

HUMAX

L3040

30 inch Wide Screen LCD TV



HUMAX

HUMAX USA, INC.
Please contact us at:
866.Humax.USA
(866.486.2987)
Humax USA, Inc.
3601 West Garry Ave
Santa Ana, CA 92704
www.humaxusa.com

O
W
N
E
R
'
S
M
A
N
U
A
L

Important Safety Instructions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION :

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK.
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates high voltage is present inside.
It is dangerous to make any kind of contact with any inside part
of this device.



This symbol alerts you that important literature concerning operation
and maintenance has been included with this device.

WARNING :

DO NOT EXPOSE THIS DEVICE TO DRIPPING OR SPLASHING, OR PLACE OBJECTS FILLED
WITH LIQUIDS, SUCH AS VASES, ON THIS DEVICE.

FCC NOTICE

• **A Class B digital device**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used according to the instructions, may cause harmful interference to radio communications. There is no guarantee, however, that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference with one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment in an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

- **Any changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.**

WARNING

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

CAUTION

The stand is intended for use only with this LCD TV. If used with other
devices, it can be unstable and cause injury.

Important Safety Instructions

Important Safeguards for You and Your New Device

Always be careful when using your LCD TV. To reduce the risk of fire, electric shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your LCD TV.

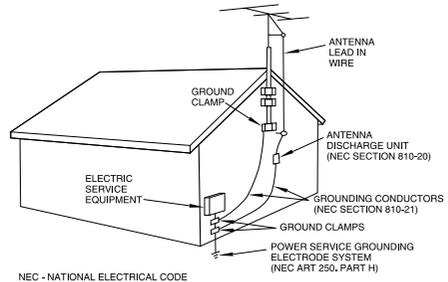
1. Read these instructions.
2. Keep these instructions
3. Heed all warnings.
4. Follow all instructions
5. Do not use this device near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings.
8. Install according to the manufacturer's instructions. Do not install near heat sources such as radiators, heat registers, stoves, or any other apparatus (including amplifiers) that produces heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the plug provided does not fit into your outlet, consult an electrician to replace the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at the plugs, convenience receptacles, and the point where they exit from the device.
11. Use only attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the device. When using a cart, use caution when moving the cart/device combination to avoid injury from tip-over.
13. Unplug this device during lightning storms or when not used for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as when the power supply cord or plug is damaged; liquid has been spilled or objects have fallen into the device; the device has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Do not place this device on a slippery or tilted surface, or on an unstable cart, stand, tripod, bracket, or table. The device may slide or fall, causing serious injury to a child or adult and serious damage to the device.
16. When mounting the device, follow the manufacturer's instructions, and use a mounting accessory recommended by the manufacturer
17. Avoid overhead power lines. Do not place an outside antenna system in the vicinity of overhead power lines or other electric light or power circuits, or where it could fall into such power lines or circuits. When installing an outside antenna system, be extremely careful not to touch the power lines or circuits. Contact with such lines can be fatal.



Important Safety Instructions

18. If an outside antenna or cable system is connected to the device, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the U.S. National Electrical Code, ANSI/NFPA 70 provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Example of Antenna Grounding as per National Electrical Code, ANSI/NFPA 70



19. Never push objects of any kind through the openings into this device as they may touch dangerous voltage points or short out parts and cause a fire or electric shock. Never spill liquid of any kind on the device.
20. If you make adjustments yourself, adjust only the controls covered in the operating instructions. Adjusting other controls may result in damage, and will often require extensive work by a qualified technician to restore the LCD TV to normal.
21. When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
22. Upon completion of any service or repair to this device, ask the service technician to perform routine safety checks to determine that the device is in proper operating condition.

LCD Cells

The LCD Panel consists of 3 million cells. It is therefore possible that a few cells might be flawed. We allow a maximum of 6 defective cells for the device to be in proper running order. Please recognize that a device with 6 or fewer defective cells cannot be exchanged or refunded.



Recommendation to Avoid or Minimize Phosphor Burn-in:

Like all phosphor-based display devices and all TFT LCD Displays, LCD TV' s can be susceptible to phosphor burn under certain circumstances. Certain operating conditions, such as the continuous display of a static image over a prolonged period of time, can result in phosphor burn if proper precautions are not taken. To protect your investment in this LCD TV, please adhere to the following guidelines and recommendations for minimizing the occurrence of image burn.

