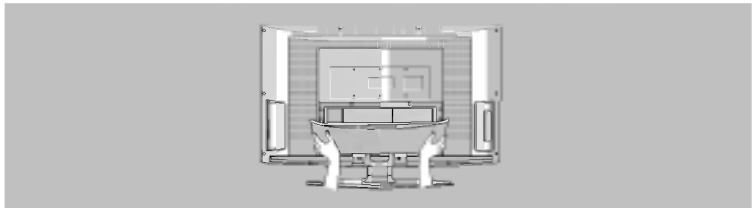
2 Install wires as necessary.
(To install various wires, refer to p.12~20.)

* Arrange the signal input cable and the power cord by holder, as shown.
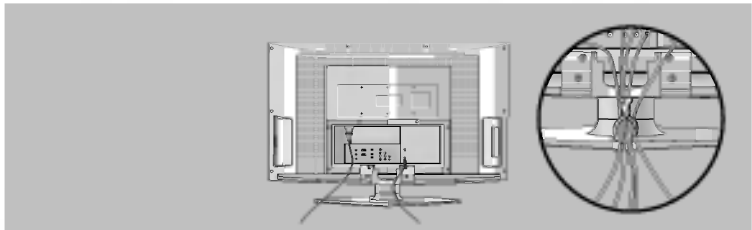
3 Align the holes on the TV back panel with the protuberance on the back cover and insert.
Reinstall the cover.

Wire Arrangement
- Pull the cables through the hole on the set.
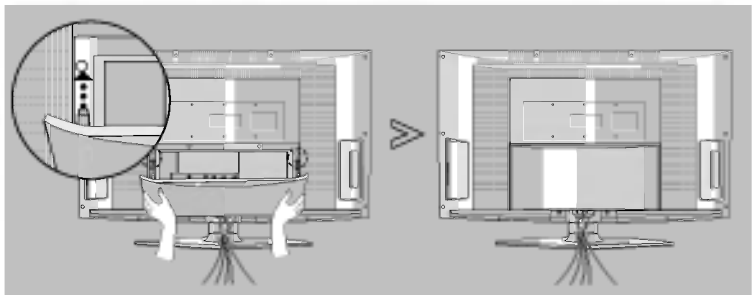
How to join the product assembly to the wall to protect the set tumbling

- Set the unit up close to the wall so the product doesn't fall over when it is pushed backwards.
- The instructions shown below are a safer way to set up the product, which is to fix it on the wall so the product does-n't fall over when it is pulled in the forward direction. It will prevent the product from falling forward and hurting peo-ple. It will also prevent the product from damage caused by a fall. Please make sure that children don't climb on or hang from the product.
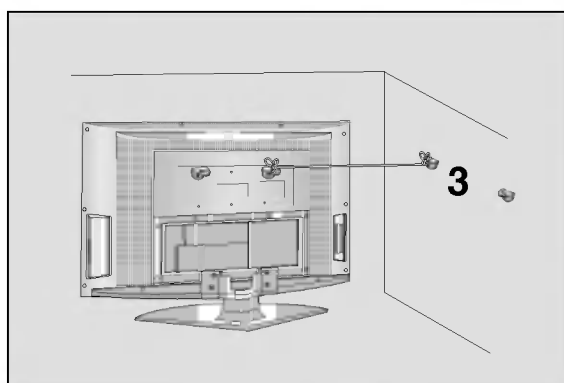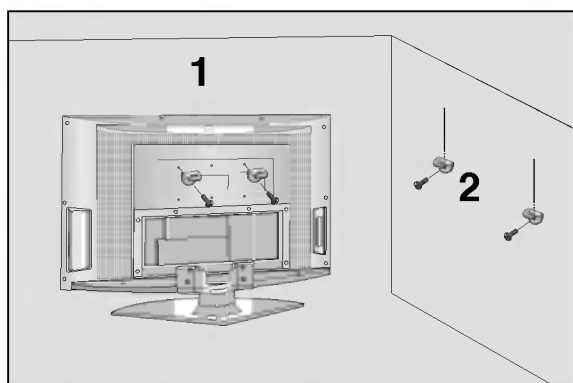
1 Use the bracket and the bolt to fix the product to the wall as shown in the picture.

2 Secure the bracket with the bolt (not provided as parts of the product, must purchase separately) on the wall.

3 Use a sturdy rope (not provided as parts of the product, must purchase separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

Notes
- When moving the product to another place undo the ropes first.
- Use a product holder or a cabinet that is big and strong enough for the size and weight of the product.
- To use the product safely make sure that the height of the bracket that is mounted on the wall is same as that of the product.

Swivel Stand
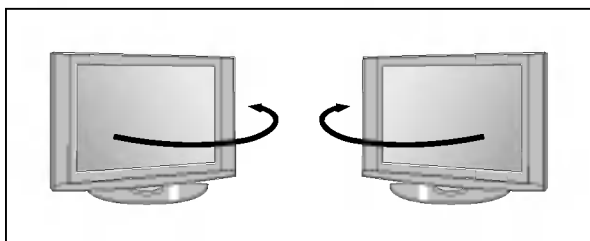
- The TV can be conveniently swivelled on its stand 30° to the left or right to provide the optimum viewing angle.

External Equipment Connections

NOTE: All cables shown are not included with the TV.

Antenna Connection

- For optimum picture quality, adjust antenna direction if needed.

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

Wall Antenna Socket

RF Coaxial Wire (75 ohm)

Antenna
(Ⅱ75Ω)

VHF Antenna
UHF Antenna

Turn clockwise to tighten.

Outdoor Antenna

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

VHF UHF

Antenna
(Ⅱ75Ω)

Signal Amplifier

- In a poor signal area, to improve picture quality, purchase and install a signal amplifier.

- If the antenna needs to be split for two TV's, install a "2-Way Signal Splitter" in the connections.

- If the antenna is not installed properly, contact your installer or dealer for assistance.

External AV Source Setup

TV side

Camcorder

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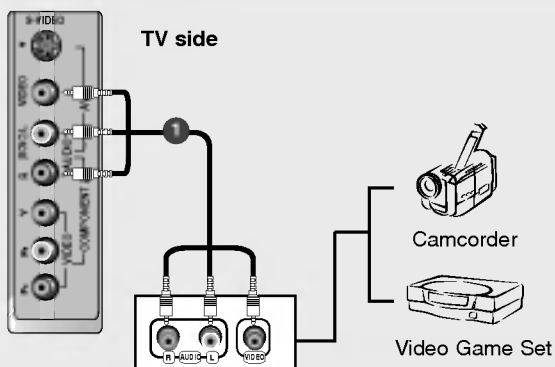
❶ Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red).

❷ Select **AV2** input source with using the **INPUT** button on the remote control.

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

Monitor Out Setup

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

TV Back
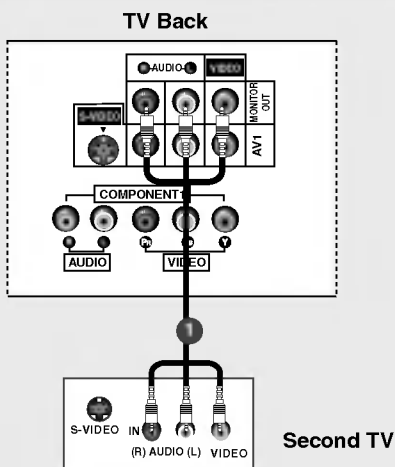
Second TV

• Digital, Component 1-2, RGB-PC/RGB-DTV, HDMI/DVI input sources cannot be used for Monitor out.

❶ Connect the second TV or monitor to the TV's **MONITOR OUT** jacks.

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

Digital Audio Output

- **Send the TV's audio to external audio equipment (stereo system) via the Digital Audio Output Optical port.**
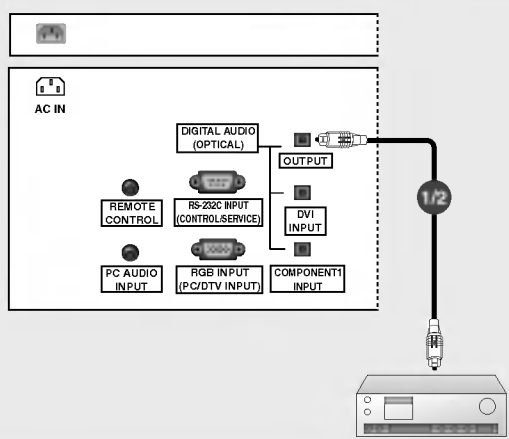
❶ Connect one end of an optical cable to the TV Digital Audio Optical Output port.

❷ Connect the other end of the optical cable to the digital audio optical input on the audio equipment.

❸ Set the " TV speaker option - Off" in the AUDIO menu. Refer to page 36. See 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.

VCR Setup

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- Avoid having a fixed image remain on the screen for a long period of time. If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen.

When connecting with an antenna

TV Back

VCR

1. Connect the RF out socket of the VCR to the **Antenna** socket on the set.

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

3. Press the **PLAY** button on the VCR and match the appropriate programme between the TV and VCR for viewing.

When connecting with an RCA cable

TV Back

VCR

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 **AV1** input source with using the **INPUT** button on the remote control.
   - If connected to **AV2** input, select **AV2** input source.

When connecting with an S-Video cable

TV Back

VCR

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

3. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

4. Select **AV1** input source with using the **INPUT** button on the remote control.
   - If connected to **AV2** input, select **AV 2** input source.

⚠ Do not connect to both Video and S-Video at the same time. In the event that you connect both Video and the S-Video cables, only the S-Video will work.

Cable TV Setup

- After subscribing for a local cable TV station and installing a converter you can watch cable TV.
- For further information of cable TV, contact the local cable TV station.

When connecting with an RCA cable

TV Back

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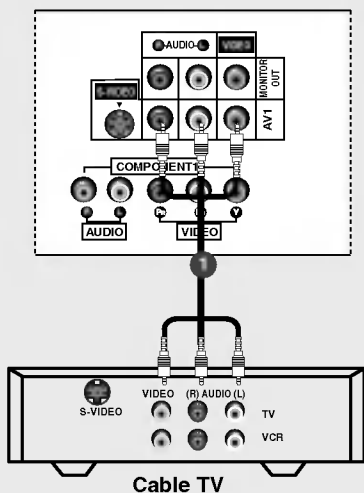
1. Connect the **AUDIO/VIDEO** jacks between TV and Cable Box. Match the jack colours (Video = yellow, Audio Left = white, and Audio Right = red)

2. Select **AV1** input source with using the **INPUT** button on the remote control.

3. Select programmes with the cable box remote control.

When connecting with an S-Video cable

TV Back

Cable TV
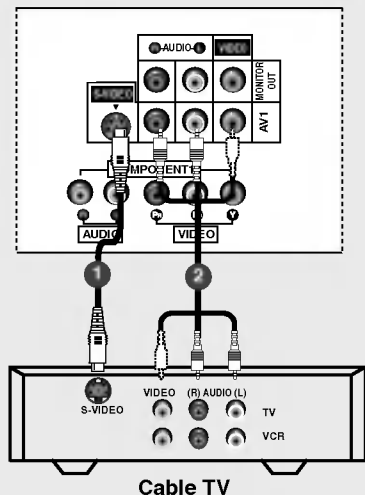
1. Connect the S-VIDEO output of the Cable Box to the **S-VIDEO** input on the set. The picture quality is improved; compared to normal composite (RCA cable) input.

2. Connect the audio outputs of the Cable Box to the **AUDIO** jacks on the set.

3. Select **AV1** input source with using the **INPUT** button on the remote control.

4. Select programmes with the cable box remote control.

> ⚠ Do not connect to both Video and S-Video at the same time. In the event that you connect both Video and the S-Video cables, only the S-Video will work.)

DVD Setup

When connecting with an S-Video cable

TV Back

DVD
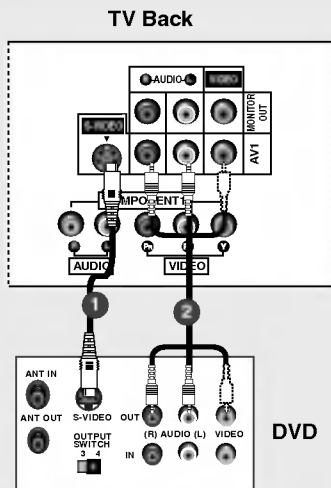
❶ Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the set.

❷ Connect the audio outputs of the DVD to the **AUDIO** input jacks on the set.

❸ Turn on the DVD player, insert a DVD.

