LG

PLASMA TV

OWNER'S MANUAL

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

Model number :
Serial number :

Safety Instructions

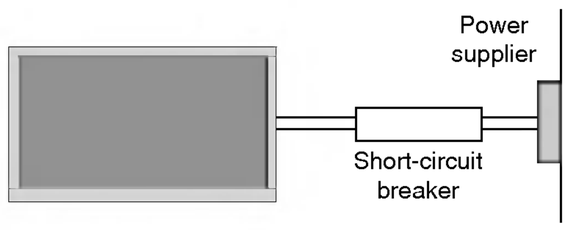
⚠ WARNING

Do not place the set in direct sunlight or near heat sources such as heat registers, stove and so on.
- This may cause a fire.

Do not use the set in damp place such as a bathroom or any place where it is likely to get wet.
- This may cause a fire or could give an electric shock.

Bend antenna cable between inside and outside building to prevent rain from flowing in.
- This may cause water damaged inside the set and could give an electric shock.

Earth wire should be connected.
- If the earth wire is not connected, there is possible a danger of electric shock caused by the current leakage.
- If grounding methods are not possible, a separate circuit breaker should be employed and installed by a qualified electrician.



- Do not connect ground to telephone wires, lightning rods or gas pipe.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
- This may cause a fire or could give an electric shock.

Do not insert any object into the exhaust vent.
- This may cause a fire or could give an electric shock.

Do not place heavy objects on the set.
- This may cause serious injury to a child or adult.

Do not use water while cleaning the set.
- This may cause damaged the set or could give an electric shock.

In case of smoke or strange smell from the set, switch it off ,unplug it from the wall outlet and contact your dealer or service centre.
- This may cause a fire or could give an electric shock.

Do not attempt to service the set yourself. Contact your dealer or service centre.
- This may cause damaged the set or could give an electric shock.

During storm activity, unplug the set from the wall outlet and don't touch the antenna cable.
- This may cause damaged the set or could give an electric shock.

DISCONNECTING DEVICE FROM MAINS
- Mains plug is the disconnecting device. The plug must remain readily operable.

* Safety instructions have two kinds of information, and each meaning of it is as below.

⚠WARNING **The violation of this instruction may cause serious injuries and even death.**

⚠NOTES **The violation of this instruction may cause light injuries or damage of the product.**

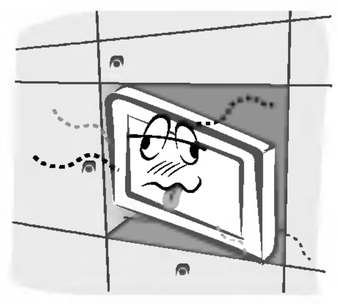
⚠ **Take care of danger that may happen under specific condition.**

⚠NOTES

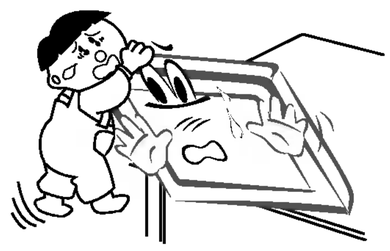
Never touch the power plug with a wet hand.
- This may cause an electric shock.

Disconnect from the mains and remove all connections before moving.

Do not place the set in a built-in installation such as a bookcase or rack.
- Ventilation required.



When installing the set on a table, be careful not to place the edge of its stand on the end of the table.
- This may cause the set to fall, causing serious injury to a child or adult, and serious damage to the set.



Do not place an outside antenna in the vicinity of overhead power lines or other electric light or power circuits.
- This may cause an electric shock.

There should be enough distance between an outside antenna and power lines to keep the former from touching the latter even when the antenna falls.
- This may cause an electric shock.

Do not pull the plug not the cord when disconnecting.
- This may cause a fire.

Ensure the power cord doesn't trail across any hot objects like a heater.
- This may cause a fire or an electric shock.

Do not plug in unit if power cord or plug is damaged or the connecting part of the power outlet is loose.
- This may cause a fire or an electric shock.

Dispose of used batteries carefully to prevent a child from eating them.
- In case of a child eating them, contact doctor immediately.

When moving the set assembled with speakers do not carry holding the speakers.
- This may cause the set to fall, causing serious injury to a child or adult, and serious damage to the set.

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
- This may cause damage the set or could give an electric shock.

Contact the service centre once a year to clean the internal part of the set.
- Accumulated dust can cause mechanical failure.

The distance between eyes and the screen should be approx. 5 ~ 7 times the diagonal length of the screen away.
- If not, eyes will strain.

Unplug the set from the wall outlet when it is left unattended and unused for long periods of time or in the occurrence of a state of emergency.
- Accumulated dust may cause a fire or an electric shock from deterioration through electric leakage.

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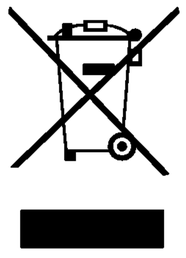
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After reading this manual, keep it in a place where the user can refer to easily.

Disposal of your old appliance



1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

Introduction

What is a Plasma Display ?

If voltage is inputted to gas in glass panels, ultraviolet rays are outputted and fused with a fluorescent substance. At this moment, light is emitted. A Plasma Display is a next generation flat Display using this phenomenon.

160° - Wide angle range of vision

A Plasma Display provides more than 160° angle range of vision so that you can get a picture without distortion from any direction.

Easy installation

A Plasma Display is much lighter and smaller than other same class products so that you can install the Plasma Display in the desired place.

Big screen

The screen of a Plasma Display is 42" so that you can get vivid experience as if you are in a theater.

Multimedia Plasma Display

A Plasma Display can be connected with a computer so that you can use it as a screen for conference, game, internet and so on.

The explanation about coloured dots may be present on PDP screen

The PDP which is the display device of this product is composed of 0.9 to 2.2 million cells and a few cell defects can occur in the manufacture of the PDP. Several coloured dots visible on the screen would be acceptable, in line with other PDP manufacturers and would not mean that the PDP is faulty. We hope you will understand that the product which corresponds to this standard is regarded as acceptable. It means that it could not be changed or refunded.
We promise that we'll do our best to develop our technology to minimize the cell defects.

Digital Video Broadcasting

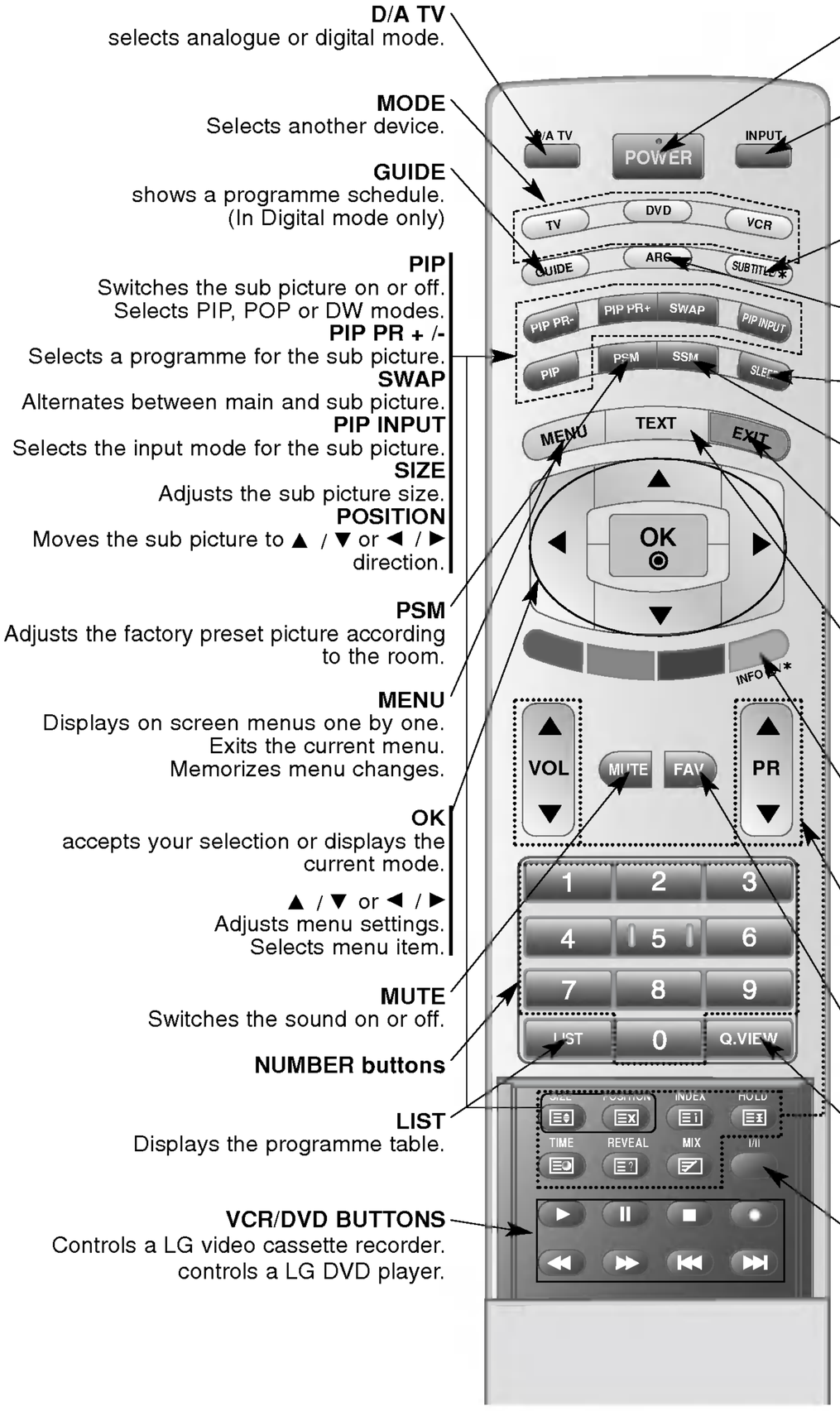
Trade Mark of the DVB Digital Video Broadcasting Project (1991 to 1996)

ID Number(s): 3463: 42PX4DVA

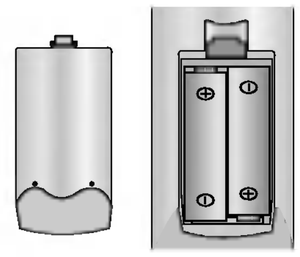
WARNING
TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Remote Control Key Functions

- When using the remote control aim it at the remote control sensor of the set.
- There maybe a defect in consecutive operation of remote control in a specified brightness according to this set.



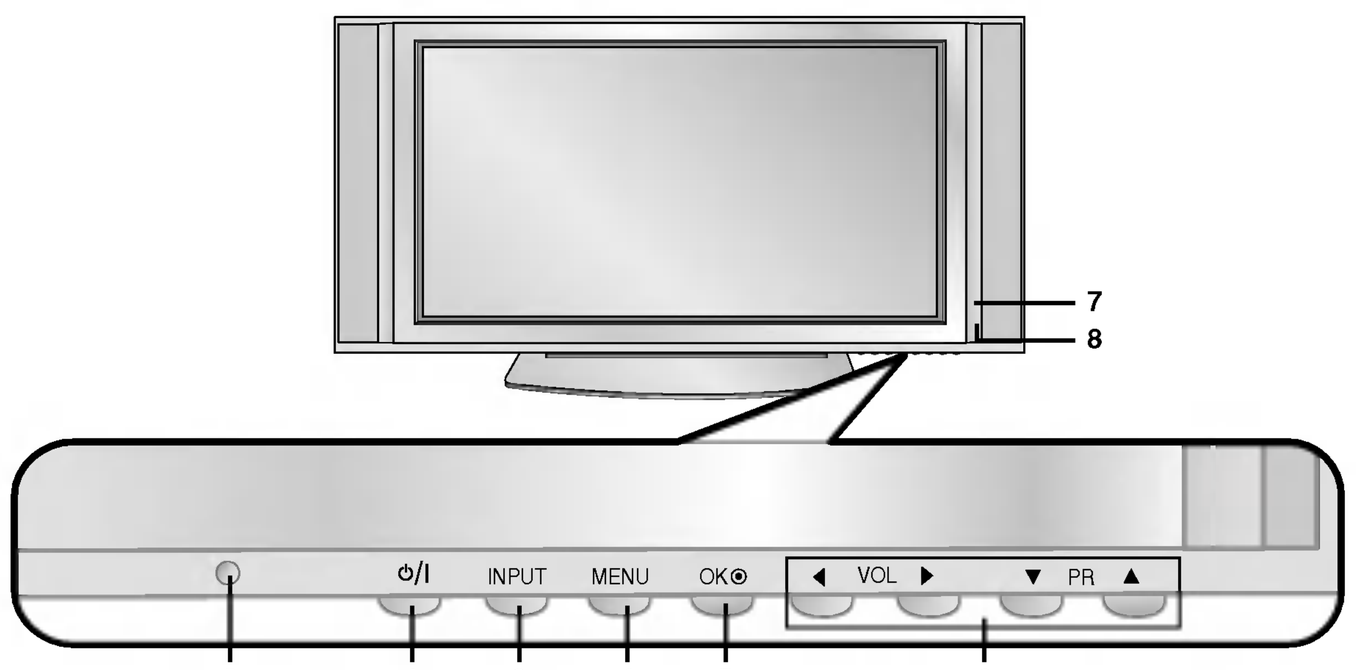
Installing Batteries



- Open the battery compartment cover on the back side and insert the batteries with correct polarity.
- Install two 1.5V alkaline batteries of AA type. Don't mix used batteries with new batteries.

Location and Function of Controls

<Front Panel Controls>



1. **Power Button**
   Switches the set on from standby or off to standby.

2. **Remote Control Sensor**

3. **INPUT Button**
   Selects the DTV, TV, AV, Component, RGB or HDMI modes.
   Switches the set on from standby.

4. **MENU**
   Displays on screen menus one by one.
   Exits the current menu.
   Memorizes menu changes.

5. **OK**
   Accepts your selection or displays the current mode.

6. **▲ / ▼ (Programme Up/Down)**
   Selects a programme or a menu item.
   Switches the set on from standby.
   ◄ / ► (Volume Up/Down)
   Adjusts the volume.
   Adjusts menu settings.

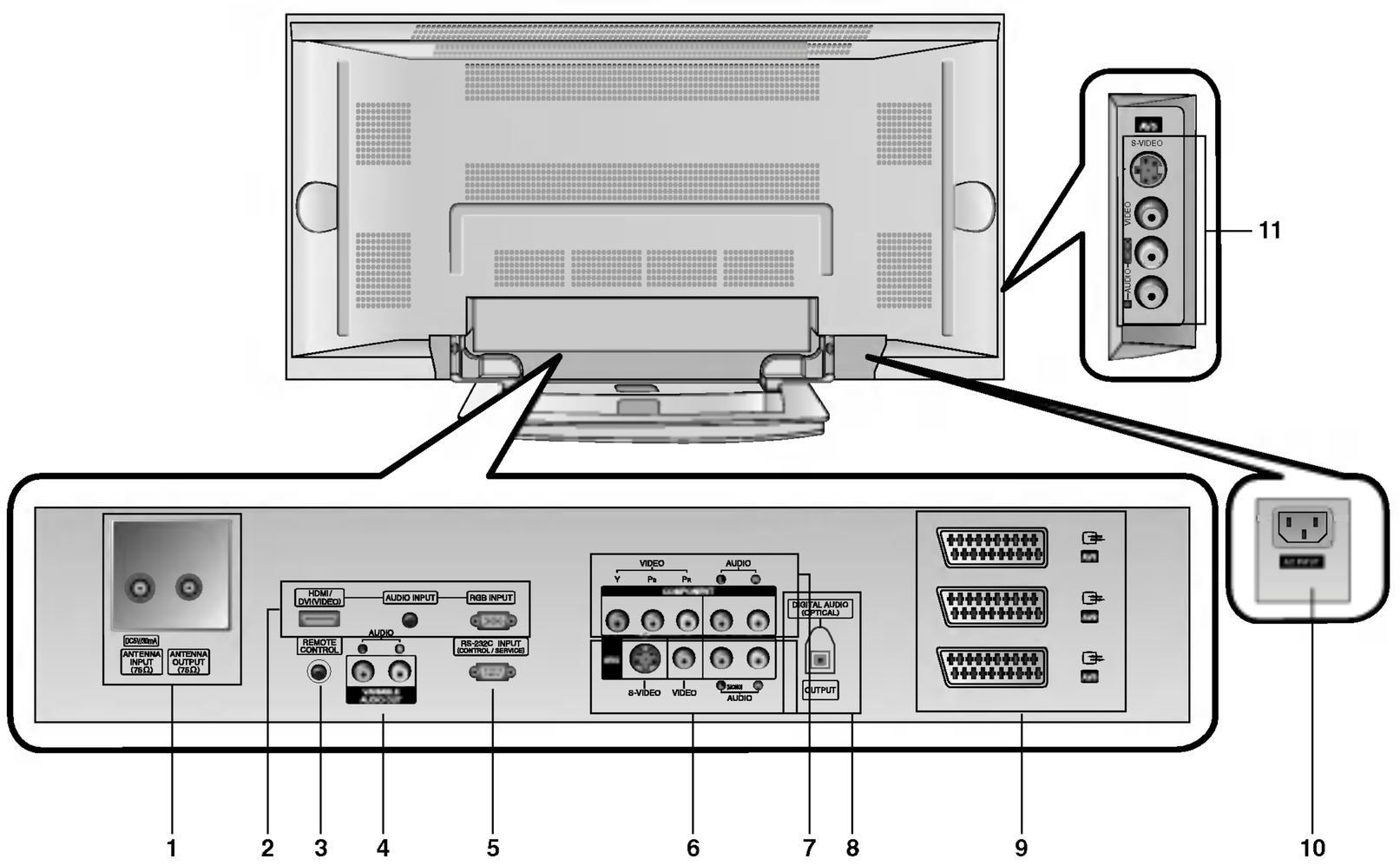
7. **Power Indicator**
   Illuminates red in standby mode, Illuminates green when the set is turned on

8. **Intelligent Eye**
   Adjusts picture according to the surrounding conditions.