1. Always enable and use your computer's screen-saver function during use with a computer input source.
2. Display a moving image whenever possible.
3. Change the position of the menu display from time to time.
4. Always power down the LCD TV when you are finished using it.
5. Lower the brightness and contrast levels as much as possible without impairing image readability.
6. Display an image with many colors and color gradations (i.e. photographic or photorealistic images).
7. Create image content with minimal contrast between light and dark areas, for example white characters on black backgrounds. Use complementary or pastel colors whenever possible.
8. Avoid displaying images with few colors and distinct, sharply defined borders between colors.
9. Refer to the "Long Life Functions" section in this manual to minimize image burn.

Burn-in is not covered by the warranty.

Cell Defect

The TFT LCD panel consists of fine cells. Although the panels are produced with more than 99.9 percent active cells, there may be some cells that do not produce light or remain lit.

Warranty

Warranty Period: One year from the date of purchase of your LCD TV.

Warranty does not cover any damage caused by image retention.

Table of Contents

START-UP

- Part Names and Functions8~9
- Checking Parts10
- Battery Installation and Replacement10

CONNECTION

- Connecting VHF and UHF Antennas11
- Connecting a Video/S-VHS12
- Connecting a DVD Player(Component Video)12
- Connecting a DTV Receiver(Component Video)...13
- Connecting a DTV Receiver (DVI).....14
- Connecting a PC(DVI)15
- Connecting a PC(RGB)16

REMOTE CONTROL

- Remote Control Buttons17
- LCD Window Feature18
- How to Control Other Brand Products19~20
- How to Confirm the MBR Code21
- PUNCH Buttons22
- RESET23

BASIC OPERATION

- Turning the LCD TV On and Off24
- Viewing the OSD Menu24
- Displaying Status Information25
- Selecting your Language25

CHANNEL

- Setting up Channels Automatically26
- Adding and Erasing Channels26
- Using the LNA(LowNoiseAmplifier).....27
- Fine Tuning Channels.....27

DIRECT ACCESS FEATURES

- Selecting Channels.....28
- Using the FAV button to Select the previous channel...28
- Adjusting the Volume.....28
- Switching the Sound Off Temporarily.....28
- Selecting a Device from External Sources.....29

PICTURE

- Changing the Picture standard30
- Customizing the Picture30

SOUND

- Changing the Sound Standard31
- Customizing the Sound.....31
- Setting the BBE Mode32
- Setting the Surround Effect32
- Selecting the Stereo Sound33
- Using the Auto Volume(AVL).....33

SETUP

- Changing the Screen Size.....34
- Protecting Screen burn (Long Life).....35
- Setting the Clock.....36
- Setting the Sleep Timer37
- Viewing the Closed Captions.....37
- Factory Reset38

PIP (Picture In Picture)

- Viewing the Picture In Picture39
- Freezing the Sub-Picture39
- Operating conditions of PIP40

OSD

- Setting the OSD Time Out41
- Changing the OSD Position41

V-CHIP

- V-CHIP Operation42~47

OPERATION WITH A PC

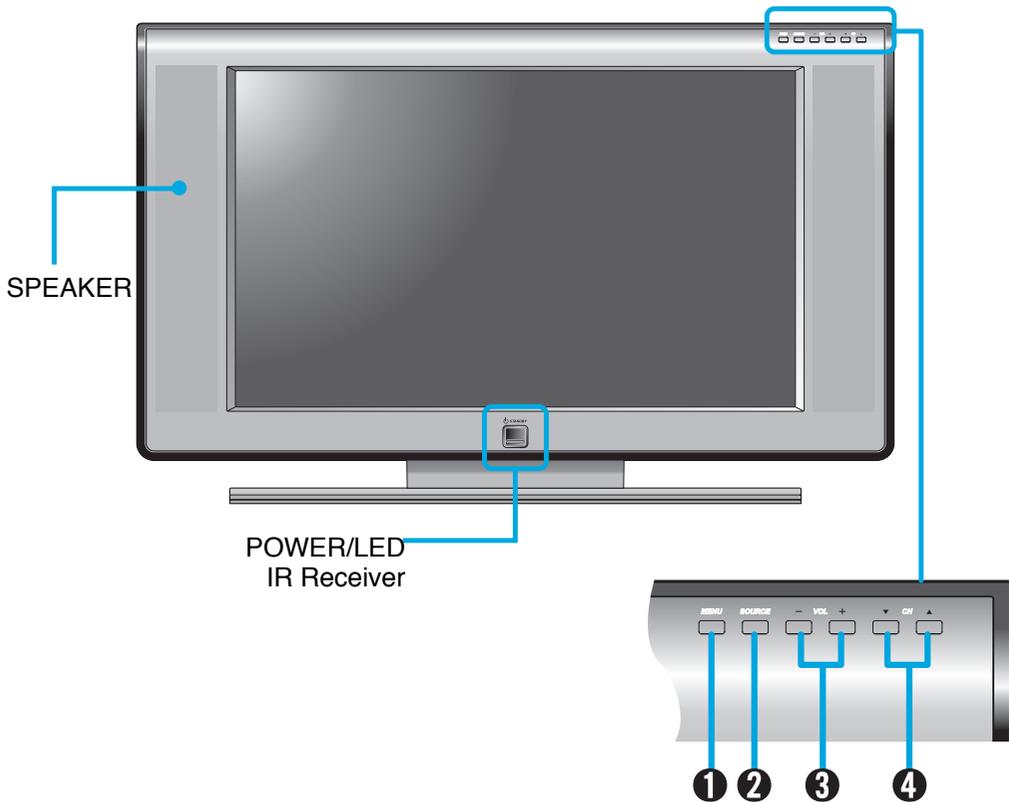
- Display Settings48~49
- Picture Color Adjustment50
- Picture Position Adjustment.....51
- Frequency Adjustment.....51
- Phase Adjustment.....52
- Automatic Quality Adjustment.....52
- Serial Control Using RS-232C53~54
- General RS-232 Command Structure.....55