❹ Select **AV1** input source with using the **INPUT** button on the remote control.

❺ Refer to the DVD player's manual for operating instructions.

When connecting with a HDMI cable

TV back

HDMI/DVI

Antenna
(I75Ω)

HDMI-DVD OUTPUT   **DVD**
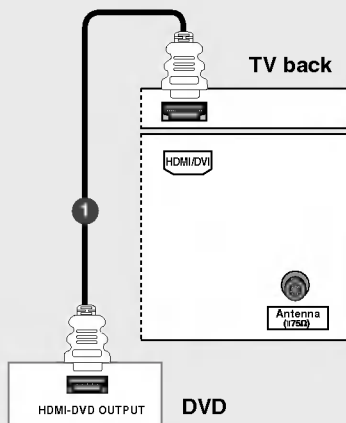
❶ Connect the HDMI output of the DVD to the **HDMI/DVI** jack on the set.

❷ Select **HDMI/DVI** input source with using the **INPUT** button on the remote control.

❸ Refer to the DVD player's manual for operating instructions.

• TV can receive the video and audio signal simultaneously when using a HDMI cable.

When connecting with a component cable

TV Back
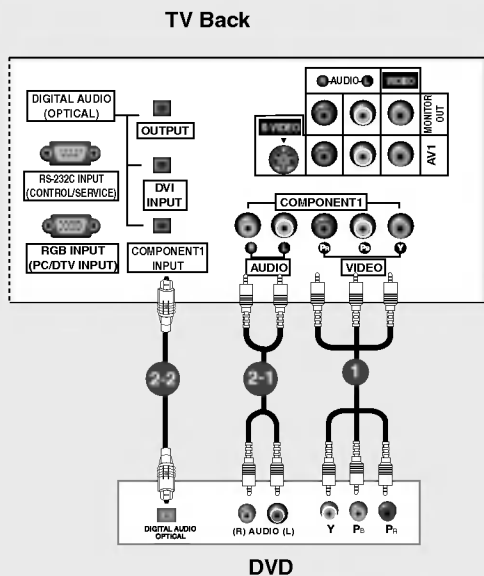
Select **2-1** or **2-2**, depending on your available DVD connector.

① Connect the video outputs (Y, P$_B$, P$_R$) of the DVD to the **COMPONENT1 VIDEO INPUT** jacks on the set.

2-1 Connect the audio outputs of the DVD to the **COMPONENT1 AUDIO INPUT** jacks on the set.

2-2 Connect the optical audio output of the DVD to the **DIGITAL AUDIO COMPONENT1 INPUT** jack on the set.

③ Turn on the DVD player, insert a DVD.

④ Select **Component 1** input source with using the **INPUT** button on the remote control.
- If connected to **COMPONENT2** input, select **Component 2** input source.

⑤ Refer to the DVD player's manual for operating instructions.

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

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

• **Digital Audio will not work for Component 2 input source.**
• Digital Audio operation has priority if Digital Audio and AUDIO L/R are connected at the same time.

HDSTB Setup

- This TV can receive Digital 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 figure as shown.

When connecting with a D-sub 15 pin cable

TV Back

Digital Set-top Box

1 Connect the RGB output of the digital set-top box to the **RGB INPUT (PC/DTV INPUT)** jack on the set.

2 Connect the audio outputs of the set-top box to the **PC AUDIO INPUT** jack on the set.

3 Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

4 Select **RGB-DTV** input source with using the **INPUT** button on the remote control.

Signal	Component	RGB-DTV, HDMI/DVI-DTV
480i/576i	Yes	No
480p/576p/720p/1080i	Yes	Yes

When connecting with a HDMI cable

TV back

Digital Set-top Box

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

2 Select **HDMI/DVI** input source with using the **INPUT** button on the remote control.

3 Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

• TV can receive the video and audio signal simultaneously when using a HDMI cable.

When connecting with a Component cable

TV back

DIGITAL AUDIO (OPTICAL)

OUTPUT

RS-232C INPUT (CONTROL/SERVICE)

DVI INPUT

RGB INPUT (PC/DTV INPUT)

COMPONENT1 INPUT

AUDIO

VIDEO

AUDIO

MONITOR OUT

AV1

COMPONENT1

DIGITAL AUDIO OPTICAL

(R) AUDIO (L)

Y   Pв   Pʀ
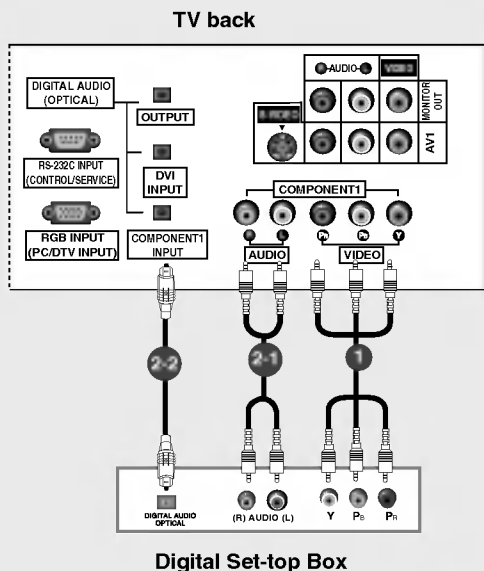
Digital Set-top Box

Select **2-1** or **2-2** , depending on your available set-top box connector.

① Connect the video outputs (Y, Pв, Pʀ) of the digital set-top box to the **COMPONENT1 VIDEO INPUT** jacks on the set.

2-1 Connect the audio output of the digital set-top box to the **COMPONENT1 AUDIO INPUT** jacks on the set.

2-2 Connect the optical audio output of the digital set-top box to the **DIGITAL AUDIO COMPONENT1 INPUT** jack on the set.

③ Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

④ Select **Component 1** input source with using the **INPUT** button on the remote control.
- If connected to COMPONENT2 input, select **Component 2** input source.

• Digital Audio will not work for Component 2 input source.

When connecting with a HDMI to DVI cable

TV Back

HDMI/DVI

DIGITAL AUDIO (OPTICAL)

OUTPUT

REMOTE CONTROL

RS-232C INPUT (CONTROL/SERVICE)

DVI INPUT

PC AUDIO INPUT

RGB INPUT (PC/DTV INPUT)

COMPONENT1 INPUT

AUDIO

VIDEO

AUDIO

MONITOR OUT

AV1

COMPONENT1

(R) AUDIO (L)

DIGITAL AUDIO OPTICAL

DVI-DTV OUTPUT

Digital Set-top Box

Select **2-1** or **2-2**, depending on your digital set-top box connector.
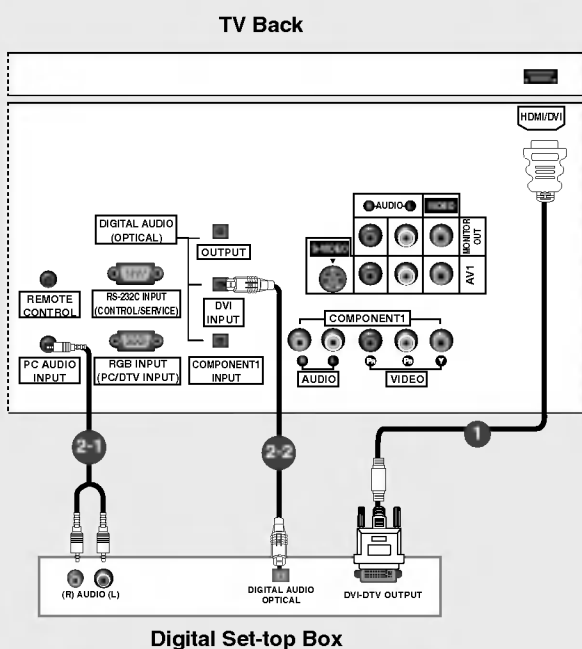
① Connect the DVI output of the digital set-top box to the **HDMI/DVI** jack on the set.

2-1 Connect the audio output of the digital set-top box to the **PC AUDIO INPUT** jack on the set.

2-2 Connect the optical audio output of the digital set-top box to the **DIGITAL AUDIO DVI INPUT** jack on the set.

③ Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)

④ Select **HDMI/DVI** input source with using the **INPUT** button on the remote control.

PC Setup

- This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings. The TV sends configuration information (EDID) to the PC using the Video Electronics Standard Association (VESA) Display Data Channel (DDC) protocol.

When connecting with a D-sub 15 pin cable

TV Back

❶ Connect the RGB output of the PC to the **RGB INPUT (PC/DTV INPUT)** jack on the set.

❷ Connect the PC audio output to the **PC AUDIO INPUT** jack on the set.

❸ Turn on the PC and the set.

❹ Select **RGB-PC** input source in **Main input** option of **SPECIAL** menu. (Refer to p.41)

When connecting with a HDMI to DVI cable

TV Back

❶ Connect the DVI output of the PC to the **HDMI/DVI** jack on the set.

❷ Connect the PC audio outputs to the **PC SOUND** jack on the set.

❸ Turn on the PC and the set.

❹ Select **HDMI/DVI** input source in **Main input** option of **SPECIAL** menu. (Refer to p.41)

1. To get the best picture quality, adjust the PC graphics card to 1024x768, 60Hz.
2. If using a sound card, adjust the PC sound as required.
3. Check the image on your TV. There may be noise associated with the resolution, vertical pattern, contrast or brightness in PC mode. If noise is present, change the PC mode to another resolution, 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.

4. Avoid keeping a fixed image on the TV's screen for a long period of time. The fixed image may become permanently imprinted on the screen.
5. The synchronization input form for Horizontal and Vertical frequencies are separate.

Monitor Display Specifications

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
640x350	31.468	70.09
640x480	31.469	59.94
	37.861	72.80
	37.500	75.00
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02

Power Cord Connection

- Connect the power cord correctly as shown.
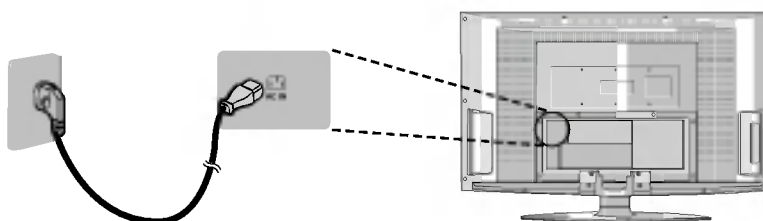
Screen Setup

- This function works in the following mode:
Component 1, Component 2, RGB-PC, RGB-DTV, or HDMI/DVI-DTV.

Note: *Some signal from some graphics boards may not function properly. If the results are unsatisfactory,*
adjust your monitor's position, size and phase manually.

* Adjustment for screen Position, Clock, and Phase
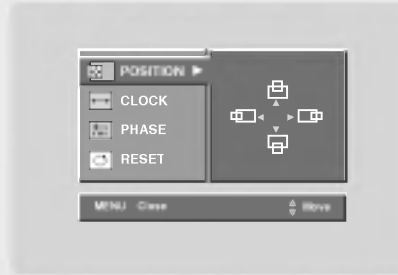
Mini Glossary

Position	This function is to adjust the picture left/right and up/down as you prefer.
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 Press the **OK** button and then use ▲ / ▼ button to select **POSITION**, **CLOCK**, or **PHASE**.

2 Press ► button and then use ▲ / ▼ / ◄ / ► buttons to make appropriate adjustments.
• The **PHASE** adjustment range is 0 ~ 31.
The **PHASE** only works in Component 1-2, RGB-PC and RGB-DTV mode.
• The **CLOCK** adjustment range is -50 ~ +50.
The **CLOCK** only works in RGB-PC mode.

3 Press the **OK** button.

* Initializing (Reset to original factory values)
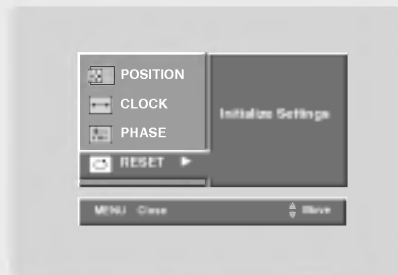
- This function allows you to return to the good picture reproduction programmed at the factory and cannot be changed.