Location and Function of Controls

- Shown is a simplified representation of the set.
- What is shown here may be somewhat different from your set.
- This manual explains the features available on the 42PX4DVA series.

<Back Panel>

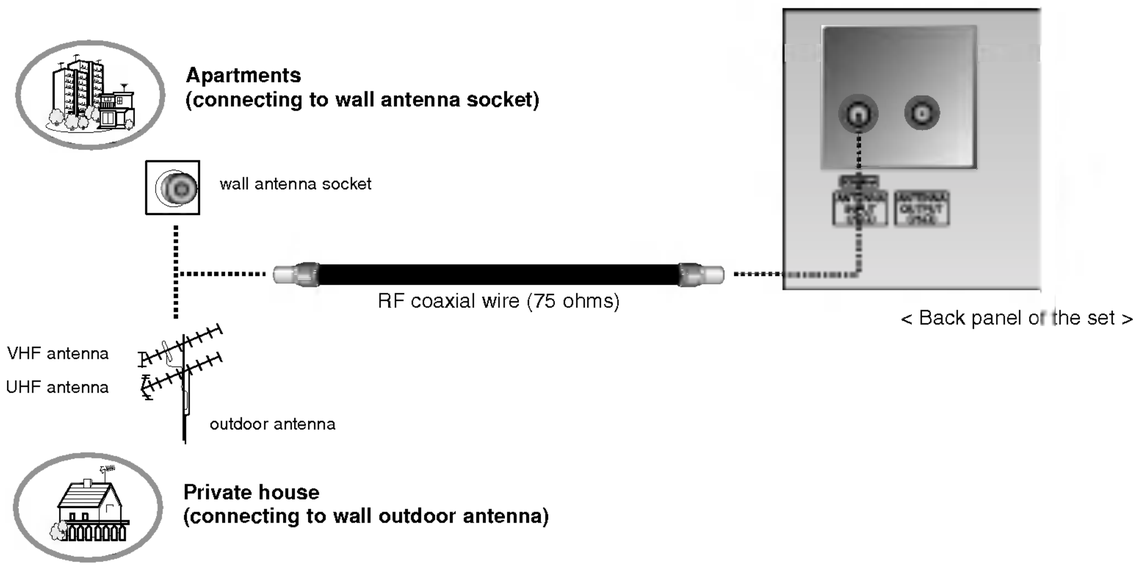


1. **ANTENNA INPUT/OUTPUT**
2. **HDMI(DVI VIDEO) / AUDIO INPUT / RGB INPUT**
   Connect the monitor output socket of the PERSONAL COMPUTER to this socket.
   Note: *If you want to use RGB/DVI audio, we strongly recommend that you use the cable that has a core, or the EMI Filter core along with separate cable.*
3. **REMOTE CONTROL**
4. **VARIABLE AUDIO OUT SOCKETS**
5. **RS-232C INPUT (CONTROL/SERVICE) PORT**
   Connect to the RS-232C port on a PC.
6. **AUDIO/VIDEO IN SOCKETS (AV4)**
   Connect the audio/video out sockets of external equipment to these sockets.
   S-VIDEO/AUDIO IN SOCKETS
   Connect the S-VIDEO out socket of an VCR to the **S-VIDEO** socket.
   Connect the audio out sockets of the VCR to the audio sockets as in **AV4**.
7. **COMPONENT INPUT**
   Connect DVD video outputs to Y, P_B, P_R of COMPONENT INPUT and audio outputs to Audio sockets of AUDIO INPUT.
8. **DIGITAL AUDIO OPTICAL OUTPUT**
   Used to connect either an external amplifier, or add a sub-woofer to your surround sound system if it has a digital audio optical input.
   Note: *In standby mode, this port will not work.*
9. **EURO SCART SOCKET**
   Connect the euro scart socket of the VCR to these sockets.
   Note:
   a. If you want to use the EURO scart cable, you have to use the signal shielded Euro scart cable.
   b. If the S-VIDEO(Y/C) signal is received through the Euro scart socket 2 (AV2), you must change to the S-Video2 mode.
10. **POWER CORD SOCKET**
    This set operates on AC power. The voltage is indicated on the Specifications page. Never attempt to operate the set on DC power.
11. **AUDIO/VIDEO IN SOCKETS (AV5)**
    S-VIDEO/AUDIO IN SOCKETS

External Equipment Viewing Setups

Antenna Connection

- Be careful not to bend the bronze wire when connecting to an antenna port.
- 5V antenna power works In Digital mode only. (Refer to p. 23)



Watching VCR

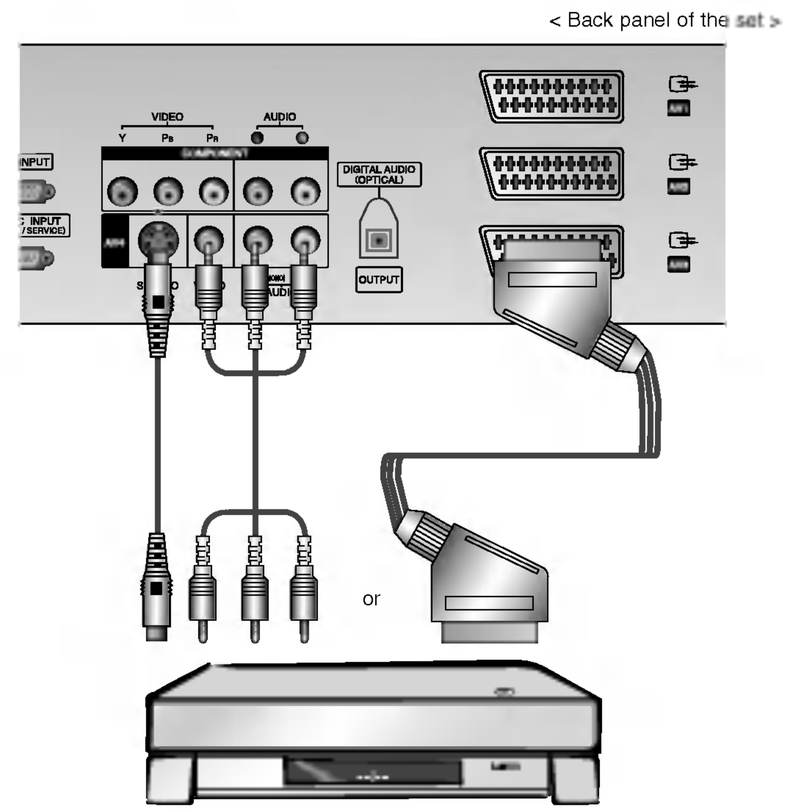
- When connecting the set to external equipment, match the colours of connecting ports (Video - yellow, Audio (L) - white, Audio (R) -red).
- Connect the VIDEO OUTPUT socket (yellow) to the VIDEO INPUT on the set.
- If you have a mono VCR, connect the audio cable from the VCR to the AUDIO (L/MONO) input on the set.
- If you connect an S-VIDEO VCR to the S-VIDEO input, the picture quality is improved; compared to connecting a regular VCR to the Video input.
- Or, connect the Euro scart socket of the VCR to the Euro scart socket of the set.
- Use the orbiter function to Avoid having a fixed image remain on the screen for a long period of time. Typically a frozen still picture from a VCR. (Refer to p. 32)
  If a 4:3 picture format is used; the fixed image may remain visible on the screen.
- To avoid picture noise (interference), leave an adequate distance between the VCR and the set.

Watching TV programmes

- Turn the set on and select the programme you want.

Watching VCR

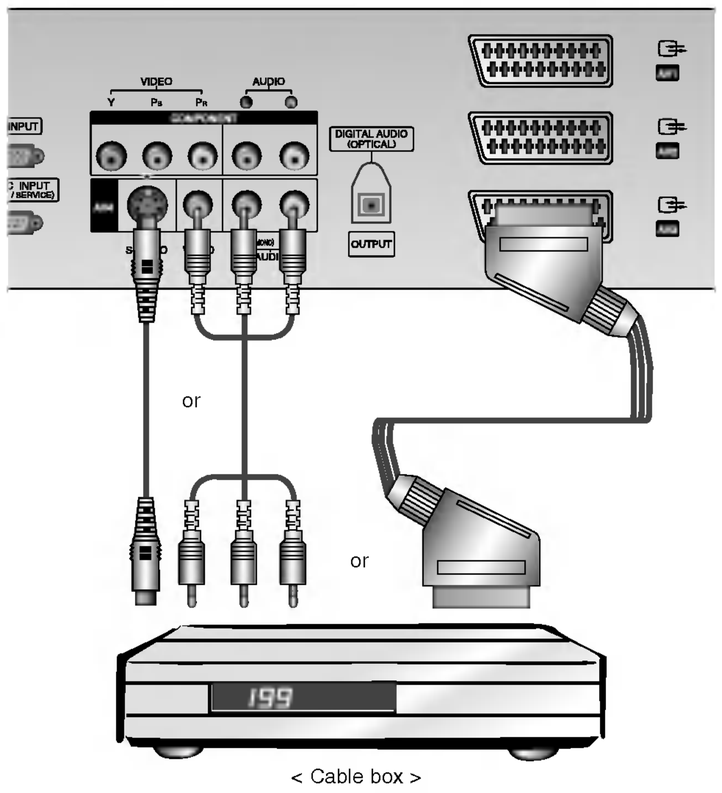
1. Use the **INPUT** button on the remote control to select **AV1**, **AV2**, **S-Video2**, **AV3**, **AV4** or **AV5**.
   - If both S-VIDEO and VIDEO sockets have been connected to the S-VHS VCR simultaneously, only the S-VIDEO can be received.
2. Insert a video tape into the VCR and press the **PLAY** button on the VCR.
   (See VCR owner's manual)



External Equipment Viewing Setups

Watching Cable TV

< Back panel of the set >



< Cable box >

- 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.

To watch cable TV

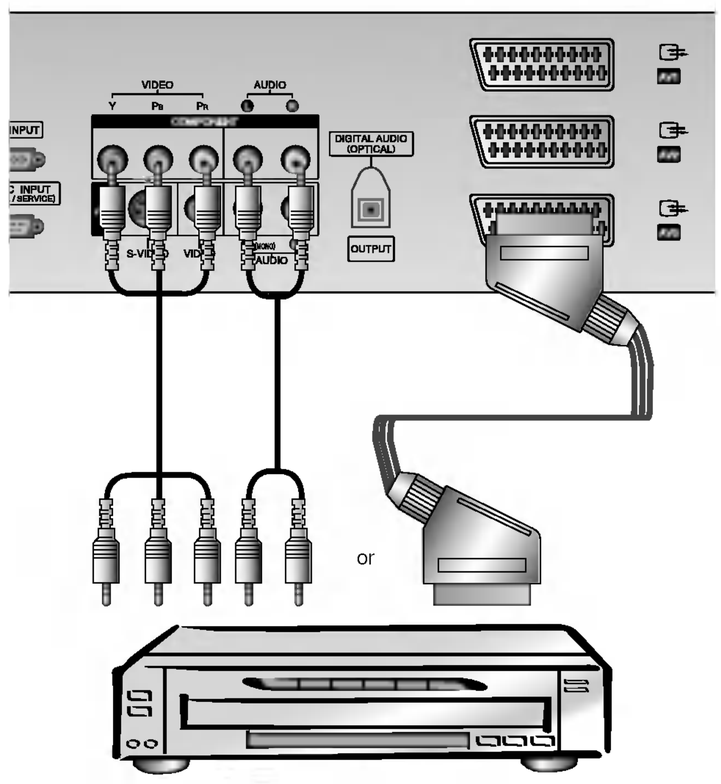
1. Use the **INPUT** button on the remote control to select **AV1**, **AV2**, **S-Video2**, **AV3**, **AV4** or **AV5**.
   - If both S-VIDEO and VIDEO sockets have been connected to the Cable box simultaneously, only the S-VIDEO can be received.
2. Select your desired channel with the remote control for cable box.

Watching DVD

How to connect

1. Connect the DVD video outputs (Y, P_B, P_R) to the COMPONENT (Y, P_B, P_R) INPUT jacks on the set and connect the DVD audio outputs to the AUDIO INPUT jacks on the set, as shown in the figure.
2. If your DVD only has an S-Video output jack, connect this to the S-VIDEO input on the set and connect the DVD audio outputs to the AUDIO INPUT jacks on the set, as shown in the figure.
   Note: *If your DVD player does not have component video output, use S-Video.*

< Back panel of the set >



< DVD player >

How to use

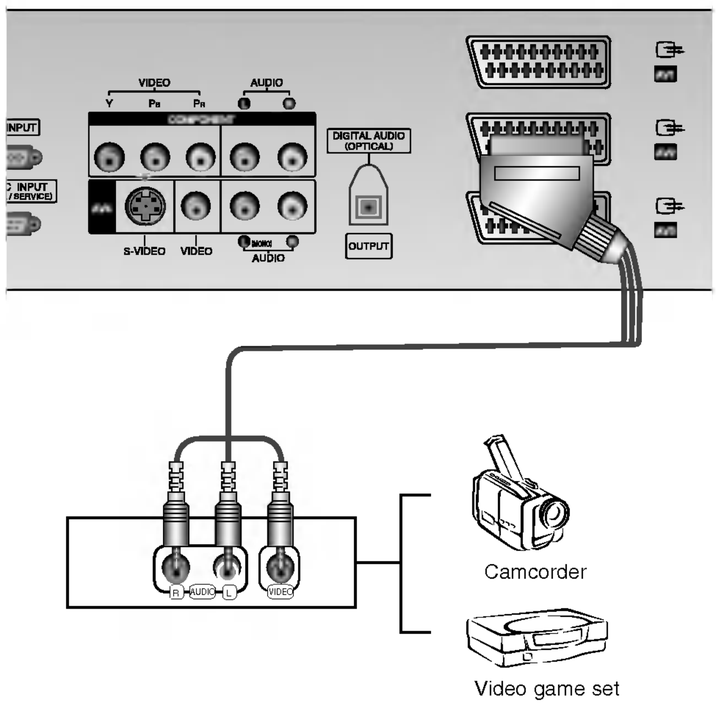
1. Turn on the DVD player, and insert a DVD.
2. Use **INPUT** button on the remote control to select **Component**, **AV1**, **AV2** or **AV3**.
   (If connected to S-VIDEO, select the **AV4** or **AV5** external input source.)
3. Refer to the DVD player's manual for operating instructions.

- **Component Input ports**
  You can get better picture quality if you connect DVD player with component input ports as below.

Component ports of the set	Y	P_B	P_R
Video output ports of DVD player	Y Y Y Y	Pb B-Y Cb P_B	Pr R-Y Cr P_R

Watching external AV source

< Back panel of the set >



- When connecting the set to an external source, match the colours of AUDIO/VIDEO input jacks on the set with the output jacks on the audio/video equipment: Video = yellow, Audio (Left) = white, Audio (Right) = red.

How to use

1. Use the **INPUT** button on the remote control to select **AV1**, **AV2**, **S-Video2**, **AV3**, **AV4** or **AV5**.
2. Operate the corresponding external equipment. See external equipment operating guide.

Watching DTV with Set-top box

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

How to connect

1. Use the set's COMPONENT (Y, PB, PR), RGB or HDMI INPUT jack for video connections, depending on your set-top box connector. Then, make the corresponding audio connections.

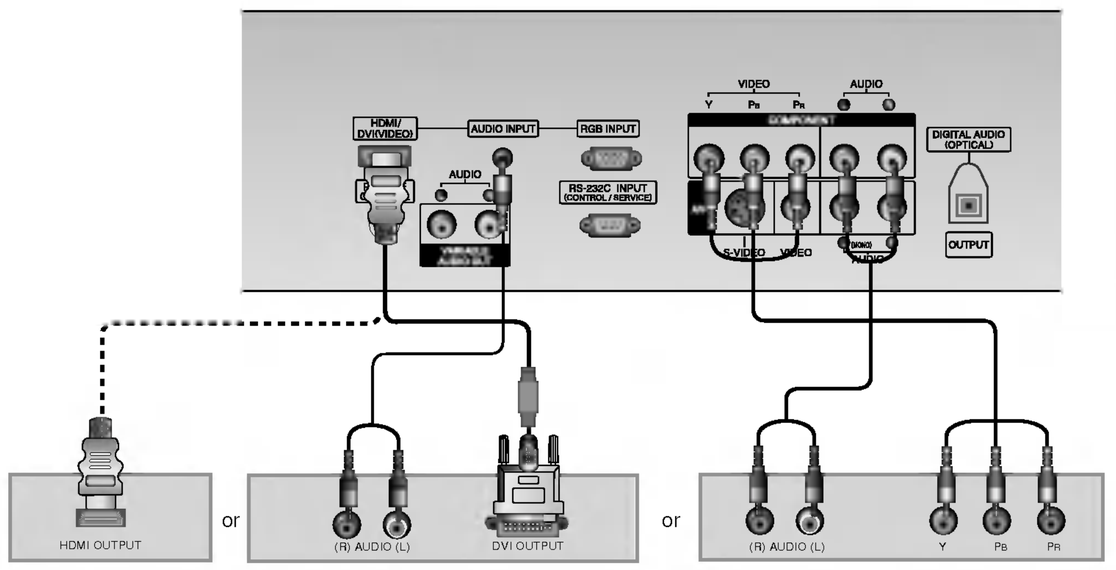
How to use

1. Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
2. Use **INPUT** on the remote control to select **Component**, **RGB** or **HDMI**.