APPENDIX

- Troubleshooting56
- Specifications.....57
- Manufacturer MBR Codes58~60
- How to Set Up the Lockout Function61
- APPENDIX.....62

Part Names and Functions

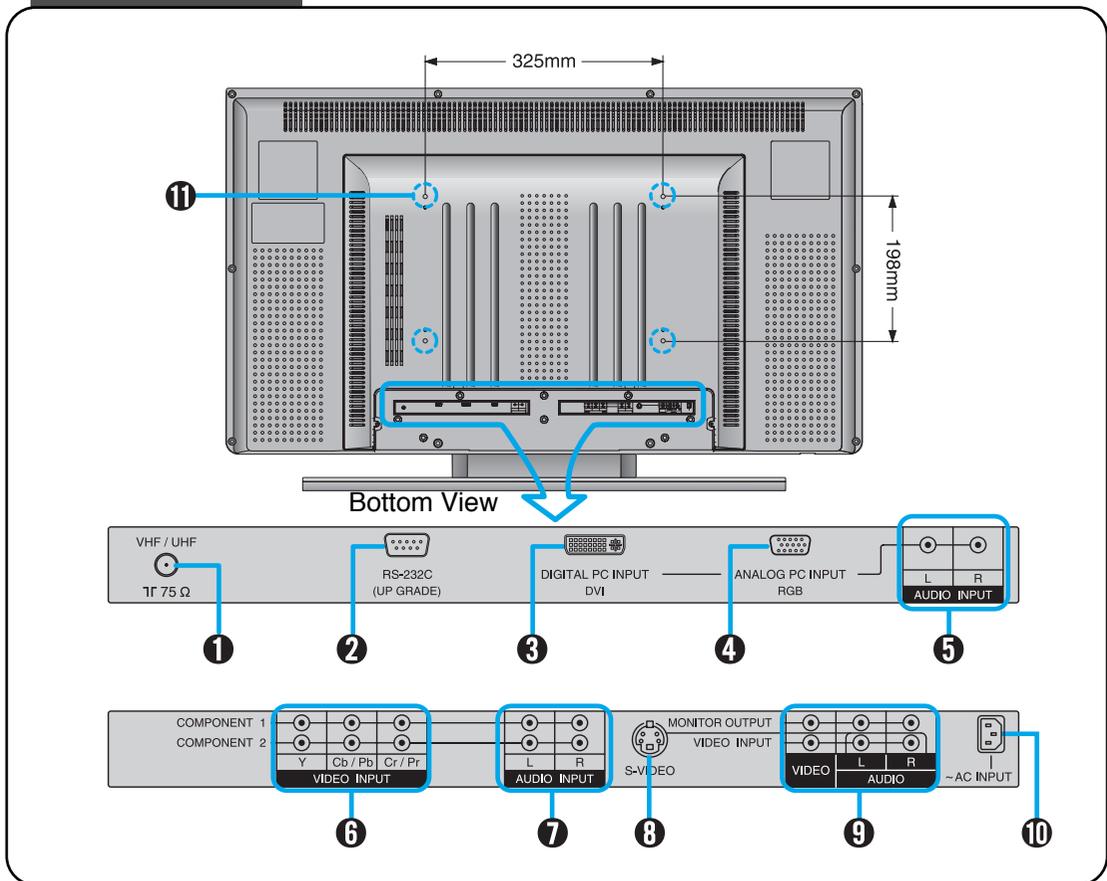
FRONT VIEW



- 1 Menu** : Displays the On screen Display (OSD).
- 2 Source** : Displays an available video source (i.e. RGB, DVI, Video, S-Video, TV, Component1 and Component2). Also functions as the Select button in the On screen Display (OSD).
- 3 Volume Up and Down** : Volume Up and Down : Adjusts the volume. Also functions as Adjust (-/+) button in the On screen Display.
- 4 Channel Up and Down** : Changes the channel. Also Functions as Move in the On screen Display (OSD).