1 Press the **OK** button and then use ▲ / ▼ button to select the **RESET** option.

2 Press ► button and then use ◄ / ► button to select **Yes**.

3 Press the **OK** button.

Operation

Basic operation
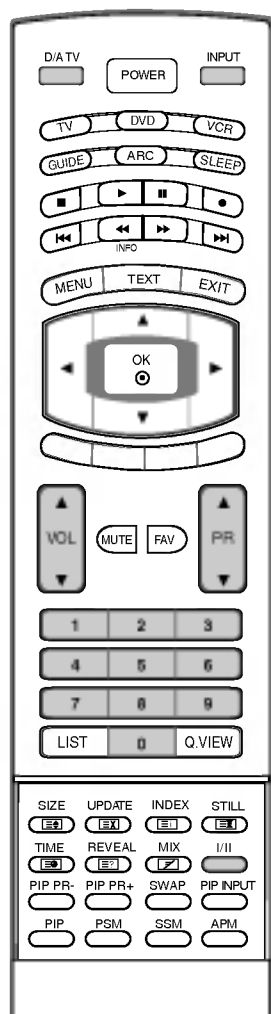
1. Connect the power cord correctly. Now, the TV is switched to standby mode.
2. Press the **ON/OFF**, **INPUT**, **PR ▲ / ▼** button on the TV or press the **POWER**, **INPUT**, **D/V TV**, **PR ▲ / ▼**, **Number (0 ~ 9)** button on the remote control and then the TV will switch on.

Initializing setup

Welcome
The Following process guides you to complete initial settings. This initial setup appears the first time you turn the TV on. The settings can be changed in menu once entered.
◉ Next
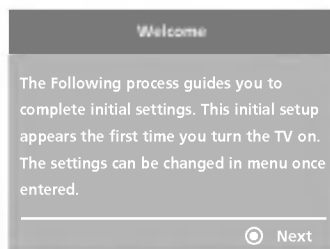
Figure 1.

1. If the OSD (On Screen Display) is displayed on the screen as figure 1 after turning on the set, you can adjust the Auto Programme tuning, Time Zone selection or Password setting.
   Note: *It will automatically disappear after approx. 40 seconds unless a button is pressed.*

Volume Adjustment

1. Press the **VOL ▲ / ▼** button to adjust the volume.
2. If you want to switch the sound off, press the **MUTE** button.
3. You can cancel this function by pressing the **MUTE**, **VOL ▲ / ▼**, or **I/II** button.

Programme Selection

Press the **PR ▲ / ▼** or NUMBER buttons to select a programme number.

• If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

How to adjust the OSD screen

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

2 Press the ► button and then use ▲ / ▼ / ◄ / ► button to display the available menus.

SETUP ►	
PICTURE	Auto programme
	Manual programme
AUDIO	Programme edit
	Signal strength
TIME	Booster
	Front light
SPECIAL	Set ID
LOCK	

≪ ≫

SETUP	PSM
PICTURE ►	Contrast
	Brightness
AUDIO	Colour
	Sharpness
TIME	Tint
	Colour temperature
SPECIAL	Video preset
LOCK	

≪ ≫

SETUP	SSM
PICTURE	AVL
	Balance
AUDIO ►	Treble
	Bass
TIME	Front surround
	TV speaker
SPECIAL	BBE
LOCK	

⋀
⋁

⋀
⋁

SETUP	Lock system
PICTURE	Set password
	Block programme
AUDIO	Parental guidance
	Aux. block
TIME	
SPECIAL	
LOCK ►	

≪ ≫

SETUP	Main input
PICTURE	Sub input
	Subtitle
AUDIO	Child lock
	ARC
TIME	Cinema
	Auto demo
SPECIAL ►	
LOCK	

≪ ≫

SETUP	Auto clock
PICTURE	Manual clock
	Off time
AUDIO	On time
	Sleep timer
TIME ►	Auto sleep
SPECIAL	
LOCK	

• The OSD (On Screen Display) function enables you to adjust the screen status conveniently since it provides graphical presentation.
• In this manual, the OSD (On Screen Display) may be different from your TV's because it is just an example to help understand the TV operation.

Setup Menu Options

Auto Programme Tuning

- *Up to 100 TV stations can be stored in this set by programme numbers (0 to 99). Once you have preset the stations, you will be able to use the PR ▲ / ▼ or NUMBER buttons to scan the stations you programmed. Stations can be tuned using automatic or manual modes.*

- *In Digital mode, up to 400 TV stations can be stored.*

- *A password is required to gain access to Auto programme or Manual programme menu if the Lock system is turned on.*

- *If you forgot your password, press '7', '7', '7', '7' on the remote control.*

- *In Australia, if no station name can be assigned to a station, the channel number is assigned and stored as ----- followed by a number see 'Assigning a station name' section to assign the station name.*

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

2 Press the ► button and then ▲ / ▼ button to select **Auto programme**.

3 Press the ► button to select **Storage from**.
Select the beginning programme number with the ▲ / ▼ button or NUMBER buttons.

4 Press the ► button to select **To start**.

5 Press the OK button to begin auto programming.
All receivable stations are stored.

To stop auto programming, press the OK button.
When auto programming is completed, the **Programme edit** menu appears on the screen. See the 'Programme Edit' section to edit the stored programme.

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

Setup Menu Options continued

Manual Programme Tuning

* In Digital Mode
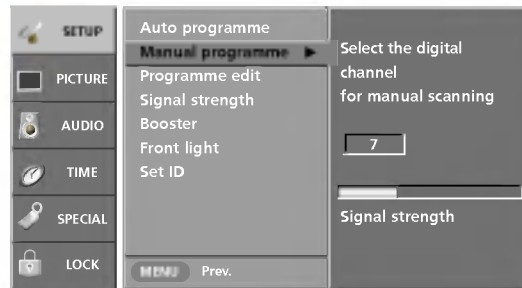
- *Manual programme lets you manually add a programme to your programme list.*

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

2 Press the ► button and then ▲ / ▼ button to select **Manual programme**.

3 Press the ► button and then ▲ / ▼ button to select the channel number you want to add.

4 Press the **OK** button to store the channel. When the channel number you want to add is already added in programme list, the message **"Already programmed channel. Do you want to update?"** will appear. If you want to keep on manual programming, select **YES** with using ◄ / ► button . Then, press the **OK** button. Otherwise select **NO**.

When the programme is stored, the **Programme edit** menu appears on the screen. See the 'Programme Edit' section to edit the stored programme.

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

* In Analogue Mode
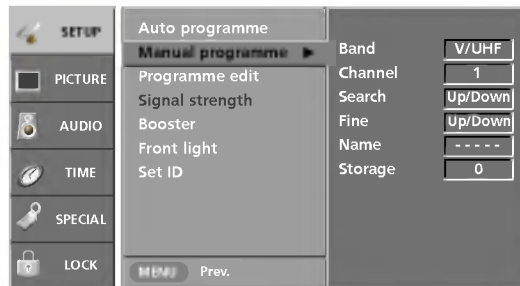
- *Manual programme lets you manually tune and arrange the stations in whatever order you desire. Also you can assign a station name with five characters to each programme number.*

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

2 Press the ► button and then ▲ / ▼ button to select **Manual programme**.

3 Press the ► button to select **Band**. Press the ▲ / ▼ button to select **V/UHF** or **Cable** as required.

4 Press the ► button to select **Channel**. Press the ▲ / ▼ button to select the desired channel number.

5 Press the ► button to select **Search**. Press the ▲ / ▼ button to commence searching. If a station is found the search will stop.

6 If this station is the one required, press the ◄ / ► button to select **Storage**. Select the desired programme number with the ▲ / ▼ button.

7 Press the **OK** button to store it.

8 To store another station, repeat steps 3 to 7.

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

Fine tuning (In Analogue mode only)

SETUP ▶	Auto programme
PICTURE	Manual programme
AUDIO	Programme edit
TIME	Signal strength
SPECIAL	Booster
LOCK	Front light
	Set ID

≫

SETUP	Auto programme		Band	V/UHF
PICTURE	Manual programme ▶		Channel	1
AUDIO	Programme edit		Search	Up/Down
TIME	Signal strength		Fine	Up/Down
SPECIAL	Booster		Name	- - - - -
LOCK	Front light		Storage	0
	Set ID			
	MENU Prev.			

- *Normally fine tuning is only necessary if reception is poor.*

- *The finely tuned programme will be indicated by a yellow number during programme selection.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Manual programme**.

3 Press the ▶ button and then ◄ / ▶ button to select **Fine**.

4 Press the ▲ / ▼ button to fine tune for the best picture and sound.

5 Press the **OK** button to store.

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

Assigning a station name (In Analogue mode only)

SETUP ▶	Auto programme
PICTURE	Manual programme
AUDIO	Programme edit
TIME	Signal strength
SPECIAL	Booster
LOCK	Front light
	Set ID

≫

SETUP	Auto programme		Band	V/UHF
PICTURE	Manual programme ▶		Channel	1
AUDIO	Programme edit		Search	Up/Down
TIME	Signal strength		Fine	Up/Down
SPECIAL	Booster		Name	- - - - -
LOCK	Front light		Storage	0
	Set ID			
	MENU Prev.			

- *You can assign a station name with the characters to each programme number.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Manual programme**.

3 Press the ▶ button and then ◄ / ▶ button to select **Name**.

4 Press the ▲ / ▼ button. You can use the numeric **0** to **9**, the alphabet **A** to **Z** +, -, and blank.

5 Press the ◄ / ▶ button to select the position and make your choice of the second character, and so on.

6 Press the **OK** button.

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

Setup Menu Options continued

Programme Edit
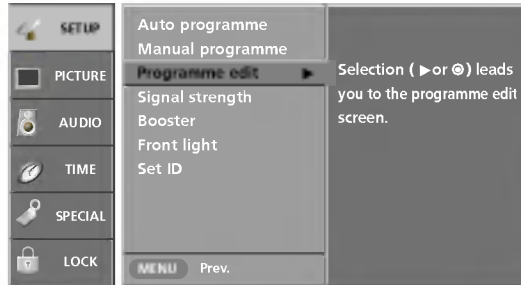
- *This function enables you to delete or skip the stored programmes. Also you can move some stations to other programme numbers or copy blank station data into the selected programme number.*

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

2 Press the ► button and then ▲ / ▼ button to select **Programme edit**.

3 Press the ► button.

■ **Deleting a programme (In Analogue mode only)**
a. Select a programme to be deleted with the ▲ / ▼ / ◄ / ► button.
b. Press the **RED** button twice. The selected programme is deleted, all the following programmes are shifted up one position.

■ **Copying a programme (In Analogue mode only)**
a. Select a programme to be copied with the ▲ / ▼ / ◄ / ► button.
b. Press the **GREEN** button.
c. Move the programme to the desired programme number with the ▲ / ▼ / ◄ / ► button.
d. Press the **GREEN** button again to move the programme. All the following programmes are shifted down one position.

■ **Moving a programme (In Analogue mode only)**
a. Select a programme to be moved with ▲ / ▼ / ◄ / ► button.
b. Press the **YELLOW** button.
c. Move the programme to the desired programme number with the ▲ / ▼ / ◄ / ► button.
d. Press the **YELLOW** button again to release this function.

■ **Skipping a programme number**
a. Select a programme number to be skipped with ▲ / ▼ / ◄ / ► button.
b. Press the **BLUE** button. The skipped programme number turns to blue.
c. 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** ▲ / ▼ button during normal TV viewing. If you want 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 Favourite Programme**
a. Select your favourite programme number with ▲ / ▼ / ◄ / ► button and then press the **FAV** button. It will automatically include the selected programme into your favourite programmes list and a heart-mark will appear in front of that programme number. You can store up to 10 programmes.
Repeatedly press the **FAV** button to select stored favourite programmes in normal TV viewing.
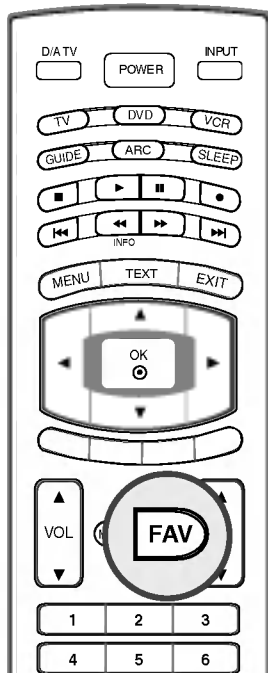
Calling up the Programme Table

- *You can check the programmes stored in the memory by displaying the programme list.*
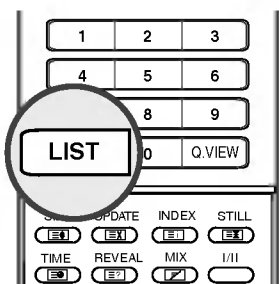
■ **Displaying programme list**
1. Press the **LIST** button to display the Programme table menu.
   The programme table appears on the screen.