- **Input signal from Digital Set-top box**

Mode \ Terminal	Component	RGB	HDMI
480i / 576i	o	x	x
480p / 576p	o	o	o
720p (50/60Hz)	o	o	o
1080i (50/60Hz)	o	o	o

< Back panel of the set >

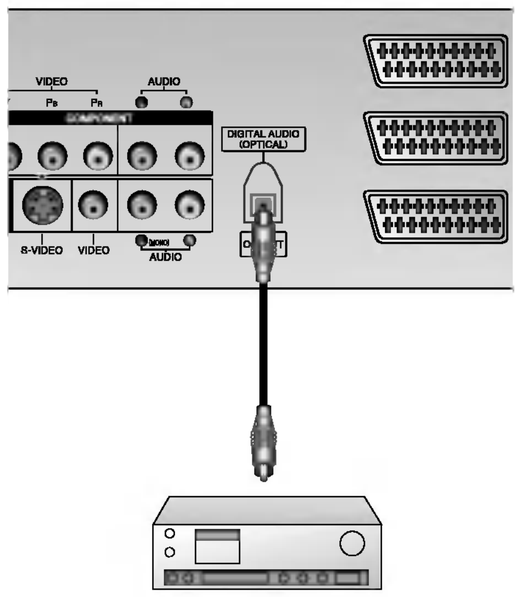


< Digital Set-top Box >

External Equipment Viewing Setups

Digital Audio Output

< Back panel of the set >



- Send the set's audio to external audio equipment (stereo system) via the Digital Audio Output (Optical) port.
  Caution: Do not look into the optical output port. Looking at the laser beam may damage your vision.

How to connect

1. Connect one end of an optical cable to the TV Digital Audio (Optical) Output port.
2. Connect the other end of the optical cable to the digital audio (Optical) input on the audio equipment.
3. Set the " **TV speaker** option - **Off**" in the AUDIO menu. Refer to page 28.
   See the external audio equipment instruction manual for operation.

Monitor Out Setup

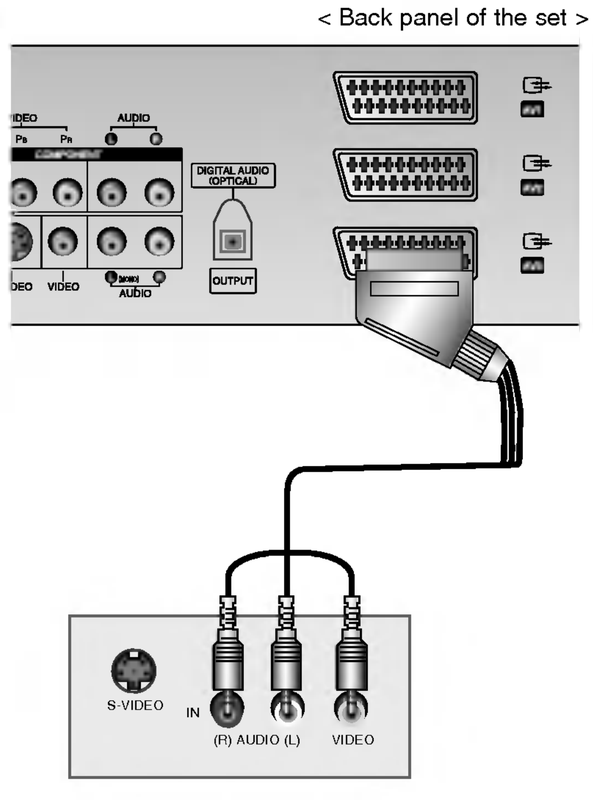
- The set has a special signal output capability which allows you to hook up a second TV or monitor.
  Connect the second TV or monitor to the set's EURO SCART SOCKET.
  See the Operating Manual of the second TV or monitor for further details regarding that device's input settings.

	Input Mode	Output Mode
SCART 1	AV1 CVBS/RGB	TV CVBS
SCART 2	AV2 CVBS, S-Video2 Y/C	DTV CVBS
SCART 3	AV3 CVBS	Monitor out

Note:

a. Component, RGB, HDMI input sources cannot be used for Monitor out.
b. HDMI input sources cannot be used for DTV out.

< Back panel of the set >



Connecting PC

- To enjoy vivid picture and sound, connect a PC to the set.
- Avoid keeping a fixed image on the set's screen for a long period of time. The fixed image may become permanently imprinted on the screen; use a screen saver when possible.
- Connect PC to the RGB INPUT or HDMI/DVI INPUT port of the set; change the resolution output of PC accordingly.
- There might be noise according to some resolution, vertical pattern, contrast or brightness in PC mode. Change the PC mode into another resolution or change the refresh rate into another rate or adjust the brightness and contrast on the menu until the picture is clean. If the refresh rate of the PC graphic card can not be changed, change the PC graphic card or consult it to the manufacturer of the PC graphic card.
- The synchronization input waveform for Horizontal and Vertical frequencies are separate.

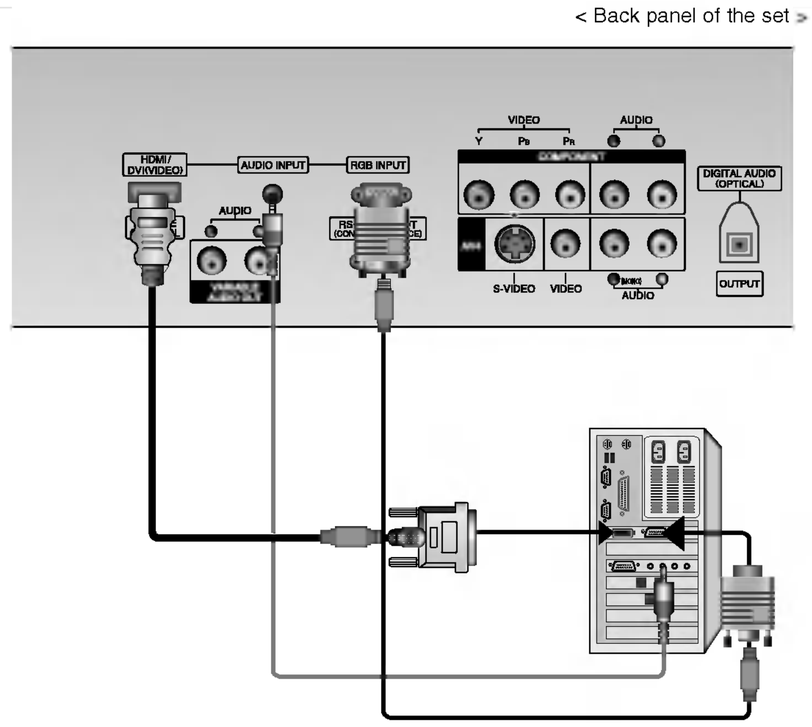
Setup Instructions to Connect a PC to your set

- We recommend using 1024x768, 60Hz for the PC mode, they provide the best picture quality.
- If the resolution of PC is over XGA, there will be no picture on the set.
- Connect the signal cable from the monitor output port of the PC to the RGB INPUT port of the set or the signal cable from the HDMI or DVI output port of the PC to the HDMI/DVI INPUT port on the set.
- Connect the audio cable from the PC to the Audio input on the set. (Audio cables are not included with the set).
- If using a sound card, adjust PC sound as required.
- This set uses a VESA Plug and Play Solution. The set provides EDID data to the PC system with a DDC protocol. The PC adjusts automatically to use this set.
- DDC protocol is preset for HDMI (Digital RGB) mode.
- If required, adjust the settings for Plug and Play functionally.
- If graphics card on the PC does not output analog and digital RGB simultaneously, connect only one of RGB INPUT or HDMI INPUT to display the PC on the set.
  If graphic card on the PC does output analog and digital RGB simultaneously, set the set to either RGB or HDMI; (the other mode is set to Plug and Play automatically by the set.)
- DOS mode may not work depending on video card if you use a HDMI to DVI cable.
- When you use too long RGB-PC cable, there might be noise on the screen. We recommend using under 5m of the cable. It provides the best picture quality.

PC Setup

1. Turn on the PC and apply power to the set.
2. Turn on the display by pressing the **POWER** button on the set's remote control.
3. Use the **INPUT** button on the remote control to select the **RGB** or **HDMI** input source.
4. Set the resolution output of the PC to 1024 x768, 60Hz. (Refer to p. 14)

< Back panel of the set >



Displayable Monitor Specification

RGB / HDMI mode

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.468	70.09
	37.861	85.08
720x400	31.469	70.08
	37.927	85.03
640x480	31.469	59.94
	35.000	66.66
	37.861	72.80
	37.500	75.00
	43.269	85.00
848x480	31.500	60.00
	37.799	70.00
	39.375	75.00
852x480	31.500	60.00
	37.799	70.00
	39.375	75.00
800x600	35.156	56.25
	37.879	60.31
	48.077	72.18
	46.875	75.00
	53.674	85.06
832x624	49.725	74.55
1024x768	48.363	60.00
	56.476	70.06
	60.023	75.02
	68.677	85.00
1152x864	54.348	60.05
	63.995	70.01
	67.500	75.00
1152x870	68.681	75.06
1280x960	60.023	60.02
1280x1024	63.981	60.02

HIGH DEFINITION MULTIMEDIA INTERFACE

- HDMI™, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing.
- This set can receive the High-Definition Multimedia Interface (HDMI) or Input of Digital Visual Interface(DVI).
- This set supports HDCP (High-bandwidth Digital Contents Protection) Protocol for the set (480p, 720p, 1080i) modes.
- When you connect to HDMI/DVI Source devices (DVD Player, STB or PC) that support AUTO HDMI/DVI Plug & Play, this sets the HDMI/DVI source devices automatically.
  After reading HDMI/DVI source devices, using Display Data Channel (DDC) Protocol, Extended Display Identification Data (EDID) stored in the set is used.
  If HDMI/DVI Source devices do not support AUTO HDMI/DVI, the resolution is set manually.
- When Source Devices have DVI Output Connector, you must connect audio with separated cable.
  (Refer to **<How to connect>**)

How to connect

1. When Source Devices (DVD Player or Set Top Box) support HDMI.
- If Source Devices have HDMI Output Connector, Source Devices connect to the set with HDMI Cable .(not supplied with the product).
- If Source Devices support Auto HDMI, automatically, Source Devices divert output resolution in 640x480p. But if not, refer to the reference Manual of Source Devices and select resolution manually.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 640x480p.
- Because HDMI sends Digital Video and Audio with one cable, there is no need for a special Audio Cable when using a HDMI Cable.

2. When Source Devices (DVD Player or Set Top Box) supports DVI.
- If Source Devices have DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
- If Source Devices support Auto DVI, automatically, Source Devices divert output resolution in 640x480p. But if not, refer to the reference Manual of Source Devices and select resolution manually.
- To get the best picture quality, adjust the DVD Player or Set Top Box output resolution to 640x480p.
- In this case, use another cable for audio. When Source Devices have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Audio Cable (not supplied with the product). And then you can listen to normal Audio.

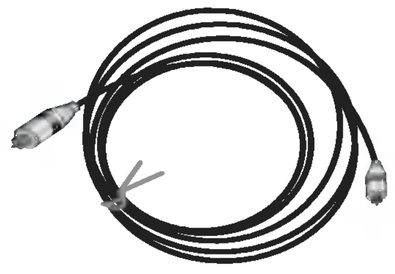
3. When PC supports DVI.
- If PC has a DVI Output Connector, Source Devices connect to the set with HDMI to DVI Cable (not supplied with the product).
- To get the best picture quality, adjust the PC graphics card to 640x480, 60Hz.
- Use the the set's HDMI/DVI (VIDEO) for video connections, depending on your PC connector.
- If the graphics card on the PC does not output analog RGB and DVI simultaneously, connect only one of either RGB Input or HDMI/DVI Input to display the PC on the set.
- If the graphics card on the PC does output analog RGB and DVI simultaneously, the set to either RGB Input or HDMI/DVI Input; (the other mode is set to Plug and Play automatically by the set.)
- Then, make the corresponding audio connections. If using a sound card, adjust the PC sound as required.
- In this case, use another cable for audio. When PC (or sound card of PC) have Analog Audio Output Connector, RGB/DVI Audio Input of the set connect to Analog Audio Cable (not supplied with the product). And then you can listen to normal Audio.

Reference

Cable sample



HDMI Cable
(not supplied with the product)



Analog Audio Cable (RCA type)
(not supplied with the product)



HDMI to DVI Cable
(not supplied with the product)



Analog Audio Cable (Stereo to RCA type)
(not supplied with the product)

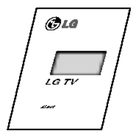
How to use

1. Connect the HDMI/DVI Source Devices(DVD Player or Set Top Box or PC) and the set.
2. Turn on the display by pressing the POWER button on the set and HDMI/DVI Source Devices remote control.
3. Select HDMI/DVI Input source in Main Input option of PIP/DW menu.
4. Check the image on your set. There may be noise associated with the resolution, vertical pattern, contrast or brightness in HDMI/DVI Source Devices. If noise is present, change the HDMI/DVI Source Devices to another resolution, change the refresh rate or adjust the brightness and contrast on the menu until the picture is clear. If the refresh rate of the PC graphics card can not changed, change the PC graphics card or consult the manufacturer of the PC graphics card.

***Notes**:*

- *Depending on the graphics card, DOS mode may not work if you use a HDMI to DVI Cable.*
- *Avoid keeping a fixed image on the set screen for a long period of time. The fixed image may become permanently imprinted on the screen. Use the Orbiter screen saver when possible.*
- *When Source Devices are connected with HDMI/DVI Input, output PC Resolution(VGA, SVGA, XGA), Position and Size may not fit to Screen. As shown on page 34, press the **MENU** button to adjust the screen Position of the set and contact a PC graphics card service centre.*
- *When Source Devices connected HDMI/DVI Input output the set Resolution(480p, 720p, 1080i), the set Display fit EIA/CEA-861-B Specification to Screen. If not, refer to the Manual of HDMI/DVI Source Devices or contact your service centre.*
- *In case HDMI/DVI Source Devices Cable is not connected or poor cable connection, "No Signal" OSD display will appear. And in case of Video Resolution not being supported by the set output in HDMI/DVI Source Devices, "No Signal" OSD display will appear. Refer to the Manual of HDMI/DVI Source Devices or contact your service centre.*

Accessories



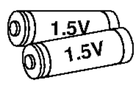
Owner's Manual



Remote Control handset



2-Eye Bolts



Alkaline batteries



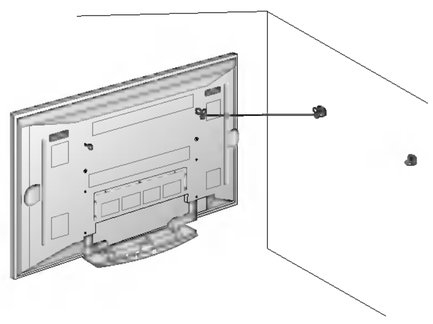
Power Cord



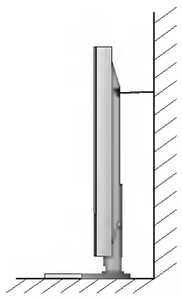
2-Wall brackets

Joining the set assembly to the wall to prevent the set tumbling

- Secure the set assembly by joining it to a wall by using the Eye Bolts/Wall brackets.



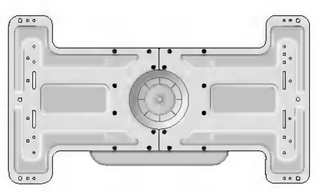
- If the set is to be mounted on a desk top, insert the 2 Eye-Bolts and tighten them securely in the upper holes as shown.
  Install the wall brackets on the wall with 2 bolts*, (not supplied with the product), as shown.
  Match the height of the Eye-Bolts and the wall brackets.
  Check to be sure the Eye-Bolts and the brackets are tightened securely.



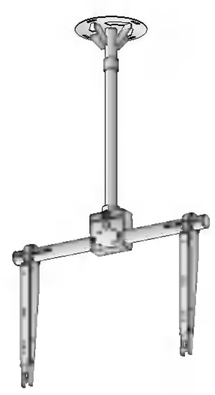
- Secure the set assembly to the wall with strong strings or wound wire cables, (not supplied with the product), as shown.

Optional Extras

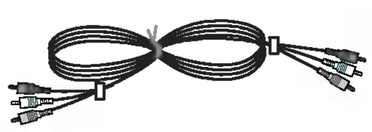
- Optional extras can be changed or modified for quality improvement. Without any notification, new optional extras can be added.
- Contract your dealer for the purchasing of these items.