Part Names and Functions

REAR VIEW



❶ VHF/UHF

For connecting outdoor Antenna

❷ RS-232C

This terminal is used when control functions need to be operated externally by PC.

❸ DVI

Input a digital video signal (TMDS/HDCP) from your PC or DTV receiver.

❹ RGB(D-sub 15pin)

Input an analog RGB signal from your PC.

❺ Audio(PC/DTV)

Input an audio signal from your PC or DTV receiver.

❻ Component1 (Y, Cb/Pb, Cr/Pr)

Input a video signal from a DVD player or DTV receiver.

Component2 (Y, Cb/Pb, Cr/Pr)

Input a video signal from a DVD player or DTV receiver.

❼ Component1 Audio

Input an audio signal from a DVD player or DTV receiver.

Component2 Audio

Input an audio signal from a DVD player or DTV receiver.

❽ S-Video

Input an S-VHS signal from VCR or DVD player.

❾ Video

Input a video (CVBS) signal from your VCR.

Video & S-Video Audio

Input an audio signal for Video or S-Video.

Monitor output - output a video signal.

❿ AC Input

Connect the included power cord here.

⓫ Screw Mounting Holes(4EA)

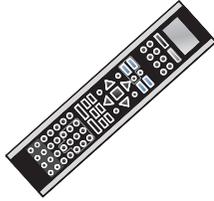
※ Mounting Screw Specifications
- four (4 ea) 5 mm .8 pitch x 10 mm threaded long screws.

Checking Parts

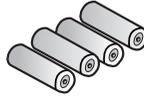
Checking parts



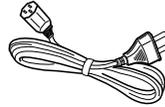
User's Manual



Remote Control



Batteries(AAA)



Power Cord



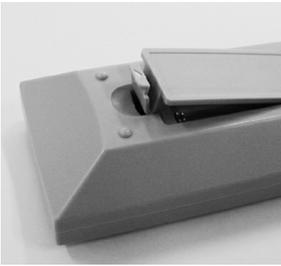
Warranty Card

Battery Installation and Replacement

Insert four AAA batteries. Make sure to insert them with the proper polarity.

1

Press and open the cover.



2

Align the batteries according to the (+) and (-) as indicated inside the case.



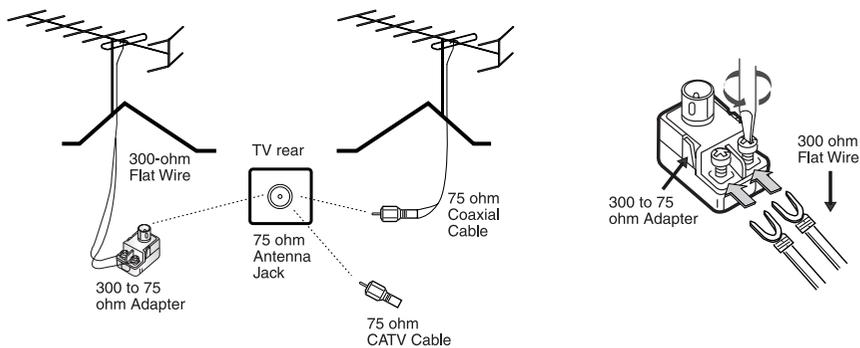
3

Close the cover.



Connection

Connecting VHF and UHF Antennas



Connecting an Outdoor Antenna

For the best reception, we recommend you use an outdoor antenna. Severely weathered antennas and antenna cables can reduce the signal quality. Before making any connections, inspect all antenna hardware; any service center can explain the various outdoor antennas available to you.

300-Ohm Flat wire

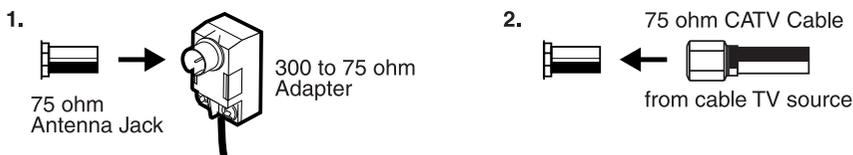
1. Connect the 300-ohm flat wire to the screws on the 300-ohm adapter.
2. Push the end of 300- to 75-ohm adapter into the 75-ohm antenna jack.