- You may find some blue highlighted programmes shown. They have been set up in the programme edit mode.
- Some programmes with the channel number shown in the programme table indicate there is no station name assigned.

■ **Selecting a programme in the programme table**
1. Select a programme with the ▲ / ▼ / ◄ / ► button.
2. The set switches to the chosen programme number.

■ **Paging through a programme table**
1. Press the **PR** ▲ / ▼ button to changes current page into previous/next page.
2. Press the **LIST** button to return to normal TV viewing.

Digital signal strength (In Digital mode only)

- *Reveals how strong your DTV signal is and whether you need to adjust your antenna.*

- *The higher the signal strength, the less likely you are to experience picture degradation.*

- *Digital TV Signals; May not be available in all areas, nor broadcast all programmes.*

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

2 Press the ► button and then ▲ / ▼ button to select **Signal strength**.

3 View the on-screen signal strength monitor to see the strength of the signal being received.

Setup Menu Options continued

Booster
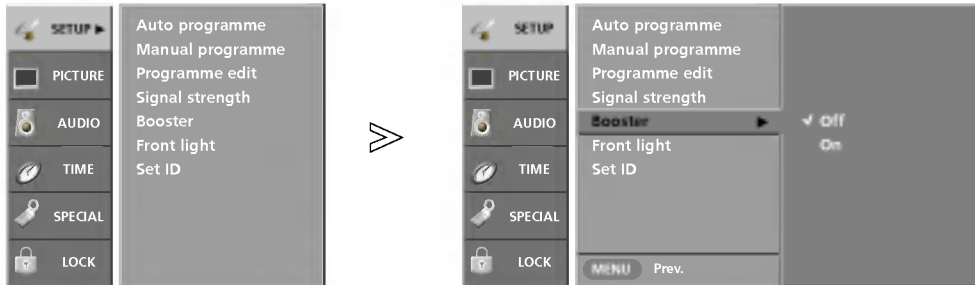
- If the reception is poor at the fringed area of TV signal, select **Booster** to **On**. When the picture condition is good, do not select **Booster** to **On**.

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

2 Press the ► button and then ▲ / ▼ button to select **Booster**.

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

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

Front Light
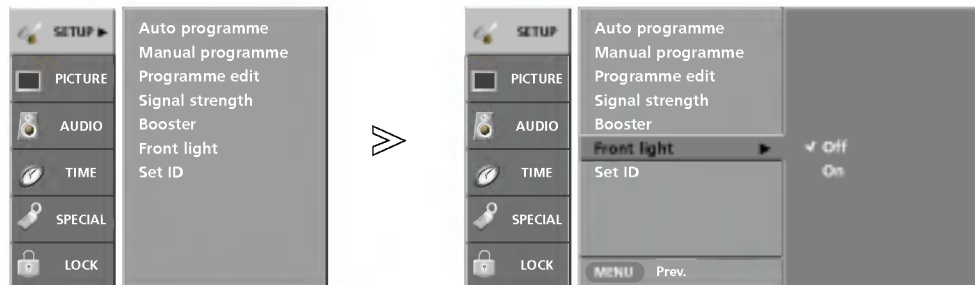
- If you select "**Front light-On**", the lamp on TV front panel turns on.

- Although you select "**Front light-Off**", TV front light turns on for a moment when the TV turns on.

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

2 Press the ► button and then ▲ / ▼ button to select **Front light**.

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

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

Picture Menu Options

PSM (Picture Status Memory)

- This function adjusts the set to the best picture appearance.

- When adjusting picture options (contrast, brightness, colour, sharpness and tint) manually, PSM is automatically changed to **User**.

- Picture options **Dynamic**, **Standard**, **Mild**, and **Game** are preset and programmed for good picture quality at the factory and cannot be changed.

- When selecting **Intelligent eye**, the most suitable picture is automatically adjusted according to the surrounding conditions.

| 7 | 8 | 9 |
| LIST | 0 | Q.VIEW |

SIZE UPDATE INDEX STILL
TIME REVEAL MIX I/II
PIP SWAP PIP INPUT
PSM
SM APM
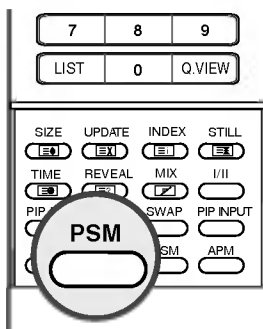
1 Press the **PSM** button repeatedly to select the picture appearance setup option as shown: **Intelligent eye**, **Dynamic**, **Standard**, **Mild**, **Game**, or **User**.
• You can also adjust **PSM** in the **PICTURE** menu.

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

APM (Adaptive Picture Mode)

SIZE UPDATE INDEX STILL
TIME REVEAL MIX I/II
PIP PR- PIP PR+ SWAP
PIP PSM S
APM
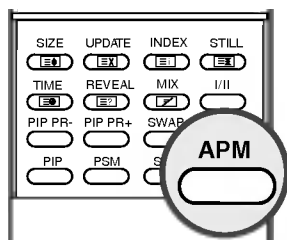
- It allows a viewer to select their preferred picture mode after comparing picture (**Dynamic**, **Standard**, **Mild** and **User**) settings.

- While operating the 4-split, any button except **APM**, **OK**, **EXIT**, **MUTE**, ▲ / ▼ / ◄ / ► button on the remote control are not available.

- APM screen will automatically disappear after approx. 40 seconds unless a button is pressed.

1 Press the **APM** button at once. The screen is divided into 4.

2 Press the ▲ / ▼ / ◄ / ► button to navigate 4 screen.
By pressing the **OK** button, you can select the desired mode.

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

Picture Menu Options continued

Picture Adjustment (PSM-User option)
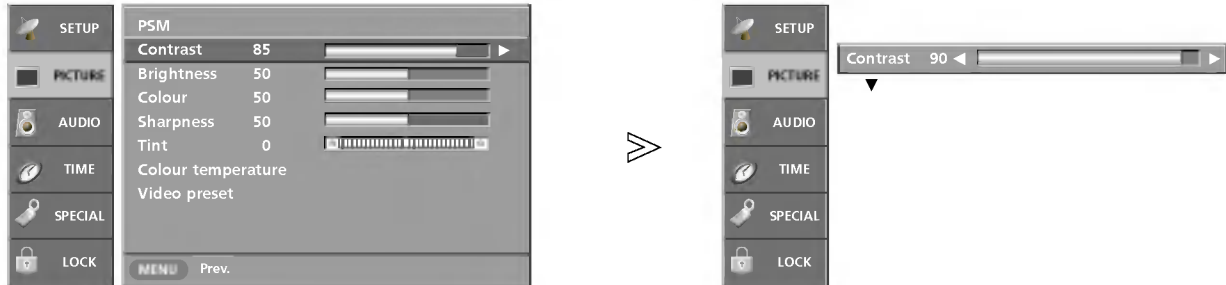
- *You can adjust picture **Contrast**, **Brightness**, **Colour**, **Sharpness**, and **Tint** options to the levels you prefer.*

- *In NTSC AV, Component 60Hz, RGB-DTV 60Hz, HDMI/DVI-DTV 60Hz, RGB-PC, HDMI/DVI-PC mode, **Tint** is available.*

- *The adjustment for PICTURE menu (**Contrast**, **Brightness**, **Colour**, **Sharpness**, and **Tint**) affect both the main and sub picture in PIP or Twin Picture mode.*

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

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

3 Press the ▶ button and then ◀ / ▶ button to make appropriate adjustments.

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

Colour Temperature Control

- *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.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Colour temperature**.

3 Press the ▶ button and then ▲ / ▼ button to select either **Warm**, **Medium**, or **Cool**.

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

Video preset
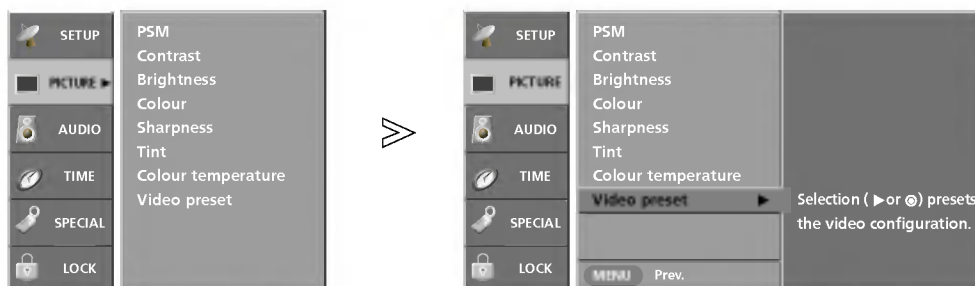
- *Use to quickly reset all the video menu options to their original factory preset values.*

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

2 Press the ► button and then ▲ / ▼ button to select **Video preset**.

3 Press the ► button to reset the video menu options to original values.

Audio Menu Options

SSM (Sound Status Memory)

- **SSM** lets you enjoy the best sound without any special adjustment because the TV sets the appropriate sound options based on the programme content.

- When adjusting sound options (treble and bass) manually, SSM is automatically changed to **User**.

- **Standard**, **Music**, **Movie**, and **Sports** are preset for good sound quality at the factory and are not adjustable.
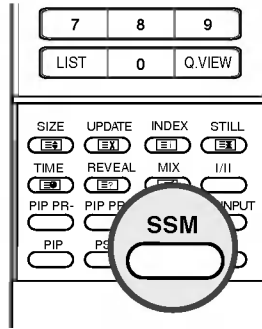
1 Press the **SSM** button repeatedly to select the appropriate sound setup as shown: **Standard**, **Music**, **Movie**, **Sports**, or **User**.
  • You can also adjust **SSM** in the **AUDIO** menu.

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

AVL (Auto Volume Leveller)
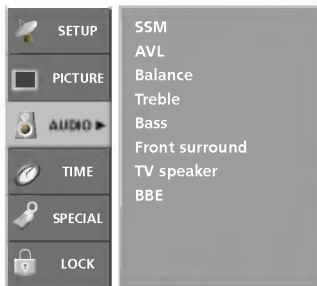
- AVL automatically keeps on an equal volume level even if you change programmes.

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

2 Press the ► button and then ▲ / ▼ button to select **AVL**.

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

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

Adjusting Sound Control

SETUP	SSM
PICTURE	AVL
AUDIO ►	Balance 0 ▶
TIME	Treble 80
SPECIAL	Bass 80
LOCK	Front surround
	TV speaker
	BBE
	MENU Prev.

≫

SETUP	Balance 0 ◄ ▶
PICTURE	▼
AUDIO ►	
TIME	
SPECIAL	
LOCK	
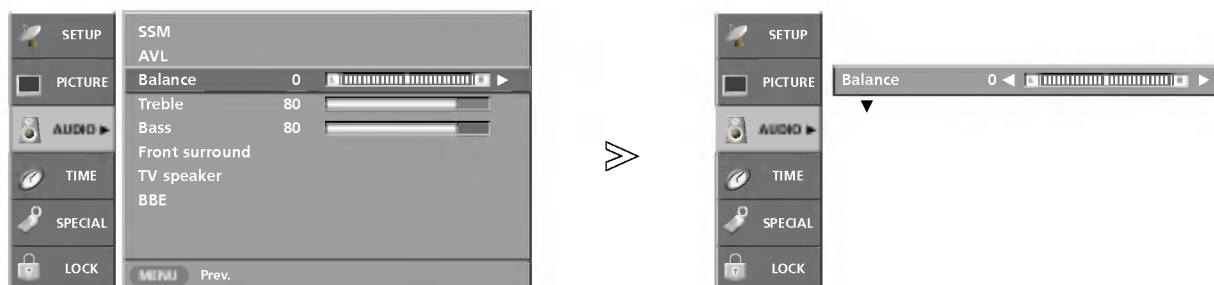
- *Adjust the sound to suit your taste and room situations.*

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

2 Press the ► button and then ▲ / ▼ button to select the desired sound item. (**Balance**, **Treble**, or **Bass**).

3 Press the ► button and then ◄ / ► button to make appropriate adjustments.

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

Front surround

SETUP	SSM
PICTURE	AVL
AUDIO ►	Balance
TIME	Treble
SPECIAL	Bass
LOCK	Front surround
	TV speaker
	BBE

≫

SETUP	SSM	
PICTURE	AVL	
AUDIO	Balance	
TIME	Treble	
SPECIAL	Bass	✓ Off
LOCK	Front surround ►	SRS TruSurround XT
	TV speaker	
	BBE	
	MENU Prev.	
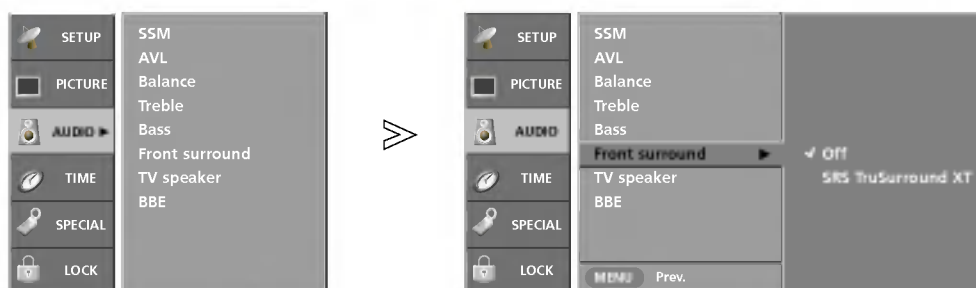
- **SRS** is a trademark of SRS Labs, Inc.