Tilt wall mounting bracket



Ceiling mounting bracket



Video cables

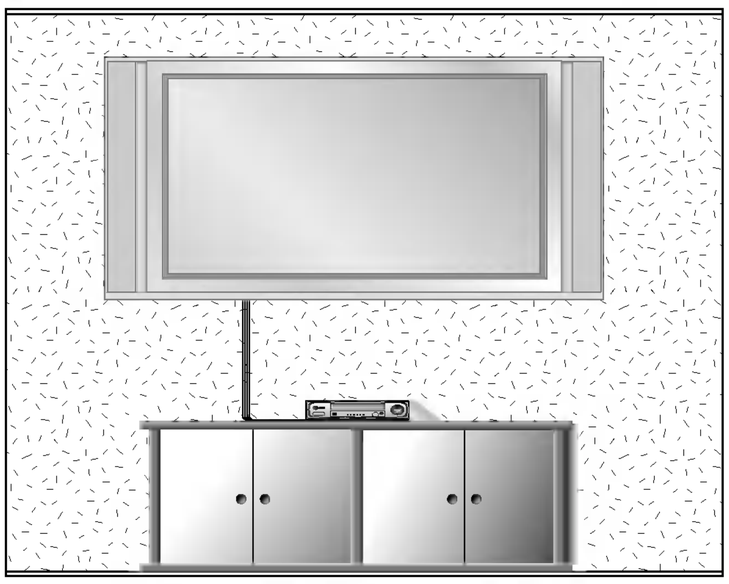


Audio cables

Installation Options

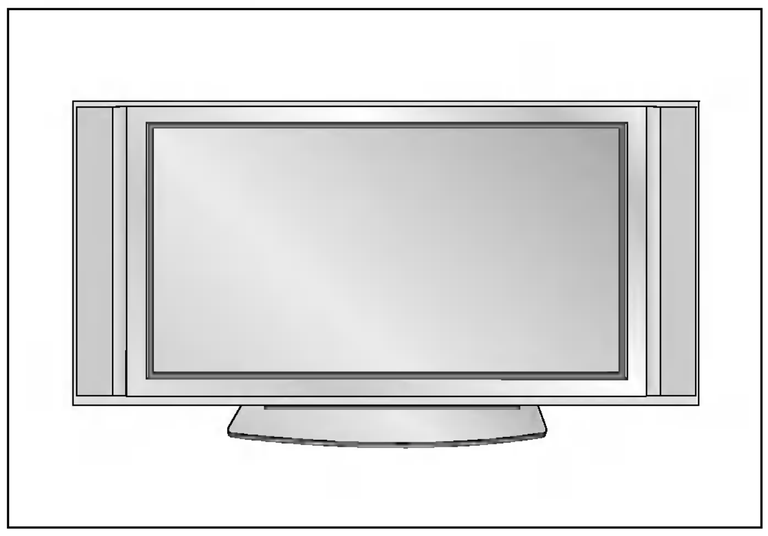
- The set can be installed in different ways such as on a wall, or on a desktop etc.
- Install this set only in a location where adequate ventilation is available.

Wall Mount: Horizontal Installation



- The set can be installed on a wall as shown above. (For further information, refer to the optional 'Wall Mounting Bracket Installation and Setup Guide'.)

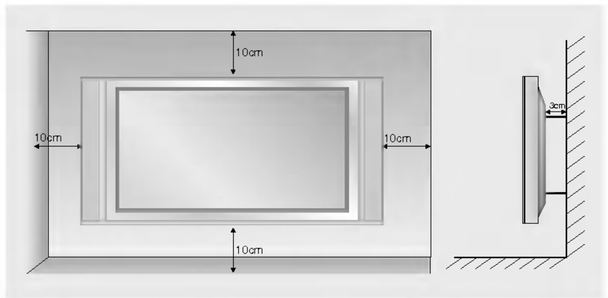
Desktop Pedestal Installation



- The set can be mounted on a desk as shown above.

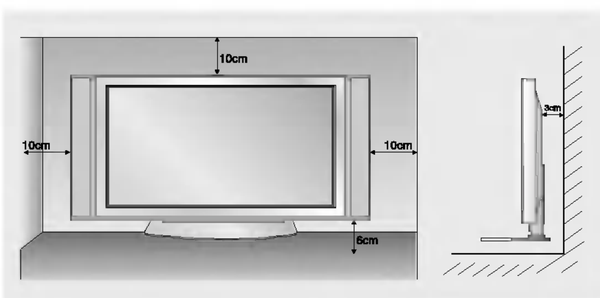
To Mount on a Wall

Wall mount minimum allowable clearances for adequate ventilation.



To Install on a Desktop

Pedestal mount minimum allowable clearances for adequate ventilation.



Turning on the Set

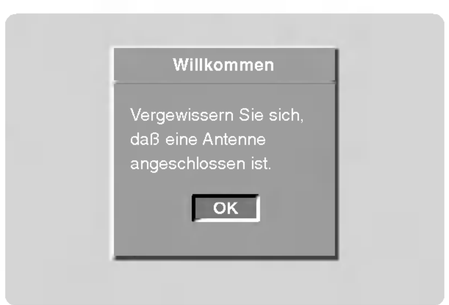
- When using the remote control, aim it at its sensor on the set.

Turning on the set just after installation

1. Connect power cord correctly, the set is switched to standby mode.

2. Press the ⏻ / **I**, **INPUT** or **PR** ▲ / ▼ button on the set or press the **POWER**, **INPUT**, **D/A TV**, **PR** ▲ / ▼ or NUMBER buttons on the remote control and then the set will switch on.

Initializing setup



If the OSD (On Screen Display) is displayed on the screen as figure after turning on the set, you can adjust the Auto Programme tuning.

Note: *It will automatically disappear after approx. 40 seconds unless a button is pressed.*

Turning on the set (power cord is still connected)

If the set was turned off with the remote control power button and the ⏻ / I button on the set

- Press the ⏻ / **I**, **INPUT** or **PR** ▲ / ▼ button on the set or press the **POWER**, **INPUT**, **D/A TV**, **PR** ▲ / ▼ or NUMBER button on the remote control to turn the set on.

On-Screen Menu Language Selection (option)

- The menus can be shown on the screen in the selected language. First select your language.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select **Menu language**.
3. Press the ► button and then use ▲ / ▼ button to select your desired language.
   From this point on, the on-screen menus will be shown in the language of your choice.
4. Press the **EXIT** button to return to normal TV viewing.

Channel Menu Options

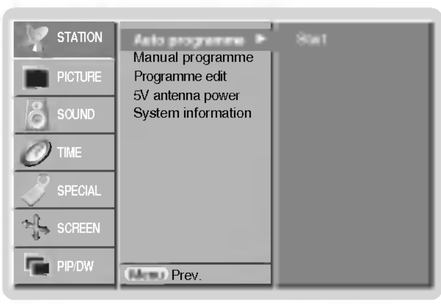
Auto Programme Tuning (In Digital mode)

- Use this Auto Programme to automatically find and store all of the programmes.

1. Press the **MENU** button and then ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Auto programme**.
3. Press the ► button to select **Start**.
4. Press the ► button to begin auto programming.
   All receivable stations are stored.

   The message **"All of service-information will be updated. Continue?"** will appear. If you want to keep on auto programming select **YES**. Otherwise select **NO**.

   To stop auto programming, press the MENU button.
   When auto programming is completed, 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.





Note :

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

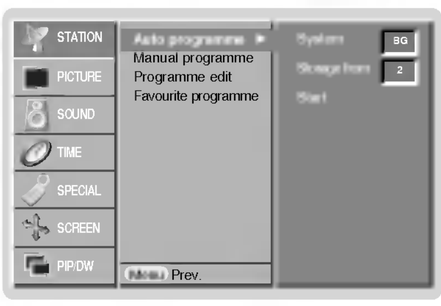
b. To begin auto programming or manual programming, input a 4-digit password in Lock system. Be sure to remember this number!

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

Auto Programme Tuning (In Analogue mode)

- All stations that can be received are stored by this method. It is recommended that you use auto programme during installation of this set.

1. Press the **MENU** button and then use ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Auto programme**.
3. Press the ► button to select **System**. Select a TV system with the ◄ / ► button;
   L : SECAM L/L' (option)
   BG : PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa /Australia)
   I : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
   DK : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
   M : (USA / Korea / Philippines) (option)
4. Press the ▼ button to select **Storage from**. Select the beginning programme number with the ◄ / ► button or NUMBER buttons on the **Storage from** menu.
5. Press the ▼ button to select **Start**.
6. Press the ► button to begin auto programming.
   All receivable stations are stored.



Note :

*a. In some models, the station name is stored for stations which broadcast VPS (Video Programme Service), PDC (Programme Delivery Control) or TELETEXT data. If no station name can be assigned to a station, the channel number is assigned and stored as **C** (V/UHF 01-69) or **S** (Cable 01-47), followed by a number.*

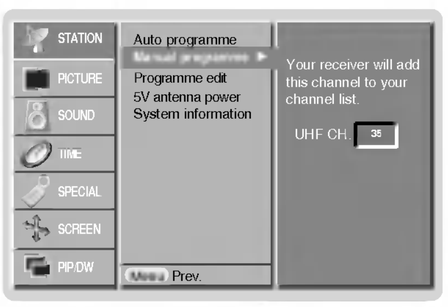
*b. In Australia, if no station name can be assigned to a station, the channel number is assigned and stored as **-----** followed by a number see 'Assigning a station name' section to assign the station name.*

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

Manual Programme Tuning (In Digital mode)

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

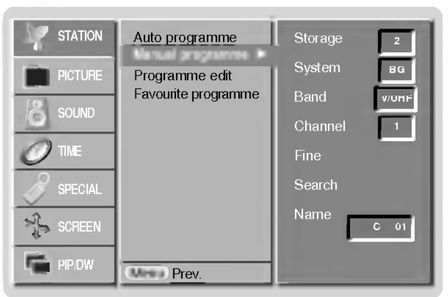
1. Press the **MENU** button and then ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Manual programme**.
3. Press the ► button and then ▲ / ▼ button to select the desired channel number.
4. Press the **OK** button to save.
   When the channel number you want to add is already added in programme list, the massage **"Service-information of the channel will be updated. Continue?"** will appear. If you want to keep on manual programming, select **YES** with using the ◄ / ► button. Then, press the **OK** button. Otherwise select **NO**.
5. Press the **EXIT** button to return to normal TV viewing.



Manual Programme Tuning (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.

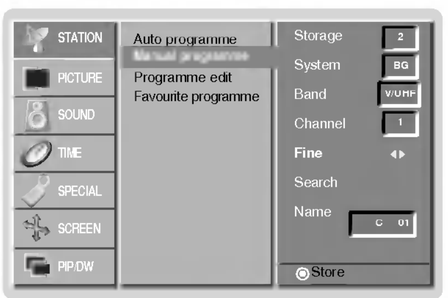
1. Press the **MENU** button and then use ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Manual programme**.
3. Press the ► button to select **Storage**. Select the desired programme number with the ◄ / ► button or NUMBER buttons on the **Storage** menu.
4. Press the ▼ button to select **System**. Select a TV system with the ◄ / ► button;
   L : SECAM L/L' (option)
   BG : PAL B/G, SECAM B/G (Europe / East Europe / Asia / New Zealand / M.East / Africa /Australia)
   I : PAL I/II (U.K. / Ireland / Hong Kong / South Africa)
   DK : PAL D/K, SECAM D/K (East Europe / China / Africa / CIS)
   M : (USA / Korea / Philippines) (option)
5. Press the ▼ button to select **Band**. Press the ◄ / ► button to select **V/UHF** or **Cable** as required.
6. Press the ▼ button to select **Channel**. You can select the desired channel number with the ◄ / ► button or NUMBER buttons. If possible, select the channel number directly with the number buttons.
7. Press the ▼ button to select **Search**. Press the ◄ / ► button to commence searching. If a station is found the search will stop.
8. Press the **OK** button to store it.
9. To store another station, repeat steps 3 to 8.



Fine Tuning (In Analogue mode only)

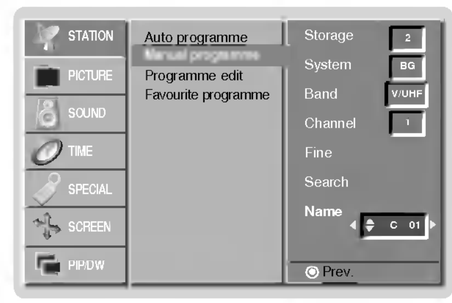
- Normally fine tuning is only necessary if reception is poor.

1. Repeat the 'Manual programme tuning' steps 1 to 2.
2. Press the ► button and then ▲ / ▼ button to select **Fine**.
3. Press the ◄ / ► button to fine tune for the best picture and sound.
4. Press the **OK** button.
5. Press the **EXIT** button to return to normal TV viewing.
   The finely tuned programme will be indicated by yellow number during programme selection.



Channel Menu Options

Assigning a Station Name (In Analogue mode only)



1. Repeat the 'Manual programme tuning' steps 1 to 2.
2. Press the ► button and then ▲ / ▼ button to select **Name**.
3. Press the ► button to display the **Name** menu.
4. Press the ▲ button. You can use a blank, +, -, the alphabet **A** to **Z** and the numeric **0** to **9**.
   With the ▼ button you can select in the opposite direction.
5. Select the next position by pressing the ► button and then take your choice of the second character, and so on.
6. Press the **OK** button in twice.
7. Press the **EXIT** button to return to normal TV viewing.

Programme Edit (In Digital mode)

- When a programme number is skipped, it means that you will be unable to select it using **PR** ▲ / ▼ button during 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** menu.
- This function enables you to skip the stored programmes.



1. Press the **MENU** button, then use the ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Programme edit** menu.
3. Press the ► button to enter the **Programme edit** menu.
4. Select a programme to be stored or skipped with the ▲ / ▼ or ◄ / ► button.
5. Press the BLUE button repeatedly to have the programme skipped or stored.
   In case of programmes to be skipped, skipped programme shows in gray colour and these programmes will not be selected by the **PR** ▲ / ▼ buttons during TV viewing.
6. Press the **EXIT** button to return to normal TV viewing.

Skipping a programme number

1. Select a programme number to be skipped with the ▲ / ▼ or ◄ / ► button.
2. Press the BLUE button. The skipped programme number turns to gray.
3. Press the BLUE button again to release the skipped programme.
   When a programme number is skipped it means that you will be unable to select it using the **PR** ▲ / ▼ 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 EPG.
4. Press the **EXIT** button to return to normal TV viewing.

Locking a programme (In Lock System On mode only)

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

Note :

a. To watch a locked programme, input a 4-digit password in Lock system. Be sure to remember this number!
b. If you forgot your password, press '7', '7', '7', '7' on the remote control handset.
c. If you select other programme after releasing a locked programme and then return to the locked programme within 1 minute, you needn't input a password to select the locked programme.

Moving a programme

1. Select a programme to be moved with the ▲ / ▼ or ◄ / ► button.
2. Press the YELLOW button.
3. Move the programme to the desired programme number with the ▲ / ▼ or ◄ / ► button.
4. Press the YELLOW button again to release this function.

Selecting favourite programme

Select your favourite programme number by pressing ▲ / ▼ or ◄ / ► button and then press the **FAV** button on your remote control handset. It will automatically include the selected programme into your favourite programme list and heart-mark will appear in front of that programme number.

Programme Edit (In Analogue mode)

1. Press the **MENU** button, then use the ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Programme edit**.
3. Press the ► button to enter the **Programme edit** menu.



Deleting a programme

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

Copying a programme

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

Moving a programme

1. Select a programme to be moved with the ▲ / ▼ or ◄ / ► button.
2. Press the YELLOW button.
3. Move the programme to the desired programme number with the ▲ / ▼ or ◄ / ► button.
4. Press the YELLOW button again to release this function.

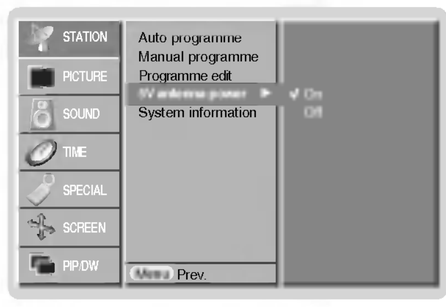
Skipping a programme number

1. Select a programme number to be skipped with the ▲ / ▼ or ◄ / ► button.
2. Press the BLUE button. The skipped programme number turns to blue.
3. Press the **OK** button.
4. Press the **OK** button then use the BLUE button 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.
5. Press the **EXIT** button to return to normal TV viewing.

5V antenna power (In Digital mode only)

- Even if there isn't a special 5V adapter power in the external antenna, this function can output 5V in the set.

1. Press the **MENU** button and then use ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then use ▲ / ▼ button to select **5V antenna power**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
   In **5V antenna power On**, if the set is short-circuit, it will automatically return to **Off**.
   The message **"Antenna feed overloaded. Automatically switched off."** will appear.
4. Press the **EXIT** button to return to normal TV viewing.



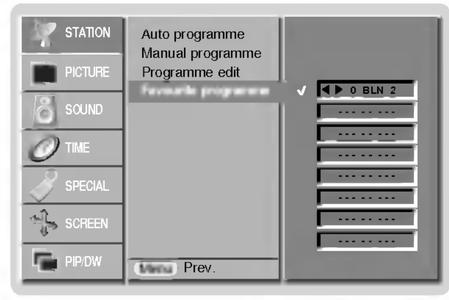
System information (In Digital mode only)

- If signal strength is weak, check the RF cable or antenna.

1. Press the **MENU** button and then use ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **System information** menu.
   Model name, Software version, Signal strength and Signal quality are displayed.
3. Press the **EXIT** button to return to normal TV viewing.

Channel Menu Options

Favourite Programme (In Analogue mode)



1. Press the **MENU** button and then use ▲ / ▼ button to select the STATION menu.
2. Press the ► button and then ▲ / ▼ button to select **Favourite programme**.
3. Press the ► button to display the **Favourite programme** menu.
4. Press the ▲ / ▼ button to select **-- -----**.
5. Select a desired programme with the ◄ / ► button or NUMBER buttons. Any number under 10 is entered with a numeric **'0'** in front of it, i.e. **'05'** for 5.
6. To store another programme, repeat steps 4 to 5.
   You can store up to 8 programmes.
7. Press the **OK** button.
8, Press the **EXIT** button to return to normal TV viewing.

Repeatedly press the **FAV** button to select stored favourite programmes.

Calling up the Programme Table (In Digital mode)

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

Displaying programme table
Press the **LIST** button to display the Programme table menu.
The programme table appears on the screen.