75-Ohm Coaxial cable

1. Connect the 75-ohm coaxial cable directly to the 75-ohm antenna jack.

Connecting a CATV Cable

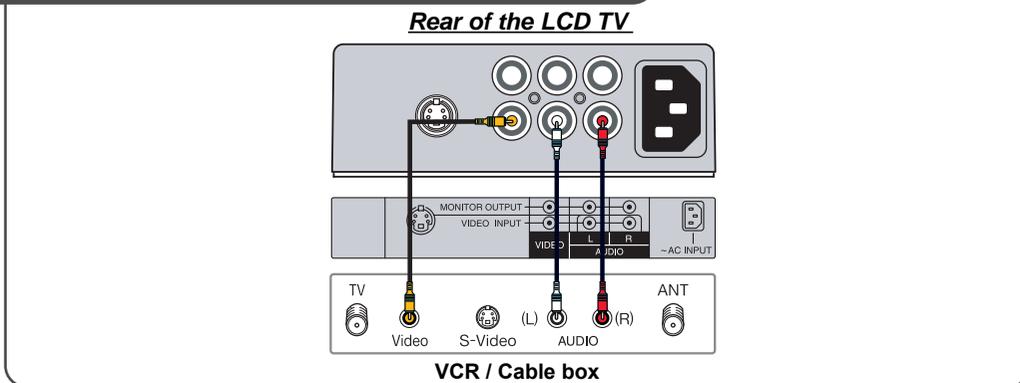
If you subscribe to a CATV system, make the antenna connection as described below.



1. Remove the 300-ohm to 75-ohm adapter or the cable from the TV, if attached.
2. Connect the CATV cable (75-ohm coaxial cable) to the antenna jack.

Connection

▶ Connecting a VCR (Composite Video)



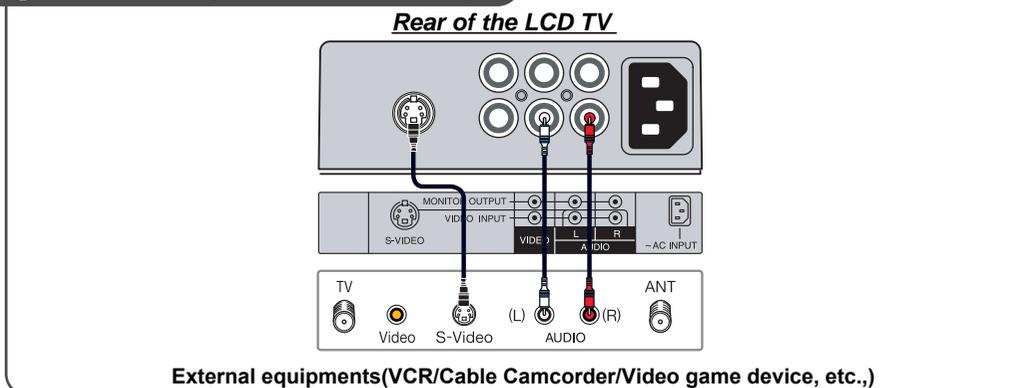
1. Connect video cable(not supplied) to the **VIDEO INPUT** jack on the LCD TV and the video output jack on the external equipments.(VCR/Cable box, etc.,)
2. Connect audio cables(not supplied) to the **AUDIO INPUT(L, R)** jack on the LCD TV and the audio output jack on the external equipments.(VCR/Cable box, etc.,)

To Play VCR / Cable box :

1. Turn on your external equipments(VCR / Cable box, etc.,) and press the play button.
2. Turn on the LCD TV and press the **SOURCE** button on the LCD TV remote control.
3. Select the VIDEO mode.

Source	
TV	TV
Video	Connected
S-Video	Not Connected
Component1	Not Connected
Component2	Not Connected
RGB	Not Connected
DVI	Not Connected
← Move	⊞ Select
	⏏ Exit

▶ Connecting a VCR (S-Video)



1. Connect video cable(not supplied) to the **S-VIDEO INPUT** jack on the LCD TV and the video output jack on the external equipments.(VCR/Cable box, etc.,)
2. Connect audio cables(not supplied) to the **AUDIO INPUT(L, R)** jack on the LCD TV and the audio output jack on the external equipments.(VCR/Cable box, etc.,)