- *TruSurround XT technology is incorporated under license from SRS Labs, Inc.*

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

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

2 Press the ► button and then ▲ / ▼ button to select **Front surround**.

3 Press the ► button and then ▲ / ▼ button to select **Off** or **SRS TruSurround XT**.

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

Mini Glossary

SRS TruSurround XT
Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement that produces an immersive sound experience from standard stereo material.

Audio Menu Options continued

TV Speakers On/Off Setup

- Turn TV speakers off if using external audio equipment. This feature turns the TV Speakers option On or Off.

- In AV 1-2, Component 1-2, RGB-PC/DTV and HDMI/DVI mode, the audio signal of these modes can be outputted even though there is no video signal.

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

2 Press the ► button and then ▲ / ▼ button to select **TV speaker**.

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

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

BBE
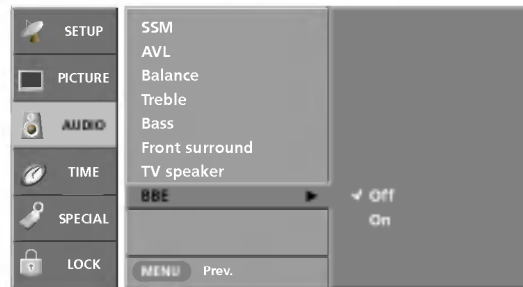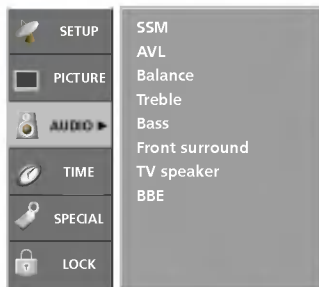
- BBE High Definition Sound restores clarity and presence for better speech intelligibility and music realism.

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

2 Press the ► button and then ▲ / ▼ button to select **BBE**.

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

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

• **BBE** Manufactured under license from BBE Sound, Inc.

Stereo Reception (In Analogue mode only)
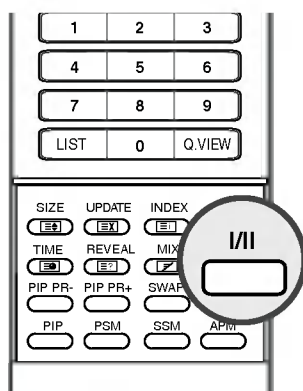
Broadcast	On Screen Display
Mono	**MONO**
Stereo	**MONO / STEREO**

■ **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 depth of sound is improved. To switch back to stereo, press the **I/II** button twice again.

Sound output selection

- *In AV 1-2, Component 1-2, RGB-PC/DTV or HDMI/DVI 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.
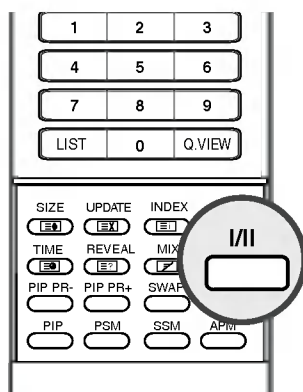
• **In digital mode**, repeatedly press the **I/II** button to change the audio mode (**MPEG** or **DOLBY DIGITAL**).

Time Menu Options

Auto clock setup

- The time is automatically set from a digital channel signal.

- The digital channel signal includes information for the current time provided by the broadcasting station.

- Set the clock manually, if the current time is set incorrectly by the auto clock function.

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

2 Press the ► button and then ▲ / ▼ button to select **Auto clock**.

3 Press the ► button and then ▲ / ▼ button to select **On**.

4 Press the ► button and then ▲ / ▼ button to select your viewing area time zone; **NSW/ACT**, **NT**, **TAS**, **WA**, **SA**, **QLD**, or **VIC**.

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

Manual clock setup

- If current time setting is wrong, reset the clock manually.

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

2 Press the ► button and then ▲ / ▼ button to select **Manual clock**.

3 Press the ► button and then use ◄ / ► button to select either the year, date, or time option. Once selected, use the ▲ / ▼ button to set the year, date, and time options.

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

On/Off Time Setup
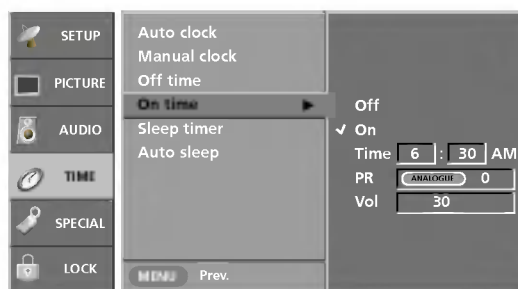
- *Time function operates only if current time has been set.*

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

- *The TV must be in standby mode for the On-Time to work.*

- *If you do not press any button within 2 hours after the TV turns on with the On Time function, the TV will automatically revert to standby mode.*

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

2 Press the ► button and then use ▲ / ▼ button to select **Off time** or **On time**.

3 Press the ► button and then use ▲ / ▼ button to select **On**.
  • To cancel **On/Off time** function, select **Off**.

4 Press the ► button and then use ▲ / ▼ button to set the hour.

5 Press the ► button and then use ▲ / ▼ button to set the minutes.

6 **For only On time function**
  Press the ► button and then use ▲ / ▼ button to select the programme at turn-on.
  Press the ► button and then use ▲ / ▼ button to set the sound level at turn-on.

7 Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

Sleep Timer
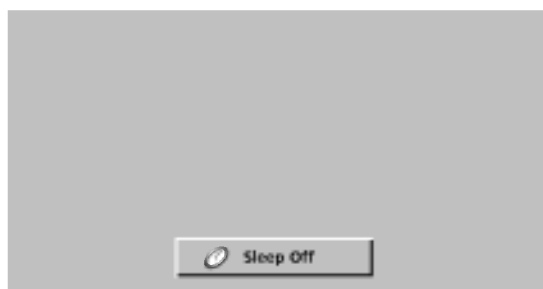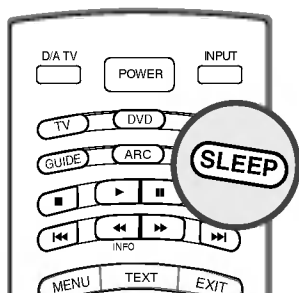
- *You don't have to remember to switch the set off before you go to sleep.*

- *The sleep timer automatically switches the set to standby after the preset time has elapsed.*

- *You can also use the **TIME** menu to adjust **Sleep timer**.*

1 Press the **SLEEP** button repeatedly to select the number of minutes. The display 'Off' will appear on the screen, followed by 10, 20, 30, 60, 90, 120, 180 and 240.

2 When the number of minutes you want is displayed on the screen, the timer begins to count down from the number of minutes selected.

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

4 To cancel the sleep time, repeatedly press the **SLEEP** button until the display '**Sleep timer Off**' appears.

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

Time Menu Options continued

Auto sleep

SETUP	Auto clock	
PICTURE	Manual clock	
AUDIO	Off time	
TIME ▶	On time	
SPECIAL	Sleep timer	
LOCK	Auto sleep	

≫

SETUP	Auto clock	
PICTURE	Manual clock	
AUDIO	Off time	
TIME	On time	
SPECIAL	Sleep timer	
LOCK	Auto sleep ▶	Off ✓ On
	MENU Prev.	
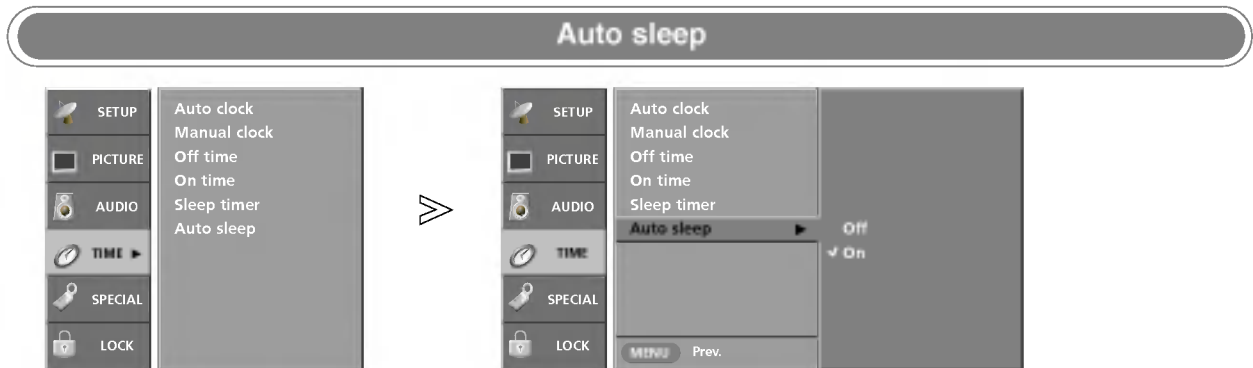
- *If there is no input signal, the set will turn off automatically after 10 minutes.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Auto sleep**.

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

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

Special Menu Options

Main Picture Source Selection

SETUP Main input	SETUP Main input ▶ ✓ Digital
PICTURE Sub input	PICTURE Sub input Analogue
Subtitle	Subtitle AV 1
AUDIO Child lock	AUDIO Child lock AV 2
ARC	ARC Component1
TIME Cinema	TIME Cinema Component2
Auto demo	Auto demo RGB-PC
SPECIAL ▶	SPECIAL HDMI/DVI
LOCK	LOCK MENU Prev.
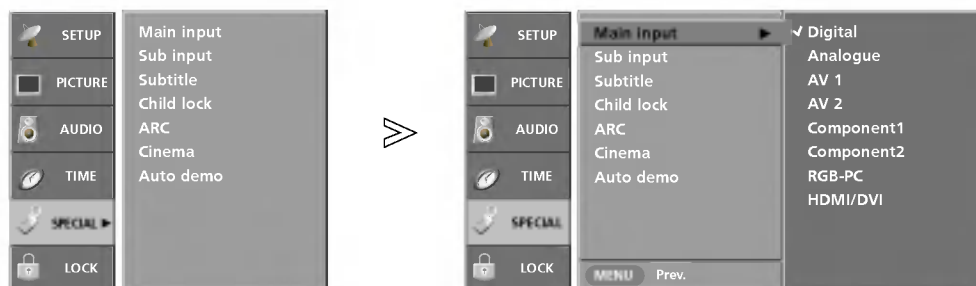
- Alternatively you can select the Digital, Analogue, AV-2, Component 1-2, RGB-PC (or RGB-DTV) or HDMI/DVI mode by pressing the **INPUT** button.

- Press the **D/A TV** button to select digital or analogue mode.

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

2 Press the ▶ button and then ▲ / ▼ button to select **Main input**.

3 Press the ▶ button and then ▲ / ▼ button to select **Digital**, **Analogue**, **AV 1**, **AV 2**, **Component 1**, **Component 2**, **RGB-PC**, **RGB-DTV**, or **HDMI/DVI**.
 • To toggle RGB-DTV and RGB-PC, select RGB-DTV (or RGB-PC) and press ▶ button.

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

Subtitle (In Digital mode only)

SETUP Main input	SETUP Main input
PICTURE Sub input	PICTURE Sub input
Subtitle	Subtitle ▶ ✓ Off
AUDIO Child lock	AUDIO Child lock On
ARC	ARC
TIME Cinema	TIME Cinema
Auto demo	Auto demo
SPECIAL ▶	SPECIAL
LOCK	LOCK MENU Prev.

- You can select Subtitle on or off with the **TEXT** button in DTV mode.