Display	Status
♥	Favourite Programme
🔒	Locked Programme

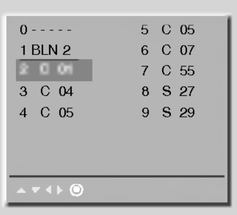


Selecting a programme in the programme table
Select a programme with the ▲ / ▼ button.
Then press the **OK** button.
The set switches to the chosen programme number.

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

Calling up the Programme Table (In Analogue mode)

Displaying programme table
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
Select a programme with the ▲ / ▼ or ◄ / ► button.
Then press the **OK** button.
The set switches to the chosen programme number.

Paging through a programme table
There are 10 programme table pages in which contain 100 programmes.
Pressing the ▲ / ▼ or ◄ / ► button repeatedly turns the pages.

Press the **LIST** 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 (NTSC input only)) manually, PSM is automatically changed to **User**.

1. Press the **PSM** button

- Each press of the **PSM** button changes the screen display as shown below.

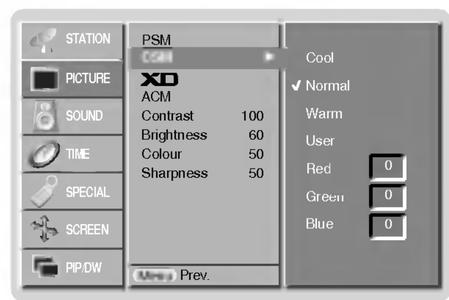


- You can also select **Intelligent Eye**, **Dynamic**, **Standard**, **Mild** or **User** in the PICTURE menu.
- Picture options **Intelligent Eye**, **Dynamic**, **Standard** and **Mild** are preset and programmed for good picture quality at the factory and cannot be changed.
- When **Intelligent Eye** function is **On**, the most suitable picture is automatically adjusted according to the surrounding conditions.

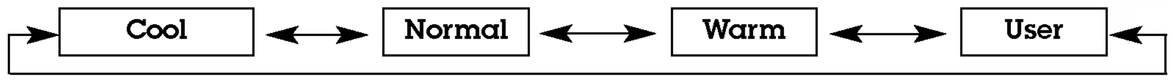
CSM (Color Status Memory)

- To initialize values (reset to default settings), select the **Normal** option.

1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select **CSM**.
3. Press the ► button and then use ▲ / ▼ button to select the desired colour temperature.
4. Press the **EXIT** button to return to normal TV viewing.



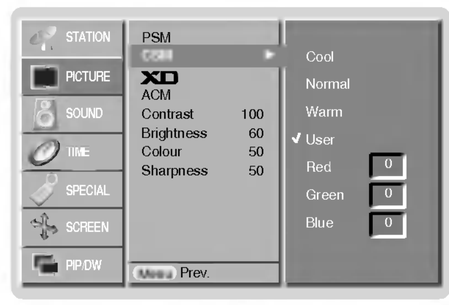
• Each press of ▲ / ▼ button changes the screen display as shown below.



Manual Colour Temperature Control

- You can adjust red, green, or blue to any colour temperature you prefer.

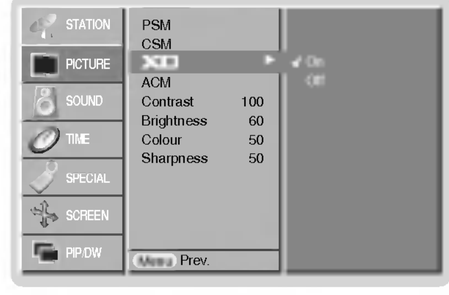
1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select **CSM**.
3. Press the ► button and then use ▲ / ▼ button to select **User**.
4. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
5. Press the **EXIT** button to return to normal TV viewing.



XD

- You can enjoy the vivid and hi-definition picture with LG's excellent Digital Reality processor technology.
- This function is not available for use in RGB[PC], HDMI[PC] mode.
- When selecting picture options (**Intelligent Eye**, **Dynamic**, **Standard** and **Mild**) in PICTURE menu, **XD** is automatically changed to **On**.

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

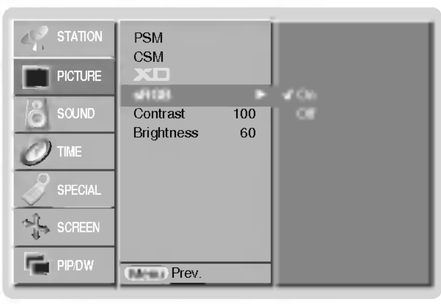


Picture Menu Options

sRGB (RGB[PC], HDMI[PC] mode only)

- When the set is connected to external equipment with the sRGB function, the colour difference is adjusted the equal image of each other.
- This function works in the following mode : RGB[PC], HDMI[PC].

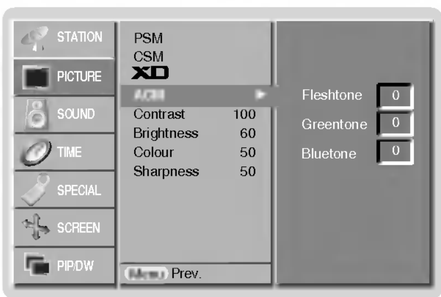
1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select **sRGB**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press the **EXIT** button to return to normal TV viewing.



ACM (Active Color Management)

- Adjust the **ACM** to select the desired skin colour option.
- This function is not available for use in RGB[PC], HDMI[PC] mode.
- It's not available to use this function in **XD Off** mode.

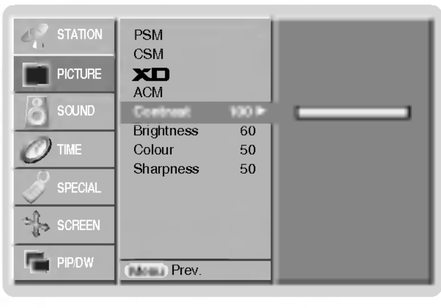
1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select **ACM**.
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press the **EXIT** button to return to normal TV viewing.



Manual Picture Control

- You can adjust picture contrast, brightness, colour, sharpness and tint (NTSC input only) to the levels you prefer.
- It's not available to use colour, sharpness function in RGB[PC], HDMI[PC] mode.
- In the broadcasting system PAL/SECAM, the picture item Tint doesn't work.

1. Press the **MENU** button and then use ▲ / ▼ button to select the PICTURE menu.
2. Press the ► button and then use ▲ / ▼ button to select the desired picture option.
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press the **EXIT** button to return to normal TV viewing.



Sound Menu Options

SSM (Sound Status Memory)

- This function lets you enjoy the best sound without any special adjustment because the set automatically selects the appropriate sound option based on the program content.
- When adjusting sound options (treble and bass) manually, SSM is automatically changed to **User**.

1. Press the **SSM** button.
2. Press the **SSM** button to select your desired sound.

SRS TSXT → Flat → Music → Movie → Sports → User

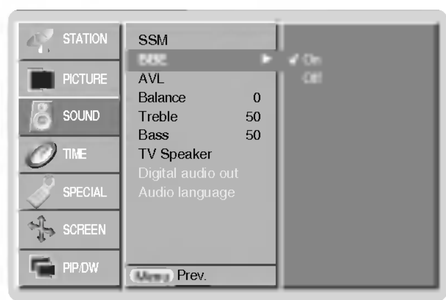
- You can also select **SRS TSXT**, **Flat**, **Music**, **Movie**, **Sports** or **User** in the SOUND menu.
- The sound **SRS TSXT**, **Flat**, **Music**, **Movie** and **Sports** are programmed for good sound reproduction at the factory and cannot be changed.

- SRS TruSurround XT DIGITAL is a trademark of SRS Labs, Inc.
- TruSurround XT technology is incorporated under license from SRS Labs, Inc.

BBE

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

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

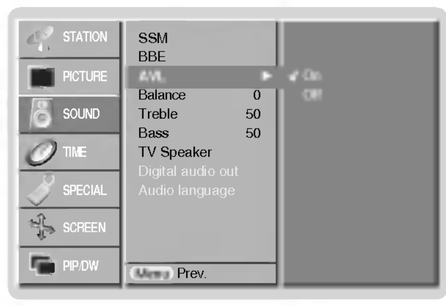


BBE Manufactured under license from BBE Sound, Inc.

AVL (Auto Volume Leveler)

- This feature maintains an equal volume level; even if you change channels.

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



Adjusting Sound Control

1. Press the **MENU** button and then use ▲ / ▼ button to select the SOUND menu.
2. Press the ► button and then use ▲ / ▼ button to select the desired sound item.
3. Press the ► button and then use ◄ / ► button to make appropriate adjustments.
4. Press the **EXIT** button to return to normal TV viewing.

Note : *Treble, Bass or BBE aren't suitable for use with* ***SRS TSXT****.*

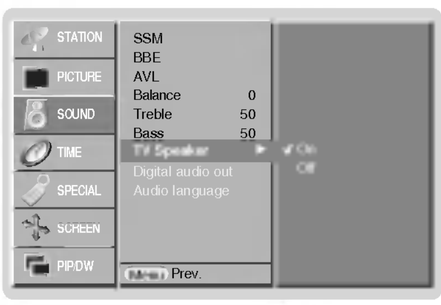


Sound Menu Options

TV Speaker

- You can adjust the internal speaker status.
- In COMPONENT, RGB[PC] and HDMI[PC] mode, TV speaker and/or variable audio can be outputted even though there is no video signal.
- If you want to use your external hi-fi stereo system, turn off the internal speakers of the set.

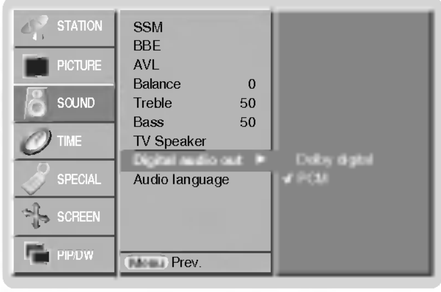
1. Press the **MENU** button and then use ▲ / ▼ button to select the SOUND menu.
2. Press the ► button and then use ▲ / ▼ button to select **TV Speaker**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press the **EXIT** button to return to normal TV viewing.



Selecting Digital Audio Output (In Digital mode only)

- This function lets you select your preferred Digital Audio Output.
- The set can output Dolby Digital in a channel only which broadcast Dolby Digital Audio.
- When it's applied the AC3 format, if you select **Dolby digital** on **Digital audio out** menu, SPDIF Output will be outputted AC3. Even if it's selected **Dolby digital**, when it doesn't apply AC3 format, SPDIF Output will be outputted PCM.
- Even if both **Dolby digital** and **Audio language** have been set in a channel which broadcast Dolby Digital Audio, only **Dolby digital** will be played.

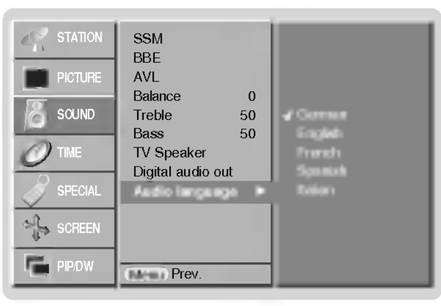
1. Press the **MENU** button and then use ▲ / ▼ button to select the SOUND menu.
2. Press the ► button and then use ▲ / ▼ button to select **Digital audio out** menu.
3. Press the ► button and then use ▲ / ▼ button to select **Dolby digital** or **PCM**.
4. Press the **EXIT** button to return to normal TV viewing.



Audio Language (In Digital mode only)

- This function lets you select your preferred language for audio.
- If the audio data in selected language is not broadcasted, default audio which is broadcasted in current channel will be played.
- At first, select **PCM** in **Digital audio out** menu to play **German**, **English**, **French**, **Spanish** or **Italian** of **Audio language**.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SOUND menu.
2. Press the ► button and then use ▲ / ▼ button to select **Audio language** menu.
3. Press the ► button and then use ▲ / ▼ button to select **German**, **English**, **French**, **Spanish** or **Italian**.
4. Press the **EXIT** button to return to normal TV viewing.





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

OSD (On-screen Display) Information

Display	Status
N.A	Not Available
Audio	Audio only service
	Audio for Visual Impaired
ABC	Audio for Hearing Impaired

Notes: *The audio which it has not a language code will be displayed a 3 character.*

Stereo / Dual Reception (In Analogue mode)

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

On Screen Display
Press the **I/II** button to received broadcast state.

Broadcast	On screen Display
Mono	**MONO**
Stereo	**STEREO**
Dual	**DUAL I**

Mono Sound Selection
In stereo reception if the stereo signal is weak, 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.

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

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

NICAM Reception (option) (In Analogue mode)

- If your Plasma Display is equipped with the PDP Tuner for NICAM reception, the high quality NICAM (Near Instantaneous Companding Audio Multiplex) digital sound can be received.

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

- When NICAM mono is received, you can select **NICAM MONO** or FM MONO.
- When NICAM stereo is received, you can select **NICAM STEREO** or FM MONO. If the stereo signal is weak, switch to FM mono.
- When NICAM dual is received, you can select **NICAM DUAL I**, **NICAM DUAL II**, **NICAM DUAL I + II**, or **MONO**. When FM mono is selected the display **MONO** appears on the screen.

Sound Output Selection

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

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

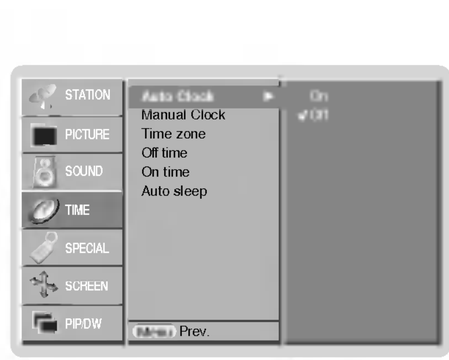
- **L+R :** Audio signal from audio L input is sent to left loud-speaker and audio signal from audio R input is sent to right loud-speaker.
- **L+L :** Audio signal from audio L input is sent to left and right loud-speakers.
- **R+R :** Audio signal from audio R input is sent to left and right loud-speakers.

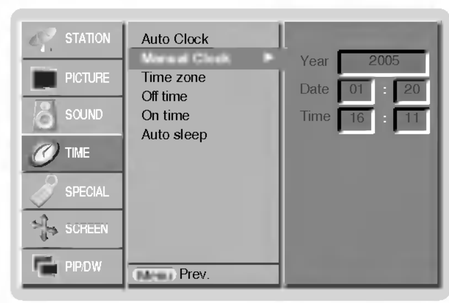
Time Menu Options

Current time

- When you select '**Auto Clock On**', the time is set automatically from a digital channel signal.
- The digital channel signal includes information for the current time provided by the broadcasting station.

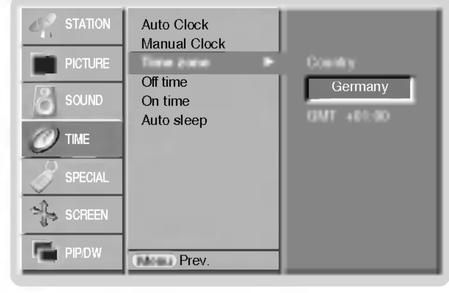
1. Press the **MENU** button and then use ▲ / ▼ button to select the TIME menu.
2. Press the ► button and then use ▲ / ▼ button to select the **Manual clock** menu.
3. Press the ► button and then use ▲ / ▼ button to adjust the **Year**.
4. Press the ► button and then use ▲ / ▼ button to adjust the **Date**.
5. Press the ► button and then use ▲ / ▼ button to adjust the **Time**.
6. Press the **EXIT** button to return to normal TV viewing.





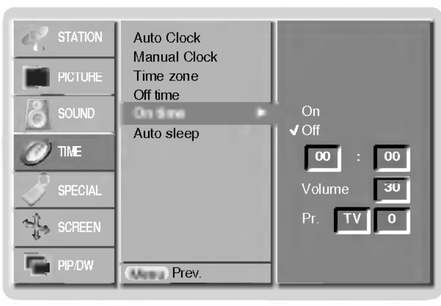
Time Zone Setup

1. Press the **MENU** button and then ▲ / ▼ button to select the TIME menu.
2. Press the ► button and then ▲ / ▼ button to select **Time zone**.
3. Press the ► button and then ▲ / ▼ button to select your viewing area time zone; **Germany**, **Great Britain**, **France**, **Spain**, or **Italy**.
4. Press the **OK** or ◄ button.
5. Press the **EXIT** button to return to normal TV viewing.



Setting the On/Off Timer

- The off timer automatically switches the set to standby at the preset time.
- Off Timer function overrides on Timer function if they are set to the same time.
- The set must be in standby mode for the On Timer to work.



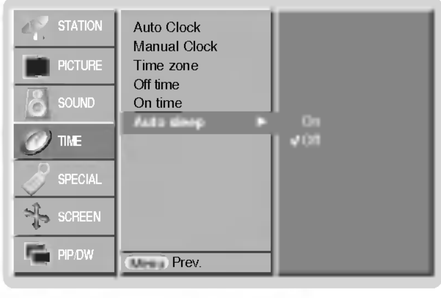
1. Press the **MENU** button and then use ▲ / ▼ button to select the TIME menu.
2. Press the ► button and then use ▲ / ▼ button to select **Off time** or **On time**.
3. Press the ► button and then use ▲ / ▼ button to select **On**.
4. Press the ► button and then use ▲ / ▼ button to adjust the hour.
5. Press the ► button and then use ▲ / ▼ button to adjust the minute.
6. **Only On time function**; Press the ► button and then use ▲ / ▼ button to adjust programme number or volume level.
7. Press the **EXIT** button to return to normal TV viewing.