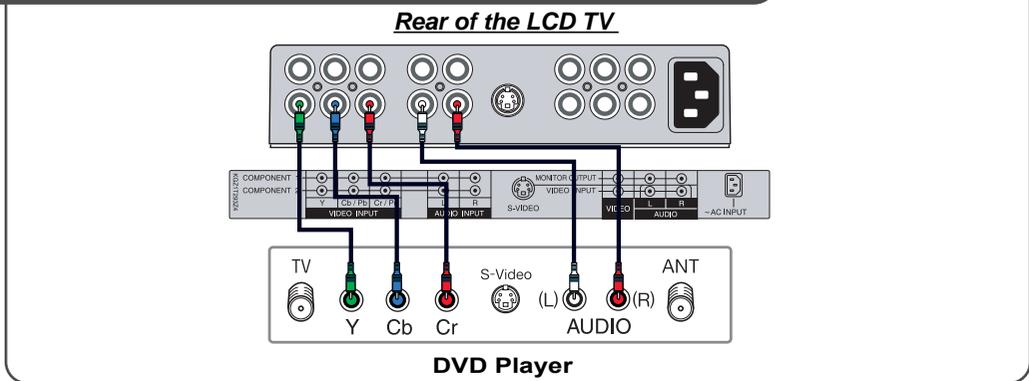
To Play external equipments :

1. Turn on your external equipments(VCR/Cable Camcorder/ Video game device, etc.,) and press the play button.
2. Turn on the LCD TV and press the **SOURCE** button on the LCD TV remote control.
3. Select the S-VIDEO mode.

Source	
TV	TV
Video	Not Connected
S-Video	Connected
Component1	Not Connected
Component2	Not Connected
RGB	Not Connected
DVI	Not Connected
← Move	⊞ Select
	⏏ Exit

Connection

▶ Connecting a DVD player (Component Video)

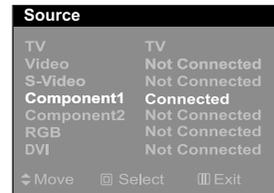


1. Connect video cables(not supplied) to the **Y, Cb/Pb, Cr/Pr** input jacks(Component 1 or 2) on the LCD TV and the video output jacks on the DVD player.
2. Connect audio cables(not supplied) to the **AUDIO INPUT** jacks(Component 1 or 2) on the LCD TV and the output jacks on the DVD player.

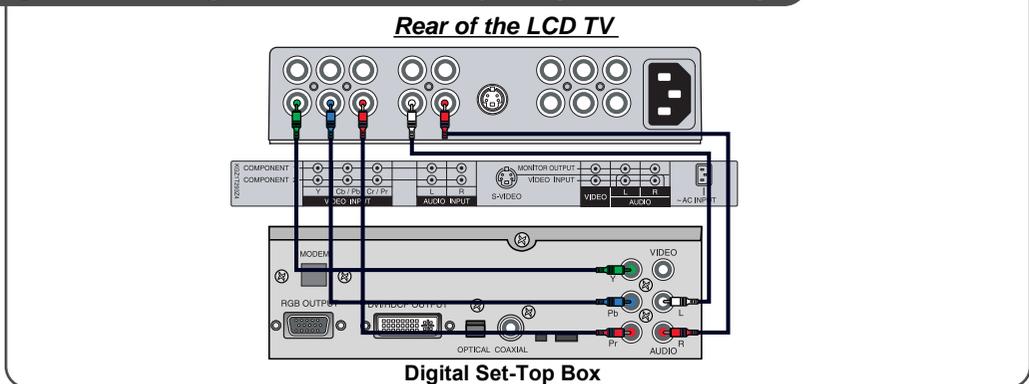
• **NOTE** : You must match the color-coded connectors with a compatible DVD player.

To Play DVD :

1. Turn on your DVD player; insert a disc and press the Play button on the DVD remote control.
2. Turn on the LCD TV and press the **SOURCE** button on the LCD TV remote control.
3. Select the Component1 mode (if the component1 jack is connected).



▶ Connecting a DTV Receiver (Component Video)

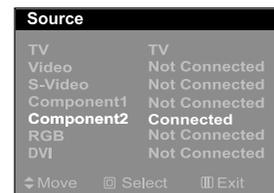


1. Connect video cables(not supplied) to the **Y, Cb/Pb, Cr/Pr** input jacks (Component 1 or 2) on the LCD TV and the video output jacks on the digital Set-Top Box.
2. Connect audio cables(not supplied) to the **AUDIO INPUT** jacks (Component 1 or 2) on the LCD TV and the output jacks on the digital Set-Top Box.

• **NOTE** : You must match the color-coded connectors with a compatible Digital Set-Top Box.