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

2 Press the ▶ button and then ▲ / ▼ button to select **Subtitle**.

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

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

Special Menu Options continued

Child Lock

SETUP	Main input	
PICTURE	Sub input	
AUDIO	Subtitle	
	Child lock	
TIME	ARC	
SPECIAL ▶	Cinema	
LOCK	Auto demo	

⟩

SETUP	Main input		
PICTURE	Sub input		
AUDIO	Subtitle	✓ Off	
	Child lock ▶	On	
TIME	ARC		
SPECIAL	Cinema		
LOCK	Auto demo		
	MENU Prev.		
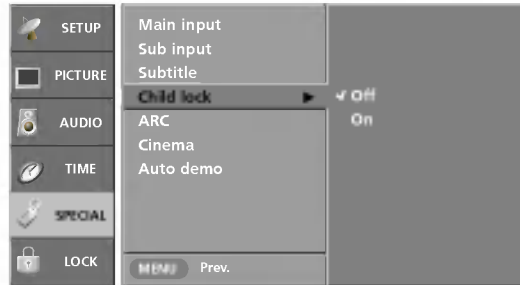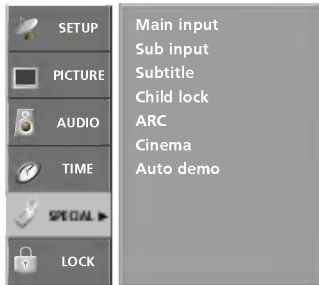
- *The TV can be set so that the remote control is needed to control it. This feature can be used to prevent unauthorized viewing.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Child lock**.

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

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

- • With the lock on, the display '**Child lock : On**' appears on the screen if any button on the front panel is pressed while viewing the TV.
- • The display '**Child lock : On**' will not appear on the screen if any button on the front panel is pressed while displaying the menus.

Picture Format

- *You can watch TV in various picture formats; Auto, 4:3, 16:9 (Wide), 14:9, Zoom and Cinema zoom.*
- *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.*

1 Press the **ARC** button repeatedly to select the desired picture format.
 • You can also adjust **ARC** in the **SPECIAL** menu.

Auto → 4:3 → 16:9 → 14:9 → Zoom → Cinema zoom → (back to Auto)
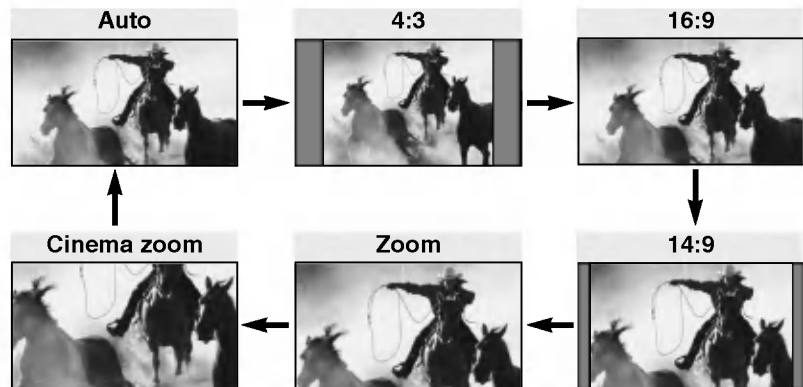
- • In HDMI/DVI-PC and RGB-PC mode, 4:3 and 16:9 is available.
- • Auto: When your TV receives the wide screen signal, it will be automatically changed to the picture format to be sent. (Not available in all countries)
- • You can adjust the enlarge proportion of Cinema Zoom using ▲ / ▼ button. The adjustment range is 1 ~ 16.
- • You can move the Zoom screen using ▲ / ▼ button. The adjustment range is -16 ~ +16.
- • You can move the 14:9 screen using ▲ / ▼ button. The adjustment range is -10 ~ +10.

Cinema Mode Setup

SETUP	Main input		
PICTURE	Sub input		
AUDIO	Subtitle		
TIME	Child lock		
SPECIAL ▶	ARC		
LOCK	Cinema		
	Auto demo		

≫

SETUP	Main input		
PICTURE	Sub input		
AUDIO	Subtitle		
TIME	Child lock		
SPECIAL	ARC		
LOCK	Cinema ▶	✔ Off	
	Auto demo	On	
	MENU Prev.		
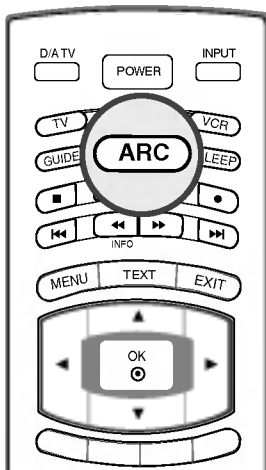
- *Most movies are 24 frames/sec, but TV signal is 25 frames/sec.*

- *This option lets the TV do 3:2 pull-down operation for you to watch movies at the best motion appearance.*

- *This feature operates only in AV 60Hz and Component 480i mode.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Cinema**.

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

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

Auto Demo (Review)

SETUP	Main input		
PICTURE	Sub input		
AUDIO	Subtitle		
TIME	Child lock		
SPECIAL ▶	ARC		
LOCK	Cinema		
	Auto demo		

≫

SETUP	Main input		
PICTURE	Sub input		
AUDIO	Subtitle		
TIME	Child lock		
SPECIAL	ARC		
LOCK	Cinema		
	Auto demo ▶	Selection (▶or ◉) leads you to the Auto Demo.	
	MENU Prev.		

- *Shows you how to navigate the set's on-screen menus.*

- *Use to scan the features and menu options available on your TV.*

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

2 Press the ▶ button and then ▲ / ▼ button to select **Auto demo**.

3 Press the ▶ button to start the auto demonstration.

4 Press the **EXIT** button to stop Auto demo.

Lock Menu Options

Parental Lock Setup

SETUP	Lock system
PICTURE	Set password
AUDIO	Block programme
TIME	Parental guidance
SPECIAL	Aux. block
LOCK ►	

≫

SETUP	Lock system ►	✔ Off
PICTURE	Set password	On
AUDIO	Block programme	
TIME	Parental guidance	
SPECIAL	Aux. block	
LOCK	MENU Prev.	
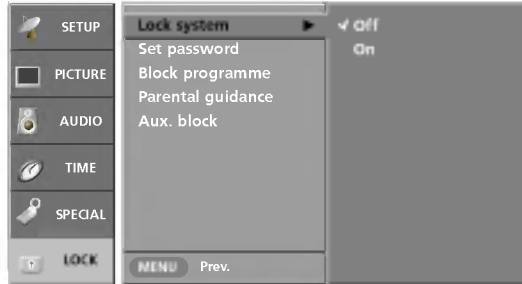
- *Set up blocking schemes to block specific programme, ratings, and external viewing sources.*

- *A password is required to gain access to this menu if the Lock System is turned on.*

• If you ever forget your password, key in '7', '7', '7', '7' on the remote control.

1 Press the **MENU** button and then ▲ / ▼ button to select the **LOCK** menu. Then, press the ► button
   • If **Lock** is already set, enter the password as requested.
   • The TV is set up with the initial password "0-0-0-0".

2 Use the ▲ / ▼ button to choose from the following Lock Menu options. Once the option is selected, change the settings to your preference.
   • **Lock System:** Activates or disables the blocking scheme you set up previously.
   • **Set Password**: Change the password by inputting a new password twice.
   • **Block programme**: Select a channel number that you wish to block.
   • **Parental guidance (Digital only):** Prevents children from watching certain children's TV programs, according to the ratings limit set.

Blocking Off	Permits all programs
G	General audience
PG	Parental guidance suggested
M	Mature audiences
MA	Mature adult audiences
AV	Adult audiences
R	Restricted

   • **Aux. block:** Enables you to select a source to block from the external source devices you have hooked up.

AV 1, 2	On, Off
Component 1, 2	On, Off
RGB and HDMI/DVI	On, Off

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

PIP (Picture-In-Picture)/POP/Twin Picture

- *PIP lets you view 2 different inputs (sources) on your TV screen at the same time. One source will be large, and the other source will show a smaller inset image.*
- *Twin Picture mode splits the screen into 2, allowing 2 picture sources to be shown on the TV screen at the same time. Each source is given half the screen.*

Watching PIP/POP/Twin Picture
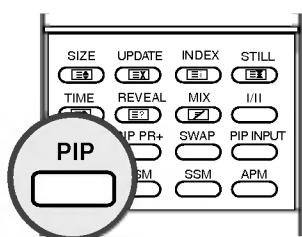
1 Press the **PIP** button to access the sub picture. Each press of PIP changes the PIP options as shown below.

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

PIP Mode → POP Mode → Twin Picture Mode

PIP Off

- When the sub picture size is 1/2 of the main picture, the picture quality may deteriorate.
- The motion of the sub picture can be unnatural because the set displays full screen by synchronizing the main picture source when the refresh rate between the main picture source and the sub picture source is different in PIP mode.

Selecting an Input Signal Source for PIP/Twin Picture
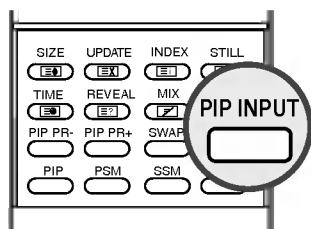
Use the **PIP INPUT** button to select the input source for the sub picture. Each press of **PIP INPUT** button changes the PIP source.
- You can also select sources for the **Sub Input** in the **SPECIAL** menu.

Main Picture Source	Available Sub Picture Sources
Digital	Analogue, AV1, and AV2
Analogue	Digital, AV1, and AV2
AV1-2, Component1-2, RGB, HDMI/DVI	Digital, Analogue, AV1-2

Programme selection for sub picture
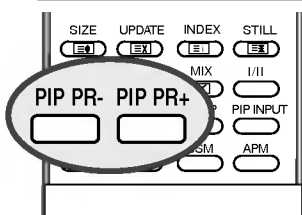
1 Press the **PIP** button.

2 Select the Digital or Analogue option on the **Sub Input** menu or with the **PIP INPUT** button. Use the **PIP PR+ / PIP PR-** button to select a channel for the sub picture.

Moving the PIP Sub Picture

In PIP mode, press the ▲ / ▼ / ◄ / ► button to move the sub picture to a different location on the screen.

Adjusting Main and Sub Picture Sizes for Twin Picture

i.e)

Use the ▲ / ▼ / ◄ / ► button to change main and sub picture sizes in Twin Picture mode.

Swapping the PIP/Twin Picture

Use the **SWAP** button to switch the main and sub pictures.
• When the main picture is Digital, Analogue or AV modes, the swapping is available.

PIP

SWAP

Main Picture   Sub Picture

Twin Picture

SWAP
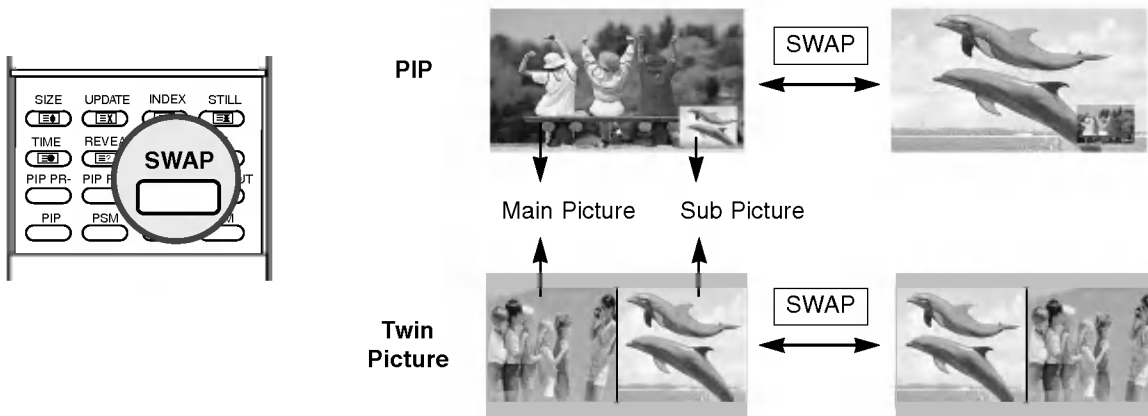
POP (Picture-out-of-Picture: Channel Scan)

- *Use POP to search the programs of all the memorized channels one-by-one on the 3 PIP screen display, (while the main picture source remains the current channel). The pictures of all the programmed channels are searched with the 3 POP screen.*
- *Run Auto programme before using POP mode.*

1 Press the **PIP** button to activate the POP mode while in PIP mode.
  • **Channel selection:** Use ◄ button to enlarge the selected channel being searched on the PIP screen to shift it for viewing on the Main screen.
  • **PIP selection:** Use ▲ / ▼ button to select one of 3 PIP screen pictures in POP mode.
  • When watching Analogue TV on Main picture, Digital TV on Sub pictures are in channel scanning. However, when watching Digital TV on Main picture, only Analogue TV on Sub picture is in channel scanning.