- To cancel **Off/On time** function
  Press the ▲ / ▼ button to select **Off** in step 3.
- Two hours after the set is switched on by the on time function it will automatically switch back to standby mode unless a button has been pressed.
- Once the on or off time is set, these functions operate daily at the preset time.

Auto Sleep

- If there is no input signal, the set turn off automatically after 10 minutes.

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



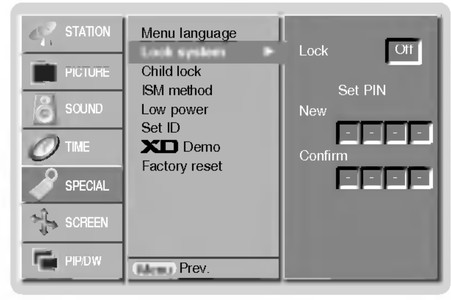
Sleep Timer

- Sleep timer turns the set off at the preset time.
- Press the **SLEEP** button to select the number of minutes. The display zz **--- Min** will appear on the screen, followed by **10**, **20**, **30**, **60**, **90**, **120**, **180** and **240** minutes. The timer begins to count down from the number of minutes selected.

a. To check the remaining sleep time, press the **SLEEP** button once.
b. To cancel the sleep time, repeatedly press the **SLEEP** button until the display zz **--- Min** appears.
c. If you turn the set off after setting the sleep timer, the setting will be erased.

Special Menu Options

System Lock Setting

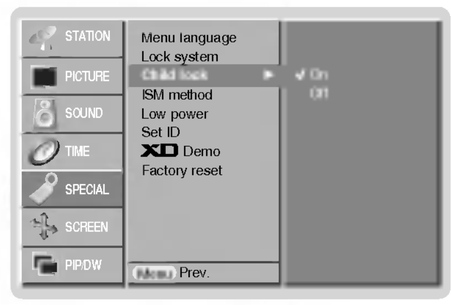


1. Press the **MENU** button and then ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then ▲ / ▼ button to select **Lock system**.
3. Press the ► button and then ▲ / ▼ button to select **On**.

   To set the password
   Press the ► button and then use NUMBER buttons to input a 4-digit password.
   Be sure to remember this number!
   Re-enter new password for confirm.
   If you forgot your password, press '7', '7', '7', '7' on the remote control handset.
4. Press the **EXIT** button to return to normal TV viewing.

Child Lock

- The set can be set up so that it can only be used with the remote control.

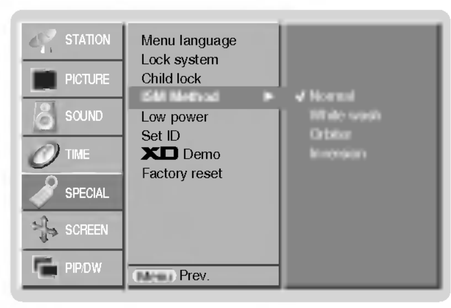


1. Press the **MENU** button and then ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then ▲ / ▼ button to select **Child lock**.
3. Press the ► button and then ▲ / ▼ button to select **On** or **Off**.
4. Press the **EXIT** button to return to normal TV viewing.

- This set is programmed to remember which option it was last set to even if you turn the set off.
- In **Child lock** '**On**', if the set is turned off, press the ⏻ / **I**, **INPUT**, **PR** ▲ / ▼ button on the set or **POWER**, **INPUT**, **D/A TV**, **PR** ▲ / ▼ or NUMBER buttons on the remote control.
- With the **Child lock On**, the display '⚠**Child lock on**' appears on the screen if any button on the front panel is pressed while viewing the set.

ISM (Image Sticking Minimization) Method

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



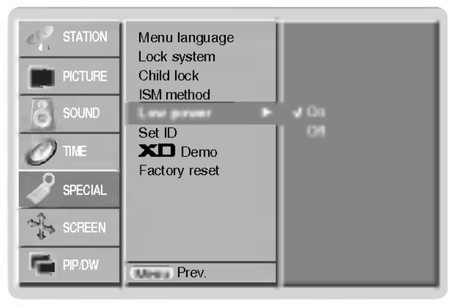
1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then ▲ / ▼ button to select **ISM Method**.
3. Press the ► button and then ▲ / ▼ button to select either **Normal**, **White wash**, **Orbiter** or **Inversion**. If you unnecessary to set this function, set **Normal**.

   • **White wash**:
   White wash removes permanent images from the screen.
   Note: An excessive permanent image may be impossible to clear entirely with White Wash.
   • **Orbiter**:
   Orbiter may help prevent ghost images. However, it is best not to allow any fixed image to remain on the screen. To avoid a permanent image on the screen, the screen will move every 2 minutes.
   • **Inversion**:
   This is the function to invert the panel color of the screen. The panel color is automatically inverted every 30 minutes.
4. Press the **EXIT** button to return to normal TV viewing.

Low Power

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

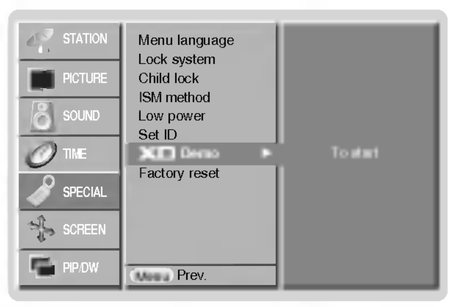
1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select **Low power**.
3. Press the ► button and then use ▲ / ▼ button to select **On** or **Off**.
4. Press the **EXIT** button to return to normal TV viewing.



XD Demo

- Use it to see the difference between XD demo on and XD Demo off.
- It's not available to use this function in RGB[PC], HDMI[PC] mode.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select **XD Demo**.
3. Press the ► button to begin **XD Demo**.
4. To stop **XD Demo**, press the **EXIT** button.



Factory Reset

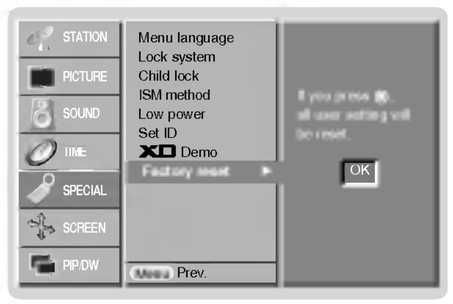
- Use to quickly reset all the menu options to their original factory preset values.
- This function deletes all TV programmes.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SPECIAL menu.
2. Press the ► button and then use ▲ / ▼ button to select **Factory reset** menu.
3. Press the ► button to reset the menu options to original values.
   The set is switched to standby mode.

Note :

a. To begin Factory Reset, input a 4-digit password in Lock system. Be sure to remember this number!

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

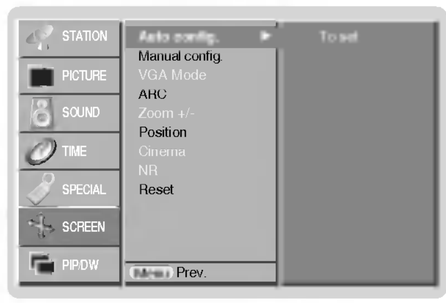


Screen Menu Options

Auto adjustment (RGB [PC] mode only)

- Automatically adjusts picture position and minimizes image shaking.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select **Auto config.**.
3. Press the ► button to start **Auto config.**.
   • When **Auto config.** has finished, **Ok** will be shown on screen.
   • If the position of the image is still not correct, try Auto adjustment again.
4. If picture needs to be adjusted more after Auto adjustment in RGB (PC), you can adjust the **Manual config.**.
5. Press the **EXIT** button to return to normal TV viewing.

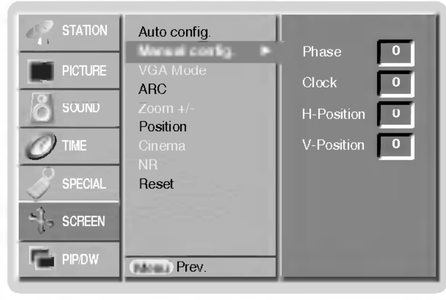


- Although the image is still not correct, your set is functioning properly but needs further adjustment.
- The **Auto config.** functions don't need to be run for HDMI mode.
- This function also adjust sub picture position and minimizes image shaking in RGB[PC] for PIP.

Manual Configure

- If the picture isn't clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.
- To correct the screen size, adjust **Clock**.
- This function works in the following mode : RGB/HDMI[PC], RGB/HDMI[DTV] (480p/576p/720p/1080i), COMPONENT (480p/576p/720p/1080i).
- It's not available to use Phase, Clock function in COMPONENT (480p/576p/720p/1080i), RGB/HDMI[DTV] (480p/576p/720p/1080i) mode.

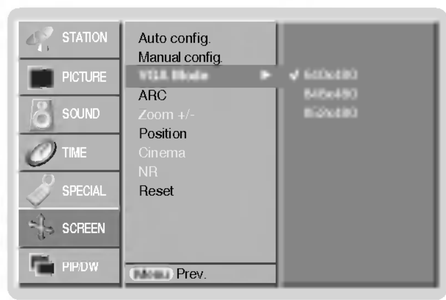
1. Press the **MENU** button and then ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then ▲ / ▼ button to select **Manual config.**.
3. Press the ► button and then ▲ / ▼ button to select **Phase**, **Clock**, **H-Position** or **V-Position**.
4. Press the ◄ / ► button to make appropriate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



Selecting Wide VGA mode

- To see a normal picture, match the resolution of RGB mode and selection of VGA mode.
- This function works in the following mode: RGB[PC], HDMI[PC] mode

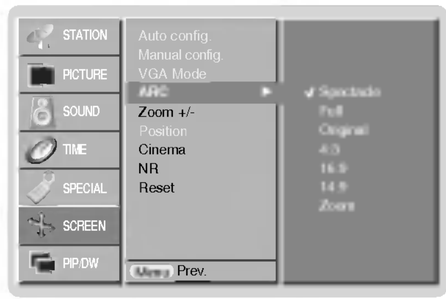
1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select **VGA Mode**.
3. Press the ► button and then use ▲ / ▼ button to select the desired VGA resolution.
4. Press the **EXIT** button to return to normal TV viewing.



Setting Picture Format

- You can watch the screen in various picture formats; **Spectacle**, **Full (option)**, **Original**, **4:3**, **16:9** (Wide), **14:9** and **Zoom**.

1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select **ARC**.
3. Press the ► button and then use ▲ / ▼ button to select **Spectacle**, **Full (option)**, **Original**, **4:3**, **16:9** (Wide), **14:9** or **Zoom**.



• Spectacle
When your TV receives the wide screen signal, when selected it will adjust the picture horizontally, in non-linear proportion, to fill the entire screen.

• Full (option)
When your TV receives the wide screen signal, when selected it will adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully.

• Original
When your TV receives the wide screen signal, it will be automatically changed to the picture format to be sent.

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

• 16:9 (Wide)
Following selection will lead you to adjust the picture horizontally, in a linear proportion, to fill the entire screen (useful for viewing 4:3 formatted DVDs).

• 14:9
You can enjoy the picture format of 14:9 or general TV programme through the 14:9 mode. The screen 14:9 is viewed just like that the screen 4:3 is magnified to the left / right.

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

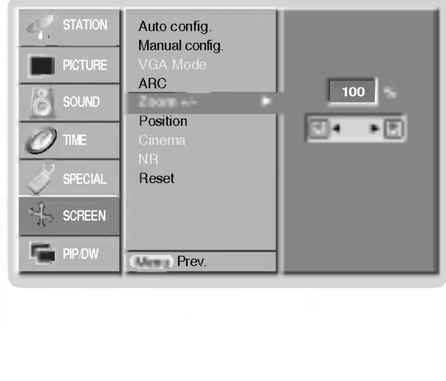
4. Repeatedly press the **MENU** button to return to normal TV viewing.

- You can only select **4:3** and **16:9** (Wide) in RGB[PC], HDMI[PC] mode only.
- You can only select **4:3**, **16:9** (Wide) and **Zoom** in RGB[DTV], HDMI[DTV], Component [DTV] mode only.
- You can only select **Spectacle**, **Full (option)**, **Original**, **4:3**, **16:9** (Wide), **14:9** and **Zoom** in DTV, TV, AV1, AV2, AV3, AV4, AV5, S-Video2 or COMPONENT [480i/576i] mode only.
- There might be uncomfortable in full mode. Then change into other mode.

Picture Size Zoom

- When enlarging or reducing the picture, the screen may be display an unnatural looking picture.

1. Press the **MENU** button and then ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then ▲ / ▼ button to select **Zoom +/-**.
3. Press the ► button and then ◄ / ► button to make appropriate adjustments.
4. Press the **EXIT** button to return to normal TV viewing.

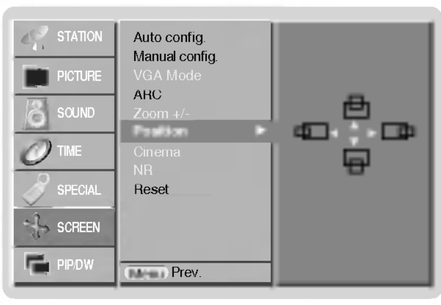


Screen Menu Options

Screen Position

- This function is available after adjusting Zoom +/-.

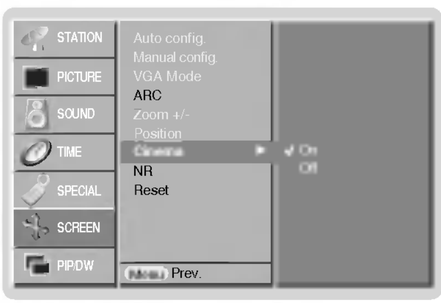
1. Press the **MENU** button and then ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then ▲ / ▼ button to select **Position**.
3. Press the ► button and then ▲ / ▼ or ◄ / ► button to adjust the position.
4. Press the **EXIT** button to return to normal TV viewing.



Cinema

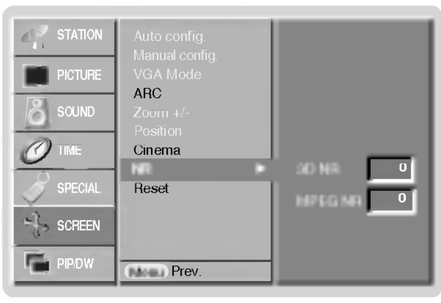
- When you watch the movie, this function adjusts the set to the best picture appearance.
- This function works in the following mode:
  TV, AV1, AV2, AV3, AV4, AV5, S-Video2 or COMPONENT 480i/576i.

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



NR (Noise Reduction)

1. Press the **MENU** button and then use ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then use ▲ / ▼ button to select **NR**.
3. Press the ► button and then use ▲ / ▼ button to select **3D NR** or **MPEG NR**.
4. Press the **EXIT** button to return to normal TV viewing.

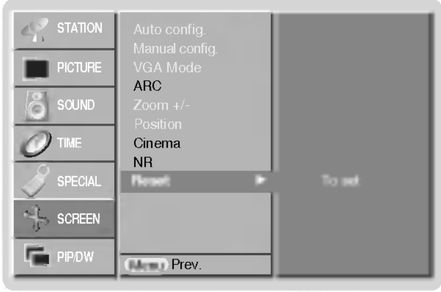


Initializing (Reset to original factory settings for screen)

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

1. Press the **MENU** button and then ▲ / ▼ button to select the SCREEN menu.
2. Press the ► button and then ▲ / ▼ button to select **Reset**.
3. Press the ► button.

   • You can initialize Position, Zoom +/-, PIP size, PIP position, PIP Transparency and sub picture size of twin picture.



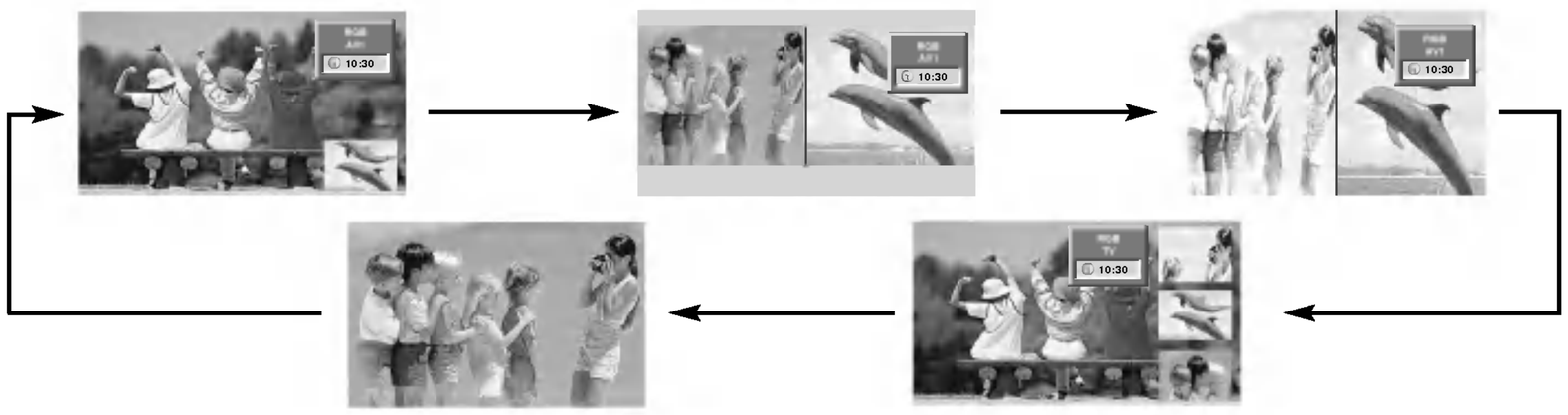
PIP (Picture-in-Picture) Feature

- PIP lets you view 2 different inputs (sources) on your set screen at the same time.
- It's not available to use this function in TELETEXT mode.

Watching PIP

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

- Each press of **PIP** button changes the screen display as shown below.