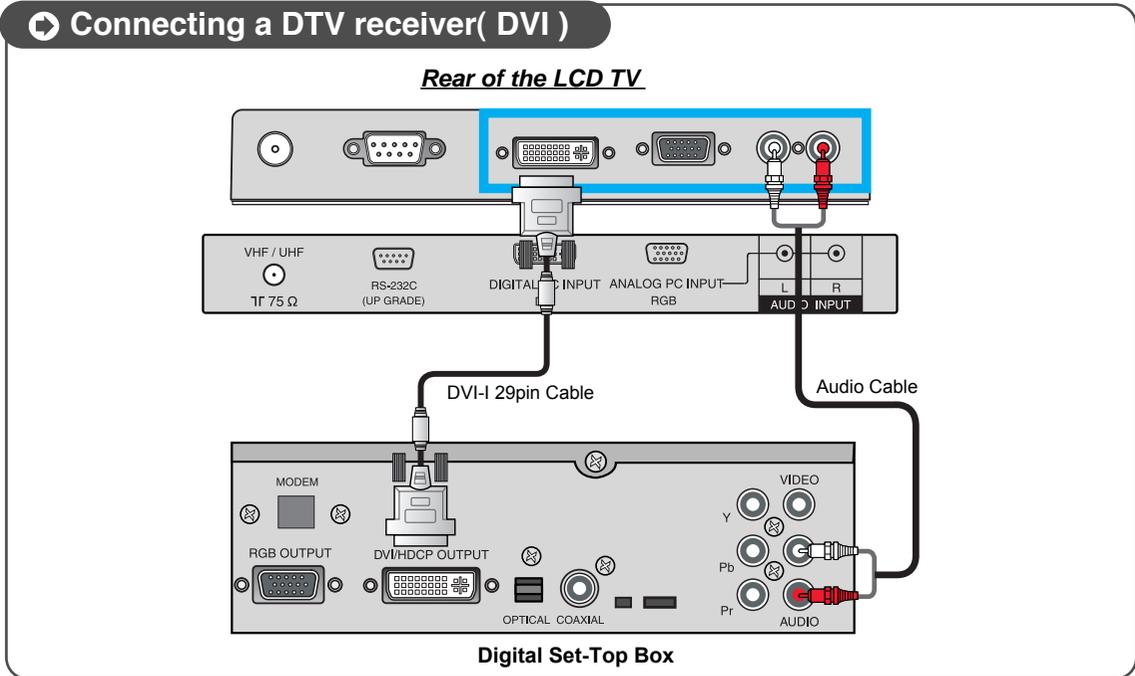
To Watch DTV :

1. Turn on your Digital Set-Top Box.
2. Turn on the LCD TV and press the **SOURCE** button on the LCD TV remote control.
3. Select the Component2 mode (if the component2 jack is connected).



Connection

Connecting a DTV receiver(DVI)



1. Connect a DVI cable(not supplied) to the **DIGITAL PC INPUT** jack on the LCD TV and DVI with **HDCP OUTPUT** jack on the digital Set-Top Box.
2. Connect audio cables(not supplied) to the **AUDIO INPUT** jacks on the LCD TV and audio output jacks on the digital Set-Top Box.

To Watch DTV :

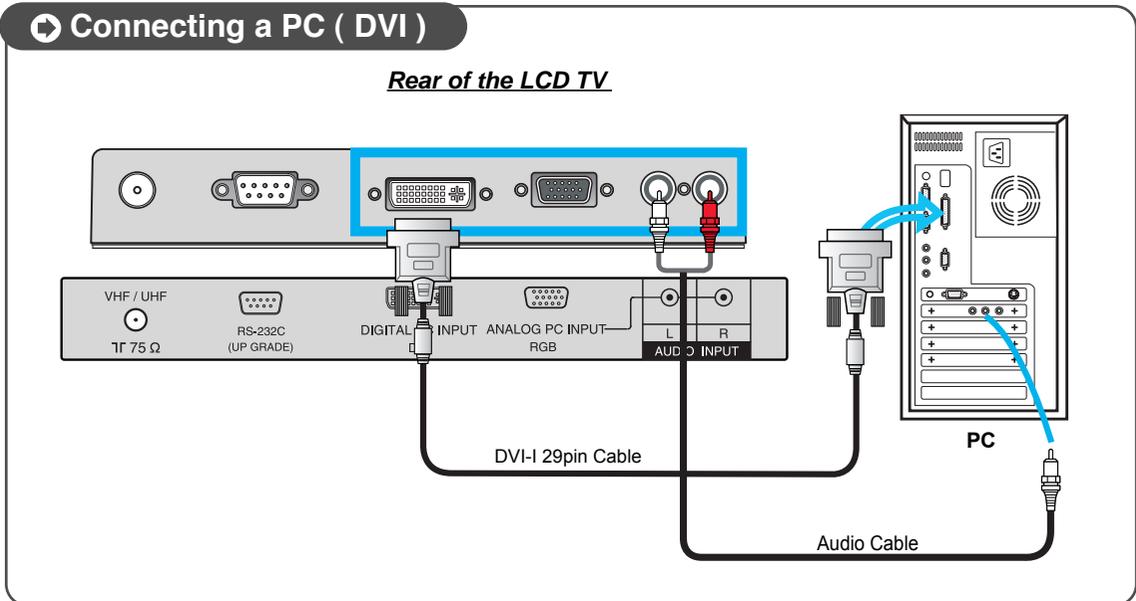
1. Turn on the your Digital Set-Top-Box.
2. Turn on LCD TV and press the **SOURCE** button to select DVI
3. Adjust the DVI screen.