2 Press the **EXIT** button to cancel POP mode.

Teletext

* This feature is not available in all countries.

- Teletext is a free service broadcast by most TV stations which gives up-to-the-minute information on news, weath-er, 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 appears on the screen.
Two page numbers, TV station name, date and time are displayed on the screen headline. The first page number indi-cates your selection, while the second shows the current page displayed.
Press the **TEXT** or **EXIT** button to switch off teletext.

SIMPLE Text

* This feature is not available in all countries.

■ Page selection

1. 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.
2. The **PR ▲ / ▼** button can be used to select the preceding or following page.

TOP Text

* This feature is not available in all countries.

- 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

1. With the blue button you can progress from block to block.
2. Use the yellow button to proceed to the next group with automat-ic overflow to the next block.
3. 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.
4. The red button permits to return to previous selection. Alternatively the **PR ▼** button can be used.

■ Direct page selection

Corresponding to the 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**

1. Press the 𝖤𝗂 button to select the index page.
2. You can select the pages which are colour coded along the bottom line with the same coloured buttons.
3. Corresponding to the SIMPLE teletext mode, you can select a page by entering its three digit page number with the NUMBER buttons in FASTEXT mode.
4. The **PR ▲ / ▼** 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 of riddles or puzzles.
Press this button again to remove the information from the display.

SIZE
Selects double height text.
Press this button to enlarge the top half of the page.
Press this button again to enlarge the bottom half of the page.
Press this button again to return to the normal display.

UPDATE
Displays the TV picture on the screen while waiting for the new teletext page.
Press this button to view the updated teletext page.

STILL
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 inhibited.
To continue press this button again.

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

TIME
a. 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.
b. 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, or **PR ▲ / ▼** buttons. Press this function again to exit.

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 broadcasted by broadcasting companies.

Switch on/off EPG
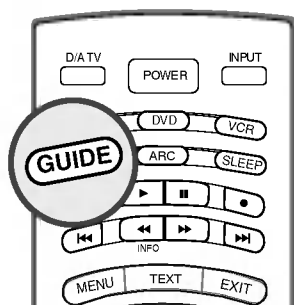
Press the **GUIDE** button to switch on EPG.
Press the **GUIDE** or **EXIT** button again to switch off EPG and return to TV viewing.

Select a programme

Press the ▲ / ▼ , ◄ / ► button to select desired programme, then press the **OK** button to display the selected programme.

Remote Control Buttons	Function
RED	Shows the TV or Radio programmes
GREEN	The detail information on or off

Reference
External Control Device Setup

- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the Monitor's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the TV back panel.
- RS-232C connection cables are not supplied with the TV.
- The set remote control and front panel controls (except main power) will not be functional if the Monitor is controlled by a PC computer or other external device.

RS-232C Setup

PC
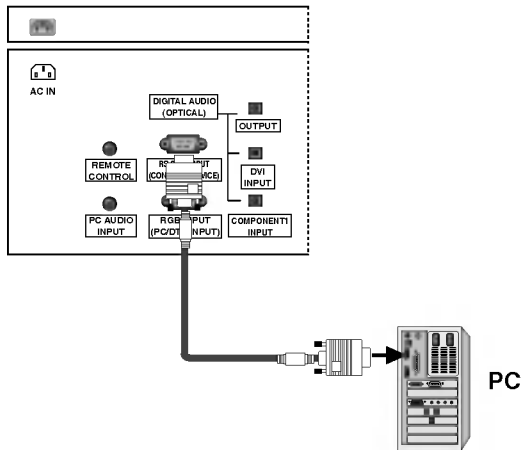
Type of Connector; D-Sub 9-Pin Male

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		4	DTR
DSR	6		6	DSR
RTS	7		7	RTS
CTS	8		8	CTS

D-Sub 9   D-Sub 9
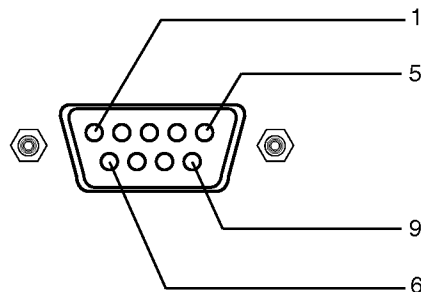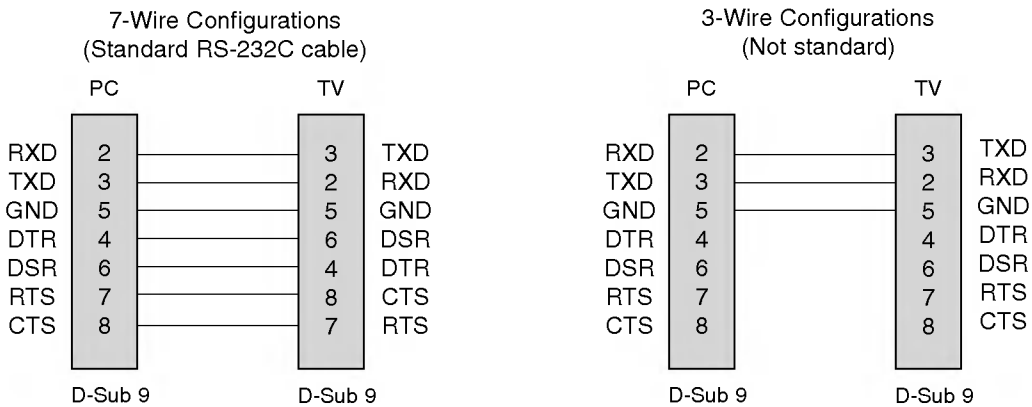
Set ID

- Use this function to specify a monitor ID number.
- Refer to 'Real Data Mapping'. See page 52.

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

2. Press the ► button and then use ▲ / ▼ button to select **Set ID**.

3. Press the ► button and then use ▲ / ▼ button to adjust **Set ID** to choose the desired monitor ID number. The adjustment range of **Set ID** is 1 ~ 99.

4. Press **EXIT** button to return to TV viewing or press **MENU** button to return to the previous menu.

SETUP	Auto programme
PICTURE	Manual programme
	Programme edit
AUDIO	Signal strength
	Booster
TIME	Front light
SPECIAL	Set ID ►
LOCK	
	MENU Prev.
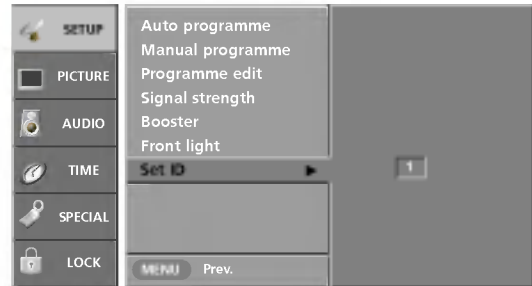
Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None
- Stop bit : 1 bit
- Communication code : ASCII code

* Use a crossed (reverse) cable.

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	0 ~ 8
03. Aspect Ratio	k	c	Refer to P.52
04. Screen Mute	k	d	0 ~ 1
05. Volume Mute	k	e	0 ~ 1
06. Volume Control	k	f	0 ~ 64
07. Contrast	k	g	0 ~ 64
08. Brightness	k	h	0 ~ 64
09. Colour	k	i	0 ~ 64
10. Tint	k	j	0 ~ 64
11. Sharpness	k	k	0 ~ 64
12. OSD Select	k	l	0 ~ 1
13. Remote Control Lock Mode	k	m	0 ~ 1
14. PIP/Twin Picture	k	n	0 ~ 3
15. PIP Position	k	q	0 ~ 3
16. Treble	k	r	0 ~ 64
17. Bass	k	s	0 ~ 64
18. Balance	k	t	0 ~ 64
19. Colour Temperature	k	u	0 ~ 2
20. PIP Input Source	k	y	0 ~ 3
21. Channel Tuning	m	a	Refer to P. 54
22. Key	m	c	Refer to P. 54
23. Input Select	x	b	Refer to P. 54
24. PIP Input Select	x	y	Refer to P. 54

Transmission / Receiving Protocol

Transmission

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

* [Command 1]: First command to control the set. (k, m or x)
* [Command 2]: Second command to control the set.
* [Set ID]: You can adjust the set ID to choose desired monitor ID number in Setup menu. Adjustment range is 1 ~ 99. When selecting Set ID '0', every connected the 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 1: Illegal Code
        2: Not supported function
        3: Wait more time

01. Power (Command2:a)

▶ To control Power On/Off of the TV.

Transmission

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

Data 0 : Power Off   1 : Power On

Acknowledgement

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

* In a like manner, if other functions transmit 'FF' data
   based on this format, Acknowledgement data feedback
   presents status about each function.

02. Input Select (Command2:b) (Main Picture Input)

▶ To select input source for the TV.

Transmission

[k][b][ ][Set ID][ ][Data][Cr]

Data 0: Digital   5: Component 2
      1: Analogue   6: RGB-DTV
      2: AV1   7: RGB-PC
      3: AV2   8: HDMI/DVI
      4: Component 1

Acknowledgement

[b][ ][Set ID][ ][OK][Data][x]

03. Aspect Ratio (Command2:c) (Main picture format)

▶ To adjust the screen format.
   You can also adjust the screen format using the ARC but-
   ton on remote control or in the Special menu.

Transmission

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

Data 0: Auto   18: Zoom (-16)
      1: 4:3   ⋮
      2: 16:9   28: Zoom (0)
      3: 14:9 (-10)   ⋮
         ⋮   38: Zoom (16)
      D: 14:9 (0)   39: Cinema Zoom (1)
         ⋮   ⋮
      17: 14:9 (10)   48: Cinema Zoom (16)

Acknowledgement

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

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

04. Screen Mute (Command2:d)

▶ To select screen mute on/off.

Transmission

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

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

Acknowledgement

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

05. Volume Mute (Command2:e)

▶ To control volume mute on/off.
   You can also adjust mute using the MUTE button on
   remote control.

Transmission

[k][e][ ][Set ID][ ][Data][Cr]

Data 0 : Volume mute off (Volume on)
      1 : Volume mute on (Volume off)

Acknowledgement

[e][ ][Set ID][ ][OK][Data][x]

06. Volume Control (Command2:f)

▶ To adjust volume.
   You can also adjust volume with the volume buttons
   on remote control.

Transmission

[k][f][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      ● Refer to 'Real data mapping' as shown below.

Acknowledgement

[f][ ][Set ID][ ][OK][Data][x]

07. Contrast (Command2:g)

▶ To adjust screen contrast.
   You can also adjust contrast in the Picture menu.

Transmission

[k][g][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      ● Refer to 'Real data mapping' as shown below.

Acknowledgement

[g][ ][Set ID][ ][OK][Data][x]

08. Brightness (Command2:h)

▶ To adjust screen brightness.
   You can also adjust brightness in the Picture menu.

Transmission

[k][h][ ][Set ID][ ][Data][Cr]

Data Min : 0 ~ Max : 64
      ● Refer to 'Real data mapping' as shown below.

Acknowledgement

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

---

* **Real data mapping 1**

0 : Step 0
⋮
A : Step 10
⋮
F : Step 15
10 : Step 16
⋮
64 : Step 100

* Tint : R50 ~ G50
* Balance : L50 ~ R50

09. Colour (Command2:i)

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

Transmission

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

Data   Min : 0 ~ Max : 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

[i][ ][Set ID][ ][OK][Data][x]

10. Tint (Command2:j)

▶ To adjust the screen tint.(only 60Hz)
You can also adjust tint in the Picture menu.

Transmission

[k][j][ ][Set ID][ ][Data][Cr]

Data   Red : 0 ~ Green : 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

[j][ ][Set ID][ ][OK][Data][x]

11. Sharpness (Command2:k)

▶ To adjust the screen sharpness.
You can also adjust sharpness in the Picture menu.

Transmission

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

Data   Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

[k][ ][Set ID][ ][OK][Data][x]

12. OSD Select (Command2:l)

▶ To select OSD (On Screen Display) on/off.