Note :

a. When the sub picture size is 1/2 of the main picture, the picture quality may decrease.

b. 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.

Programme Selection for Sub Picture

Press the **PIP PR + /-** button to select a programme for the sub picture.

Selecting an Input Signal Source for the PIP

Press the **PIP INPUT** button to select the input source for the sub picture.

In some models, when the sub picture quality get poor in AV modes for sub picture, select Auto, PAL, SECAM or NTSC in PIP System menu.



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

Use POP to search the programmes 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.

Notes: *Sub pictures are changed from the TV/DTV mode.*

Moving the PIP (PIP mode only)

Press the **POSITION** button.

Repeatedly press the ▲ / ▼ or ◄ / ► button until desired position is achieved. The sub picture moves up/down or left/right.



Picture Size

Press the **SIZE** button and then ◄ / ► button to adjust the sub picture size.

With **SIZE** button in DW1, DW2 modes, main and sub picture is adjusted simultaneously. With **SIZE** button in PIP mode, sub picture is adjusted.



Adjusting PIP Transparency (PIP mode only)

1. Press the **MENU** button and then ▲ / ▼ button to select the PIP/DW menu.
2. Press the ► button and then ▲ / ▼ button to select **PIP Transparency**.
3. Press the ► button and then ◄ / ► button to adjust PIP transparency.
4. Press the **EXIT** button to return to normal TV viewing.

Teletext (option)

- Teletext (or TOP text) is an optional function, therefore only the set with the teletext system can receive the teletext broadcast.
- Teletext is a free service broadcast by most TV stations which gives up-to-the-minute information on news, weather, television programmes, share prices and many other topics.
- The teletext decoder of this set 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 indicates your selection, while the second shows the current page displayed.

Press the **TEXT** button to switch off teletext.

SIMPLE Text (option)

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 reenter the correct page number.
2. The **PR ▲ / ▼** button can also be used to select the preceding or following page.

TOP Text (option)

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 automatic 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 text 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 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 text 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 also 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.

HOLD

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

This button has two functions:

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 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 button again to exit this function.

Brief Info. (In Digital mode only)

- Show the present screen information.
- Press the **INFO**/ⓘ/✱ button or **EXIT** button to exit.



Remote Control Buttons	Function
◄ / ►	Change to Now/Next
▲ / ▼	The detail information on or off

EPG (Electronic Programme Guide) (In Digital mode only)

EPG (Electronic Programme Guide) (In Digital mode only)

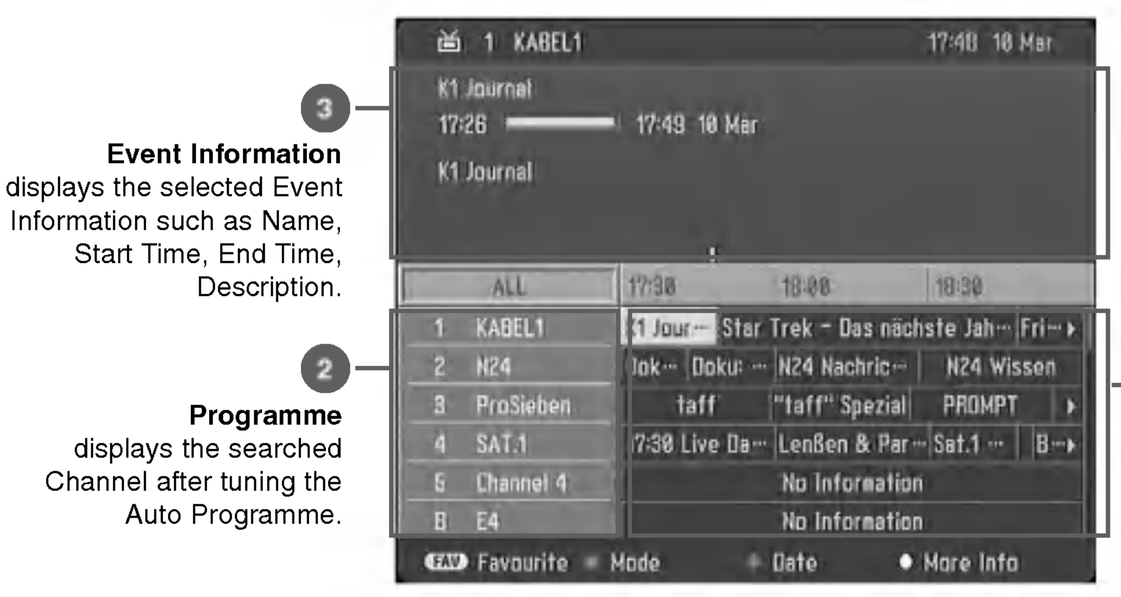
- This system has an Electronic Programme Guide (EPG) to help your navigation through all the possible viewing options.
- The EPG supplies information such as programme listings, start and end times for all available services. In addition, detailed information about the programme is often available in 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.
- The EPG displays the programme description for next 8 days.

Switch on/off EPG

1. Press the **GUIDE** button to switch on EPG.
2. Press the **GUIDE** 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.
Pressing the **PR** ▲ / ▼ button repeatedly turns the pages.



Event Information
displays the selected Event Information such as Name, Start Time, End Time, Description.

Programme
displays the searched Channel after tuning the Auto Programme.

Event
displays the Event Name which broadcasts at present or next.

Button Function in NOW/NEXT Guide Mode



Remote Control Buttons	Function
RED	Mode change to 8 Days Guide
▲ / ▼	Select a broadcasting station
◄ / ►	Select the Event
FAV	Shows the favourite programmes
BLUE	The detail information on or off

Button Function in 8 Days Guide/Date Change Mode



Remote Control Buttons	Function
GREEN	Shows the Date Box
RED	Mode change to Channel Guide
▲ / ▼	Select a broadcasting station
◄ / ►	Select the Event
FAV	Shows the favourite programmes
BLUE	The detail information on or off
EXIT	Switch off EPG

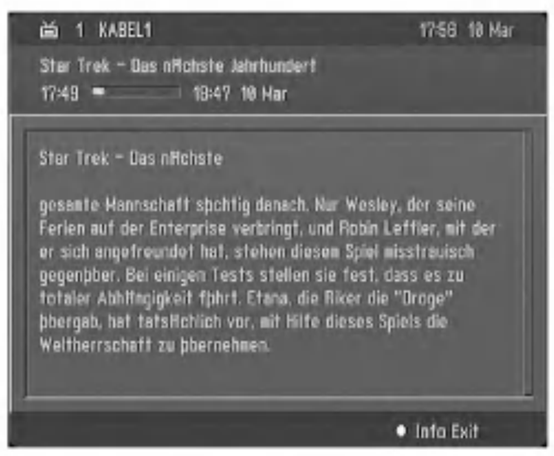
EPG (Electronic Programme Guide) (In Digital mode only)

Button Function in Channel Guide Mode



Remote Control Buttons	Function
GREEN	Shows the Date Box
RED	Mode change to NOW/NEXT Guide
▲ / ▼	Select the Event
◄ / ►	Select a broadcasting station
FAV	Shows the favourite programmes
BLUE	The detail information on or off

Button Function in Extended Description Box



Remote Control Buttons	Function
BLUE	The detail information on or off
▲ / ▼	Text Up/Down
PR ▲ / ▼	Page Up/Down

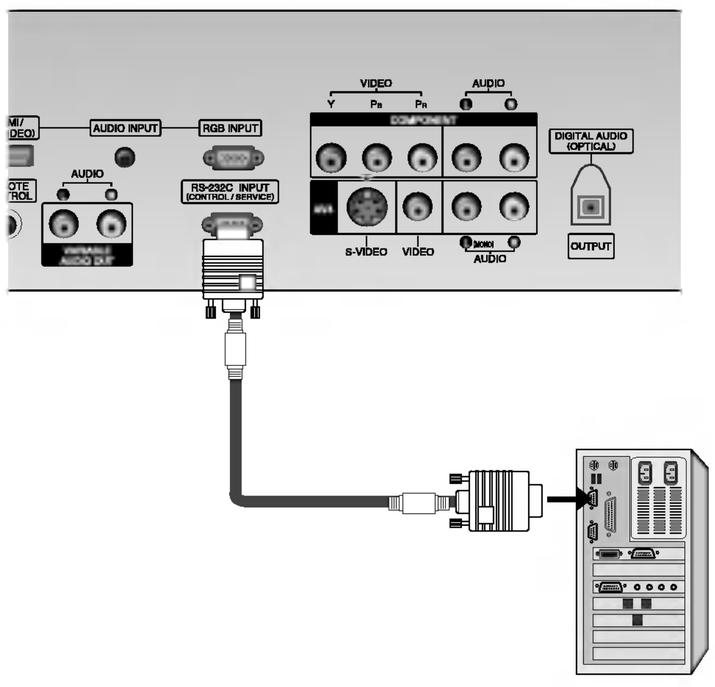
External Control Device Setup

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

How to connect external control equipment

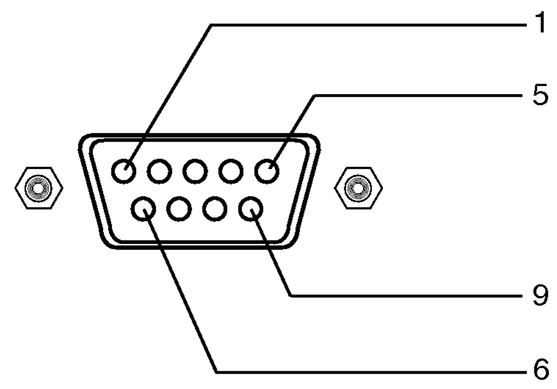
- Connect the serial port of the control device to the RS-232C jack on the back panel of the set.
- RS-232C connection cables are not supplied with the set.
- The set remote control and front panel controls (except main power) will not be functional if the set is controlled by a PC computer or other external device.

< Back panel of the set >



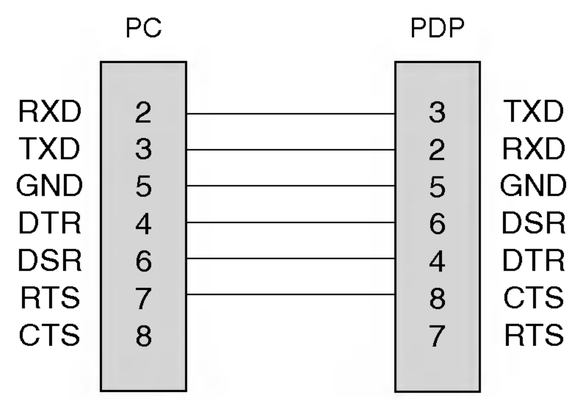
Type of connector; D-Sub 9-pin male

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

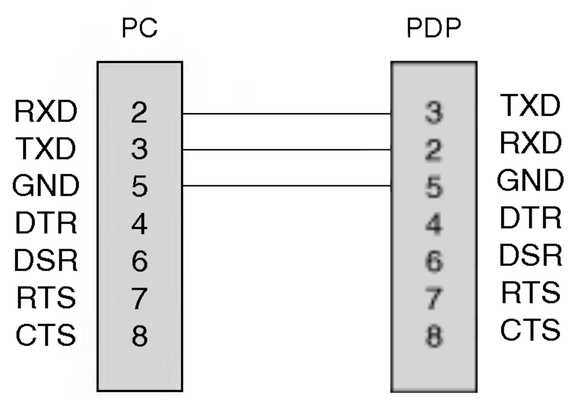


RS-232C configurations

7-wire configuration
(Standard RS-232C cable)



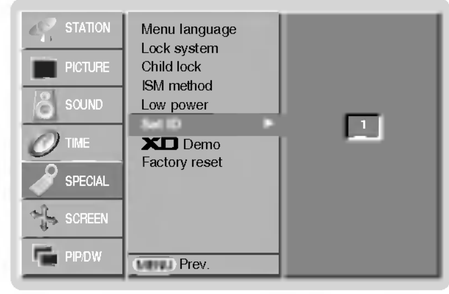
3-wire configuration
(Not standard)



Set ID

- Use this function to specify a set ID number.
- Refer to 'Real Data Mapping 1'. See page 49.

1. Press the **MENU** button and then use the ▲ / ▼ button to select the SPECIAL 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. Repeatedly press the **MENU** button to return to normal TV viewing.



Communication Parameters

- Baud rate : 9600 bps (UART)
- Data length : 8 bits
- Parity : None

* Use a crossed (reverse) cable.

- Stop bit : 1 bit
- Communication code : ASCII code

Command Reference List

	COMMAND 1	COMMAND 2	DATA (Hexadecimal)
01. Power	k	a	0 ~ 1
02. Input Select	k	b	Refer to p. 45
03. Aspect Ratio	k	c	Refer to p. 45
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/DW	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 (CSM)	k	u	0 ~ 3
20. Red Adjustment	k	v	0 ~ 50
21. Green Adjustment	k	w	0 ~ 50
22. Blue Adjustment	k	$	0 ~ 50
23. PIP input Source	k	y	Refer to p. 47
24. Abnormal Status	k	z	0 ~ a
25. ISM Method	j	p	0 ~ 3
26. Low Power	j	q	0 ~ 1
27. Orbiter Time Setting	j	r	1 ~ FE
28. Orbiter Pixel Setting	j	s	1 ~ 3
29. Picture Size Setting for DW Mode	j	t	0 ~ 20
30. Auto Configure	j	u	1
31. Tune Command	m	a	Refer to p. 48
32. Send IR Code	m	c	Key Code
33. Input select (Main)	x	b	Refer to p. 49
34. Input select (PIP)	x	y	Refer to p. 49

* When setting the 24 ~ 34, a menu doesn't display on screen.

Transmission / Receiving Protocol

Transmission

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

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

OK Acknowledgement

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

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

Error Acknowledgement

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

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

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

01. Power (Command 2 : a)

► To control Power On/Off of the set.

Transmission

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

Data 0 : Power Off
1 : Power On

Ack

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

► To show Power On/Off.

Transmission

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

Ack

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

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

02. Input Select (Command 2 : b)

► To select input source for the set.
You can also select an input source using the INPUT button on the set's remote control.

Transmission

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

Data 0 : DTV
1 : Analogue
2 : AV1
3 : AV2
4 : Component
6 : RGB-DTV
7 : RGB-PC

Ack

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

03. Aspect Ratio (Command 2 : c) (Main Picture Size)

► To adjust the screen format. (Main picture format)
You can also adjust the screen format using the ARC (Aspect Ratio Control) button on remote control or in the SCREEN menu.

Transmission

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

Data 1 : Normal screen (4:3)
2 : Wide screen (16:9)
3 : Horizon (Spectacle)
4 : Zoom
6 : Original
7 : 14:9
8 : Full

Ack

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

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

04. Screen Mute (Command 2 : d)

► To select screen mute on/off.

Transmission

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

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

Ack

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

05. Volume Mute (Command 2 : e)

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

Transmission

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

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

Ack

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

06. Volume Control (Command 2 : f)

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

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

07. Contrast (Command 2 : g)

► To adjust screen contrast.
You can also adjust contrast in the PICTURE menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

08. Brightness (Command 2 : h)

► To adjust screen brightness.
You can also adjust brightness in the PICTURE menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

09. Colour (Command 2 : i)

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

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

10. Tint (Command 2 : j) (option)

► To adjust the screen tint.
You can also adjust tint in the PICTURE menu.

Transmission

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

Data Red : 0 ~ Green : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

11. Sharpness (Command 2 : k)

► To adjust the screen sharpness.
You can also adjust sharpness in the PICTURE menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

12. OSD Select (Command 2 : l)

► To select OSD (On Screen Display) on/off when controlling remotely.

Transmission

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

Data 0 : OSD off 1 : OSD on

Ack

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

13. Remote control lock mode (Command 2 : m)

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

Transmission

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

Data 0 : Lock off 1 : Lock on

Ack

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

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

14. PIP / DW (Command 2 : n)

► To control the PIP (Picture In picture)/DW.
You can also control the PIP/DW using the PIP/DW button on the remote control or in the PIP/DW menu.

Transmission

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

Data 0: PIP/DW off
1: PIP
2: DW1
3: DW2

Ack

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

15. PIP Position (Command 2 : q)

► To select sub picture position for PIP.
You can also adjust the sub picture position using POSITION button on the remote control or in the PIP/DW menu.

Transmission

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

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

Ack

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

16. Treble (Command 2 :r)

► To adjust treble.
You can also adjust treble in the SOUND menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

17. Bass (Command 2 : s)

► To adjust bass.
You can also adjust bass in the SOUND menu.

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

18. Balance (Command 2 : t)

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

Transmission

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

Data Min : 0 ~ Max : 64
* Refer to 'Real data mapping 1'. See page 49.

Ack

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

19. Colour Temperature (Command 2 : u)

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

Transmission

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

Data 0: Normal 1: Cool 2: Warm 3: User

Ack

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

20. Red Adjustment (Command 2 : v)

▶ To adjust red in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 49.

Ack

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

21. Green Adjustment (Command 2 : w)

▶ To adjust green in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 49.

Ack

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

22. Blue Adjustment (Command 2 : $)

▶ To adjust blue in colour temperature.

Transmission

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

Data Min : 0 ~ Max : 50
* Refer to 'Real data mapping 2'. See page 49.

Ack

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

23. PIP Input Select (Command 2 : y)

▶ To select input source for sub picture in PIP/Twin picture mode. You can also adjust input source for sub picture using PIP INPUT button on remote control.

Transmission

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

Data 0 : DTV
1 : Analogue
2 : AV1
3 : AV2
4 : Component
6 : RGB-DTV
7 : RGB-PC

Ack

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

24. Abnormal State (Command 2 : z)

▶ To recognize an abnormal state.

Transmission

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

Data FF : Read

Ack

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

Data 0: Normal (Power on and signal exist)
1: No signal (Power on)
2: Turn the set off by remote control
3: Turn the set off by sleep time function
4: Turn the set off by RS-232C function
5: 5V down
6: AC down
7: Turn the set off by Fan Alarm function (option)
8: Turn the set off by Off time function
9: Turn the set off by Auto sleep function
a: Turn the set off by AV board detect

* This function is "read only".

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

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

Transmission

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

Data 1 : Inversion
2 : Orbiter
4 : White wash
8 : Normal

Ack

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

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

► To reduce the power consumption of the set. You can also adjust Low Power in SPECIAL menu.

Transmission

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

Data 0 : Off
1 : On

Ack

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

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

► To adjust orbiter operation time term.

Transmission

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

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

Ack

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

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

► To adjust pixel number in orbiter function.

Transmission

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

Data Min: 1 ~ Max: 3
* Refer to 'Real data mapping 1'.

Ack

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

29. Picture Size Setting for DW Mode (Command 1 : j, Command 2 : t)

► To select the PIP picture format.
You can also select the PIP picture format using the SIZE on the remote control.

Transmission

[j][t][ ][Set ID][ ][Data][Cr]

Data Min: 0 ~ Max: 20
* Refer to 'Real data mapping 1'.

Ack

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

30. Auto Configure (Command 1 : j, Command 2 : u)

► To adjust picture position and minimize image shaking automatically. It works only in RGB (PC) mode.

Transmission

[j][u][ ][Set ID][ ][Data][Cr]

Data 1: To set

Ack

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

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

► Select channel to following physical number.

Transmission

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

Data0 : High channel data
Data1 : Low channel data
ex. No. 47 -> 00 2F (2FH)
No. 394 -> 01 88 (188H)
Data2 0x00 : ATV Main
0x01 : ATV Sub
0x10 : DTV Main
0x11 : DTV Sub

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

ex) In ATV Main and DTV Sub mode
1. Auto Programme or Manual Programme
2. "ma 1 00 08 00" --> Select 8 channel (ATV Main)
3. "ma 1 00 0E 11" --> Select 14 channel (DTV Sub)

Ack

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

Data Min: 00 ~ Max: FF

32. Send IR Code (Command 1 : m, Command 2 : c)

► To send IR remote key code.

Transmission

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

Data Key code - Refer to page 51.

Ack

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

33. Input select (Main) (Command 1 : x, Command 2 : b)

▶ To select input source for main picture.

Transmission

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

Data Structure

MSB							LSB
0	0	0	0	0	0	0	0
External Input				Input Number			

External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	0	1	1	S-Video
0	1	0	0	Component
0	1	0	1	RGB-DTV
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4
0	1	0	0	Input5
0	1	0	1	Input6

Ack

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

34. Input select (PIP) (Command 1 : x, Command 2 : y)

▶ To adjust input source for sub picture in PIP mode.

Transmission

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

Data Structure

MSB							LSB
0	0	0	0	0	0	0	0
External Input				Input Number			

External Input				Data
0	0	0	0	DTV
0	0	0	1	Analogue
0	0	1	0	AV
0	0	1	1	S-Video
0	1	0	0	Component
0	1	0	1	RGB-DTV
0	1	1	0	RGB-PC
1	0	0	1	HDMI

Input Number				Data
0	0	0	0	Input1
0	0	0	1	Input2
0	0	1	0	Input3
0	0	1	1	Input4
0	1	0	0	Input5
0	1	0	1	Input6

Ack

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

*** Real data mapping 1**

0 : Step 0
⋮
A : Step 10 (Set ID 10)
⋮
F : Step 15 (Set ID 15)
10 : Step 16 (Set ID 16)
⋮
64 : Step 100
⋮
6E : Step 110
⋮
73 : Step 115
74 : Step 116
⋮
C7 : Step 199
⋮
FE : Step 254
FF : Step 255

*** Real data mapping 2**

0 : -40
1 : -39
2 : -38
⋮
28 : 0
⋮
4E : +38
4F : +39
50 : +40

IR Code (NEC Format)

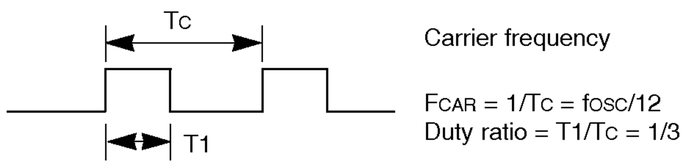
How to connect

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

Remote Control IR Code (NEC Format)

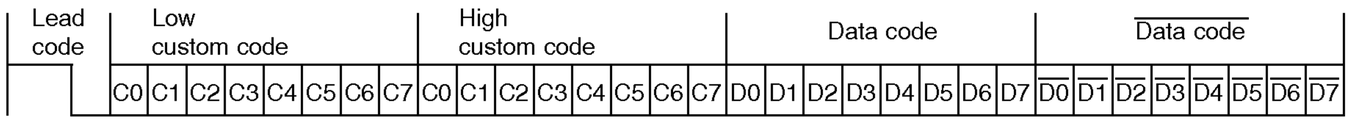
► **Output waveform**

Single pulse, modulated with 37.917KHz signal at 455KHz

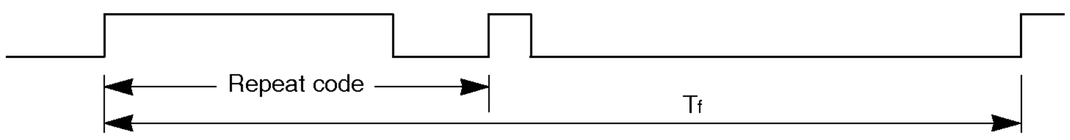


► **Configuration of frame**

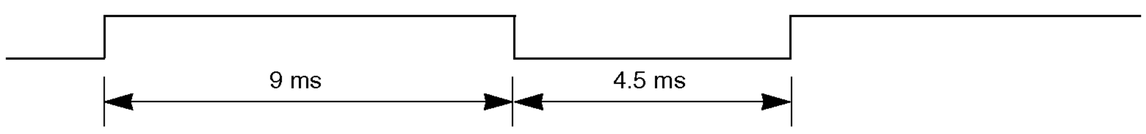
• 1st frame



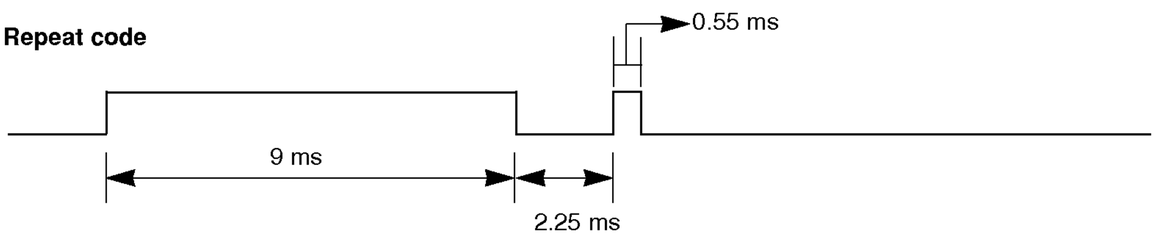
• Repeat frame



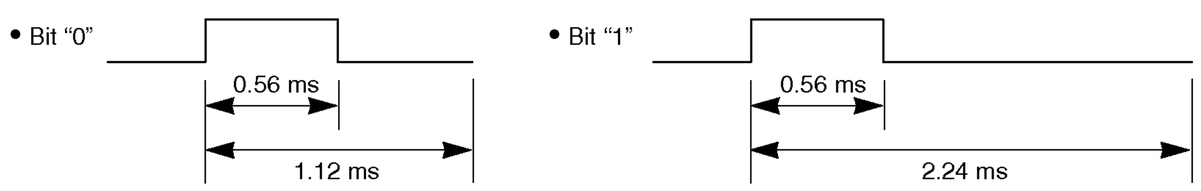
► **Lead code**



► **Repeat code**

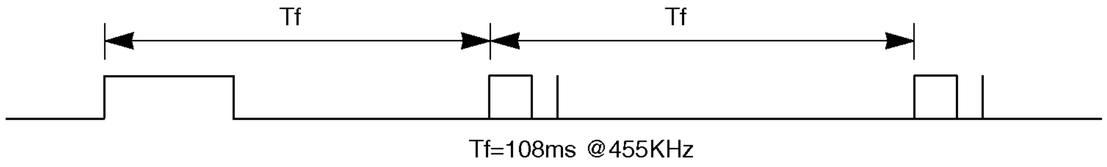


► **Bit description**



► **Frame interval : Tf**

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



Code (Hexa)	Function	Note
00	PR ▲	R/C Button
01	PR ▼	R/C Button
02	VOL ▲	R/C Button
03	VOL ▼	R/C Button
40	Up (▲)	R/C Button
41	Down (▼)	R/C Button
06	Right (►)	R/C Button
07	Left (◄)	R/C Button
08	POWER	R/C Button (Power On/Off)
C4	POWER ON	Discrete IR Code (Only Power On)
C5	POWER OFF	Discrete IR Code (Only Power Off)
09	MUTE	R/C Button
10	Number Key 0	R/C Button
11	Number Key 1	R/C Button
12	Number Key 2	R/C Button
13	Number Key 3	R/C Button
14	Number Key 4	R/C Button
15	Number Key 5	R/C Button
16	Number Key 6	R/C Button
17	Number Key 7	R/C Button
18	Number Key 8	R/C Button
19	Number Key 9	R/C Button
0B	INPUT	R/C Button
BF	COMPONENT	Discrete IR Code (Input COMPONENT Selection)
C6	HDMI	Discrete IR Code (Input HDMI Selection)
D5	RGB	Discrete IR Code (Input RGB Selection)
D6	TV	Discrete IR Code (Input TV Selection)
5A	AV1	Discrete IR Code (Input AV1 Selection)
D0	AV2	Discrete IR Code (Input AV2 Selection)
D1	AV3	Discrete IR Code (Input AV3 Selection)
D2	AV4	Discrete IR Code (Input AV4 Selection)
D3	S-Video2	Discrete IR Code (Input S-Video2 Selection)
AB	GUIDE	R/C Button
39	SUBTITLE/✱	R/C Button
5B	EXIT	R/C Button
1E	FAV	R/C Button
1A	Q.VIEW	R/C Button
50	D/A TV	R/C Button
0A	I/II	R/C Button
0E	SLEEP	R/C Button
43	MENU	R/C Button
44	OK(◉)	R/C Button
4D	PSM	R/C Button
52	SSM	R/C Button
53	LIST	R/C Button
20	TEXT	R/C Button
2A	REVEAL	R/C Button
24	MIX	R/C Button
26	TIME	R/C Button
62	UPDATE / POSITION	R/C Button
64	SIZE	R/C Button
65	HOLD	R/C Button
70	INDEX	R/C Button
60	PIP/DW	R/C Button
C3	PIP INPUT	R/C Button
C2	SWAP	R/C Button
C0	PIP PR+	R/C Button
C1	PIP PR-	R/C Button
61	BLUE Key	R/C Button
63	YELLOW Key	R/C Button
71	GREEN Key	R/C Button
72	RED Key	R/C Button
79	ARC	R/C Button
76	ARC (4:3)	Discrete IR Code (Only 4:3 mode)
77	ARC (16:9)	Discrete IR Code (Only 16:9 mode)
AF	ARC (Zoom)	Discrete IR Code (Only Zoom mode)

Programming the Remote

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

Programming a code into a remote mode

1. 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 needs 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 the code table on the following pages. When pressing the button, the light blinks at a time. If the device is 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			
AIWA	034			
AKAI	016	043	046	124
	125	146		
AMPRO	072			
ANAM	031	033	103	
AUDIO DYNAMICS	012	023	039	043
BROKSONIC	035	037	129	
CANON	028	031	033	
CAPEHART	108			
CRAIG	003	040	135	
CURTIS MATHES	031	033	041	
DAEWOO	005	007	010	064
	065	108	110	111
	112	116	117	119
DAYTRON	108			
DBX	012	023	039	043
DYNATECH	034	053		
ELECTROHOME	059			
EMERSON	006	017	025	027
	029	031	034	035
	036	037	046	101
	129	131	138	153
FISHER	003	008	009	010
FUNAI	034			
GE	031	033	063	072
	107	109	144	147
GO VIDEO	132	136		
HARMAN KARDON	012	045		
HITACHI	004	018	026	034
	043	063	137	150
INSTANTREPLAY	031	033		
JCL	031	033		
JCPENNY	012	013	015	033
	040	066	101	
JENSEN	043			
JVC	012	031	033	043
	048	050	055	060
	130	150	152	

Brand	Codes			
KENWOOD	014	034	039	043
	047	048		
LG (GOLDSTAR)	001	012	013	020
	101	106	114	123
LLOYD	034			
LXI	003	009	013	014
	017	034	101	106
MAGIN	040			
MAGNAVOX	031	033	034	041
	067	068		
MARANTZ	012	031	033	067
	069			
MARTA	101			
MATSUI	027	030		
MEI	031	033		
MEMOREX	003	010	014	031
	033	034	053	072
	101	102	134	139
MGA	045	046	059	
MINOLTA	013	020		
MITSUBISHI	013	020	045	046
	049	051	059	061
	151			
MTC	034	040		
MULTITECH	024	034		
NEC	012	023	039	043
	048			
NORDMENDE	043			
OPTONICA	053	054		
PANASONIC	066	070	074	083
	133	140	145	
PENTAX	013	020	031	033
	063			
PHILCO	031	034	067	
PHILIPS	031	033	034	054
	067	071	101	
PILOT	101			
PIONEER	013	021	048	

Brand	Codes			
PORTLAND	108			
PULSAR	072			
QUARTZ	011	014		
QUASAR	033	066	075	145
RCA	013	020	033	034
	040	041	062	063
	107	109	140	144
	145	147		
REALISTIC	003	008	010	014
	031	033	034	040
	053	054	101	
RICO	058			
RUNCO	148			
SALORA	014			
SAMSUNG	032	040	102	104
	105	107	109	112
	113	115	120	122
	125			
SANSUI	022	043	048	135
SANYO	003	007	010	014
	102	134		
SCOTT	017	037	112	129
	131			
SEARS	003	008	009	010
	013	014	017	020
	031	042	073	081
	101			
SHARP	031	054	149	
SHINTOM	024			
SONY	003	009	031	052
	056	057	058	076
	077	078	149	
SOUNDESIGN	034			
STS	013			
SYLVANIA	031	033	034	059
	067			
SYMPHONIC	034			
TANDY	010	034		

Brand	Codes			
TATUNG	039	043		
TEAC	034	039	043	
TECHNICS	031	033	070	
TEKNIKA	019	031	033	034
	101			
THOMAS	034			
TMK	006			
TOSHIBA	008	013	042	047
	059	082	112	131
TOTEVISION	040	101		
UNITECH	040			
VECTOR RESEARCH	012			
VICTOR	048			
VIDEO CONCEPTS	012	034	046	
VIDEOSONIC	040			
WARDS	003	013	017	024
	031	033	034	040
	053	054	131	
YAMAHA	012	034	039	043
ZENITH	034	048	056	
	058	072	080	101

DVD

Brand	Codes			
APEX DIGITAL	022			
DENON	020	014		
GE	005	006		
HARMAN KARDON	027			
JVC	012			
LG	001	010	016	025

Brand	Codes			
MAGNAVOX	013			
MARANTZ	024			
MITSUBISHI	002			
NAD	023			
ONKYO	008	017		
PANASONIC	003	009		

Brand	Codes			
PHILIPS	013			
PIONEER	004	026		
PROCEED	021			
PROSCAN	005	006		
RCA	005	006		
SAMSUNG	011	015		

Brand	Codes			
SONY	007			
THOMPSON	005	006		
TOSHIBA	019	008		
YAMAHA	009	018		
ZENITH	010	016	025	

Troubleshooting Checklist

No picture & No sound	• Check whether the set is turned on. • Power cord inserted into wall outlet? • Plug another product's power cord into the wall outlet where the set's power cord was plugged in.
Picture OK & No sound	• Press the **VOLUME** (►) button. • Sound muted? Press **MUTE** button.
The remote control doesn't work	• Check to see if there is any object between the set and the remote control causing obstruction. • Check to see if the batteries are installed with the correct polarities. (Refer to p.6) • Check if the remote control handset is set up to correct mode. • Install new batteries. (Refer to p.6)
Picture appears slowly, after switching on	• This is normal as the image is muted during the startup process of the set. Please contact your service centre, if the picture has not appeared after five minutes.
No or Poor colour or Poor picture	• Select **Colour** in the PICTURE menu and press the **VOLUME** (►) button. (Refer to p.26) • Keep a certain distance between the set and the VCR. • Activate any function to restore the brightness of the picture. (If still picture is on the screen for more than 5 minutes, the screen gets dark.)
Horizontal/vertical bars or picture shaking	• Check for local interference such as an electrical appliance or power tool.
No output from one of the speakers	• Adjust **Balance** in the SOUND menu. (Refer to p.27)
Unusual sound from inside the set	• A change in ambient humidity or temperature may result in an unusual noise at the time of switching off or on of the set and do not indicate a fault with the set.

Product Specifications

MODEL	42PX4DVA-ZC
Width (inches / mm)	49.3 / 1252
Height (inches / mm)	27.8 / 705
Depth (inches / mm)	11.3 / 285
Weight (pounds / kg)	84.5 / 38.3
Power requirement	AC100-240V, 50/60Hz
Operating Temperature Range	32 ~ 104°F (0 ~ 40°C)
Operating Humidity Range	Less than 80%

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