Transmission

[k][l][ ][Set ID][ ][Data][Cr]

Data 0: OSD mute off   1: OSD mute on

Acknowledgement

[l][ ][Set ID][ ][OK][Data][x]

* When setting "OSD - Off", every OSD doesn't display on screen.

13. Remote Control Lock Mode (Command2:m)

▶ To lock the remote control and the front panel controls on the set.

Transmission

[k][m][ ][Set ID][ ][Data][Cr]

Data 0: Lock off   1: Lock on

Acknowledgement

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

14. PIP/ Twin picture (Command2:n)

▶ To control the PIP (Picture-in-Picture)/POP/Twin picture.
You can also control the PIP/POP/Twin picture using the PIP button on the remote control.

Transmission

[k][n][ ][Set ID][ ][Data][Cr]

Data   0: PIP off   2: POP
       1: PIP   3: Twin picture

Acknowledgement

[n][ ][Set ID][ ][OK][Data][x]

15. PIP Position (Command2:q)

▶ To select sub picture position for PIP.

Transmission

[k][q][ ][Set ID][ ][Data][Cr]

Data   0: Right down on screen
       1: Right up on screen
       2: Left up on screen
       3: Left down on screen

Acknowledgement

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

16. Treble (Command2:r)

▶ To adjust treble.
You can also adjust treble in the Audio menu.

Transmission

[k][r][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

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

17. Bass (Command2:s)

▶ To adjust bass.
You can also adjust bass in the Audio menu.

Transmission

[k][s][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

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

18. Balance (Command2:t)

▶ To adjust balance.
You can also adjust balance in the Audio menu.

Transmission

[k][t][ ][Set ID][ ][Data][Cr]

Data   Min: 0 ~ Max: 64

• Refer to 'Real data mapping'. See page 52.

Acknowledgement

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

19. Colour Temperature (Command2:u)

► To adjust colour temperature.
You can also adjust colour temperature in the Picture menu.

Transmission

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

Data 0: Medium   1: Cool 2: Warm

Acknowledgement

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

20. PIP Input Select (Command2:y)

► To select input source for sub picture in PIP/Twin picture mode.

Transmission

[k][y][ ][Set ID][ ][Data][Cr]

Data 0: Digital
      1: Analogue
      2: AV1
      3: AV2

Acknowledgement

[y][ ][Set ID][ ][OK][Data][x]

21. Channel Tuning (Command: m a)

► To tune channel to following programme number

Transmission

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

Data 0: High channel data
Data 1: Low channel data
Data 2: 00: Analogue TV Main
          01: Analogue TV Sub
          10: Digital Main
          11: Digital Sub

ex) Analogue TV Main: ma 0 00 01 00
    Digital Sub: ma 0 00 0A 11

* **Channel Data Range:**
  Analogue TV: 0 ~ 63
  Digital TV: 0 ~ 3E7

22. Key (Command: m c)

► To send IR remote key code

Transmission

[m][c][ ][Set ID][ ][Data][Cr]

Data Key code: Refer to page 56.

Acknowledgement

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

* In this function, it's unavailable to use the IR code "**08** (POWER)" and "**C4** (Power On)".

23. Input Select (Command:x b) (Main Picture Input)

► To select input source for main picture.

Transmission

[x][b][ ][Set ID][ ][Data][Cr]

* Data Structure

DATA(Hex)	INPUT
00	Digital
10	Analogue
20	AV1
21	AV2
40	Component1
41	Component2
50	RGB-DTV
60	RGB-PC
90	HDMI/DVI

Acknowledgement

[b][ ][Set ID][ ][OK][Data][x]

24. PIP Input Select (Command:x y)

► To select the input source for sub picture in PIP mode.

Transmission

[x][y][ ][Set ID][ ][Data][Cr]

* Data Structure

DATA(Hex)	INPUT
00	Digital
10	Analogue
20	AV1
21	AV2

Acknowledgement

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

IR Code

How to Connect

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

Remote Control IR Codes

► **Output waveform**

Single pulse, modulated with 37.917KHz signal at 455KHz

Carrier frequency

$F_{CAR} = 1/T_C = f_{OSC}/12$
Duty ratio $= T1/T_C = 1/3$
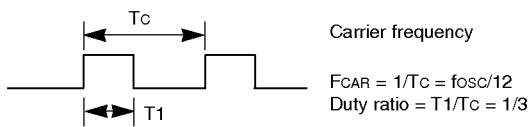
► **Configuration of frame**

• 1st frame

Lead code	Low custom code								High custom code								Data code								$\overline{\text{Data code}}$							
	C0	C1	C2	C3	C4	C5	C6	C7	C0	C1	C2	C3	C4	C5	C6	C7	D0	D1	D2	D3	D4	D5	D6	D7	D0	D1	D2	D3	D4	D5	D6	D7

• Repeat frame

Repeat code

Tf

► **Lead code**

9 ms

4.5 ms

► **Repeat code**

0.55 ms

9 ms

2.25 ms

► **Bit description**

• Bit "0"

0.56 ms

1.12 ms

• Bit "1"

0.56 ms

2.24 ms
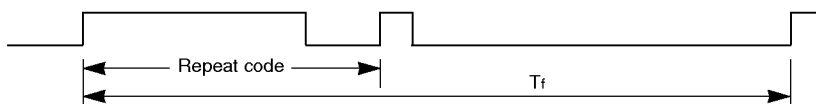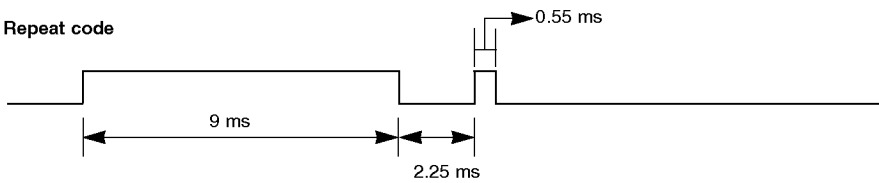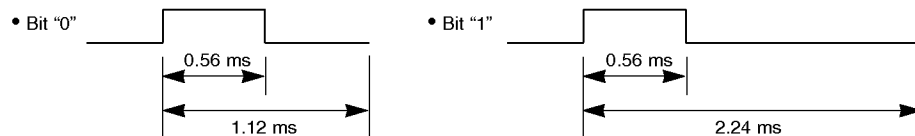
► **Frame interval : Tf**

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

Tf

Tf

Tf=108ms @455KHz
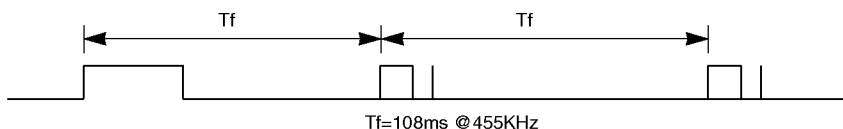
Code (Hexa)	Function	Note
0B	INPUT	Remote Control Button
D6	TV	Discrete IR Code (Input TV Selection)
5A	AV1	Discrete IR Code (Input AV1 Selection)
D0	AV2	Discrete IR Code (Input AV2 Selection)
BF	Component1	Discrete IR Code (Input Component1 Selection)
D4	Component2	Discrete IR Code (Input Component2 Selection)
D5	RGB-PC	Discrete IR Code (Input RGB-PC Selection)
D7	RGB-DTV	Discrete IR Code (Input RGB-DTV Selection)
C6	HDMI/DVI	Discrete IR Code (Input HDMI/DVI Selection)
08	POWER	Remote Control Button (Power On/Off)
C4	POWER ON	Discrete IR Code (Only Power On)
C5	POWER OFF	Discrete IR Code (Only Power Off)
A9	GUIDE	Remote Control Button
50	D/A TV	Remote Control Button
B1	■	Remote Control Button
B0	▶	Remote Control Button
BA	‖	Remote Control Button
B2	|◀◀	Remote Control Button
AA	◀◀ (INFO)	Remote Control Button
7D	▶▶	Remote Control Button
B3	▶▶|	Remote Control Button
43	MENU	Remote Control Button
20	TEXT	Remote Control Button
5B	EXIT	Remote Control Button
07	◀	Remote Control Button
40	▲	Remote Control Button
41	▼	Remote Control Button
06	▶	Remote Control Button
44	OK ◉	Remote Control Button
72	RED	Remote Control Button
71	GREEN	Remote Control Button
63	YELLOW	Remote Control Button
61	BLUE	Remote Control Button
02	VOL▲	Remote Control Button
03	VOL▼	Remote Control Button
09	MUTE	Remote Control Button
79	ARC	Remote Control Button
76	Ratio 4:3	Discrete IR Code (Only 4:3 mode)
77	Ratio 16:9	Discrete IR Code (Only 16:9 mode)
AF	Ratio Zoom	Discrete IR Code (Only Zoom mode)
00	PR▲	Remote Control Button
01	PR▼	Remote Control Button
10 ~ 19	Number Key 0~ 9	Remote Control Button
53	LIST	Remote Control Button
1A	Q.VIEW	Remote Control Button
62	UPDATE	Remote Control Button
64	SIZE	Remote Control Button
65	STILL	Remote Control Button
70	INDEX	Remote Control Button
26	TIME	Remote Control Button
2A	REVEAL	Remote Control Button
24	MIX	Remote Control Button
0A	I/II	Remote Control Button
C1	PIP PR-	Remote Control Button
C0	PIP PR+	Remote Control Button
C2	SWAP	Remote Control Button
C3	PIP INPUT	Remote Control Button
60	PIP	Remote Control Button
1E	FAV	Remote Control Button
0E	SLEEP	Remote Control Button
92	APM	Remote Control Button
4D	PSM	Remote Control Button
52	SSM	Remote Control Button

Programming the Remote

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

Programming the Remote

1 To find out whether your remote can operate the device without programming, turn on the device such as a VCR and press the corresponding mode button on the remote.
After that, press the **POWER** button. If the device is turned off then it responds properly and the remote need not to be programmed. If not, the remote should be programmed to operate the device. The programming procedures are explained below.

2 Press the **MENU** and **MUTE** button continuously at the same time for 2 seconds, the current selected device button will be illuminated.
If you don't press any button for 20 seconds, the light on the mode button will be turned off. In that case, you have to repeat from step 2.

3 Enter code numbers using the number button on the remote by referring to the code table on the following pages. When pressing the button, the light blinks each time. If the device turned off, the programming is successful.

4 Press the **MENU** button to store the code. After blinking twice, this code is stored.

5 Test the remote functions to see if the device responds properly. If not, repeat from step 2.

Programming Codes

■ VCRs

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

■ DVD

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

Troubleshooting Checklist

The operation does not work normally.	
The remote control doesn't work	• Check to see if there is any object between the product and the remote control causing obstruction. • Are batteries installed with correct polarity (+ to +, - to -)? • Correct remote operating mode set: TV, VCR etc.? • Install new batteries.
Power is suddenly turned off	• Is the sleep timer set? • Check the power control settings. Power interrupted • No broadcast on station tuned with Auto off activated.

The video function does not work.	
No picture & No sound	• Check whether the product is turned on. • Try another channel. The problem may be with the broadcast. • Is the power cord inserted into wall power outlet? • Check your antenna direction and/or location. • Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.
Picture appears slowly after switching on	• This is normal, the image is muted during the product startup process. Please contact your service centre, if the picture has not appeared after five minutes.
No or poor colour or poor picture	• Adjust Colour in menu option. • Keep a sufficient distance between the product and the VCR. • Try another channel. The problem may be with the broadcast. • Are the video cables installed properly? • Activate any function to restore the brightness of the picture.
Horizontal/verti-cal bars or pic-ture shaking	• Check for local interference such as an electrical appliance or power tool.
Poor reception on some channels	• Station or cable product experiencing problems, tune to another station. • Station signal is weak, reorient antenna to receive stronger station. • Check for sources of possible interference.
Lines or streaks in pictures	• Check antenna (Change the direction of the antenna).

The audio function does not work.	
Picture OK & No sound	• Press the **VOL** or **VOLUME** button. • Sound muted? Press **MUTE** button. • Try another channel. The problem may be with the broadcast. • Are the audio cables installed properly?
No output from one of the speakers	• Adjust Balance in menu option.
Unusual sound from inside the product	• A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.

There is a problem in PC mode. (Only PC mode applied)	
The signal is out of range.	• Adjust resolution, horizontal frequency, or vertical frequency. • Check it whether the signal cable is connected or loose. • Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	• Work the Auto configure Or adjust clock, phase, or H/V position. *(This feature is not available for all models.)*
Screen colour is unstable or single colour	• Check the signal cable. • Reinstall the PC video card.