Source	
TV	TV
Video	Not Connected
S-Video	Not Connected
Component1	Not Connected
Component2	Not Connected
RGB	Not Connected
DVI	Connected

⇐ Move □ Select ||| Exit

Connection

▶ Connecting a PC (DVI)



1. Connect a DVI 29pin cable(not supplied) to the **DIGITAL PC INPUT** jack on the LCD TV and DVI output jack on the PC.
2. Connect audio cables(not supplied) to the **AUDIO INPUT** jacks on the LCD TV and audio output jack on the PC.

• **NOTE** : When you connect a DVI, Please note the Analog input is not supported.

To watch the PC screen :

1. Turn on LCD TV and press the **SOURCE** button to select the DVI.
2. Turn on PC and check for PC system requirements. Refer to the 'Operation with a PC' section.
3. Adjust the PC screen.

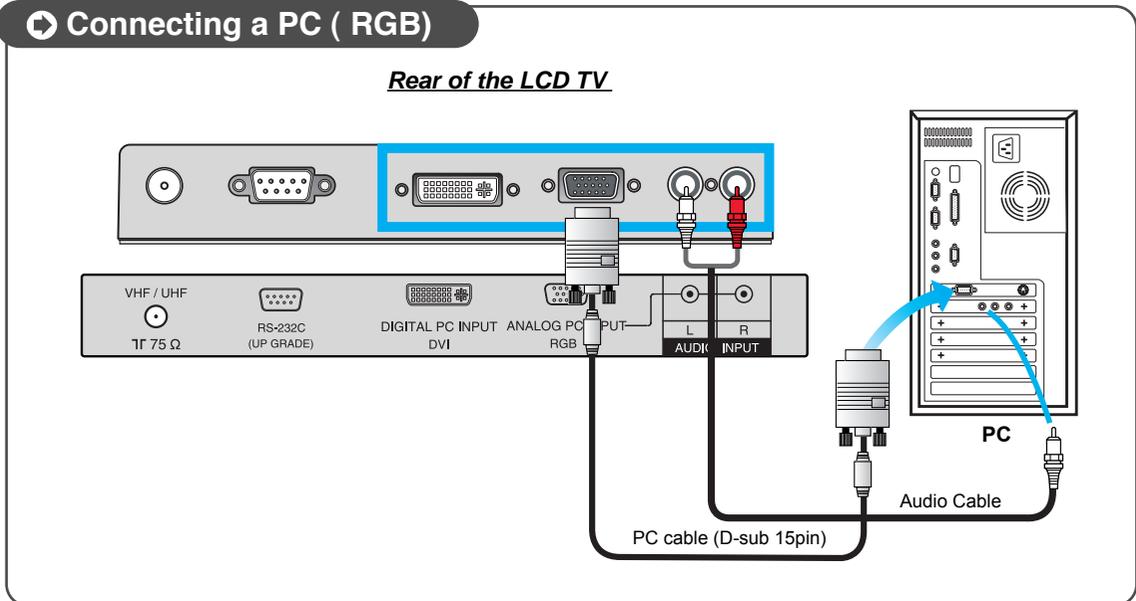


Setting up Your LCD TV Plug and Play

Our adoption of the new VESA® Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your LCD TV in a Plug and Play compatible system without the usual hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This LCD TV automatically tells the PC system its Extended Display Identification Data(EDID) using Display Data Channel(DDC) protocols so the PC system can automatically configure itself to use the flat panel display.

Connection

Connecting a PC (RGB)



1. Connect a PC cable, D-sub 15pin(not supplied) to the **ANALOG PC INPUT** jack on the LCD TV and RGB output jack on the PC.
2. Connect audio cables(not supplied) to the **AUDIO INPUT** jacks on the LCD TV and audio output jack on the PC.

To watch the PC screen :

1. Turn on LCD TV and press the **SOURCE** button to select the RGB.
2. Turn on PC and check for PC system requirements.
Refer to the 'Operation with a PC' section.
3. Adjust the PC screen.

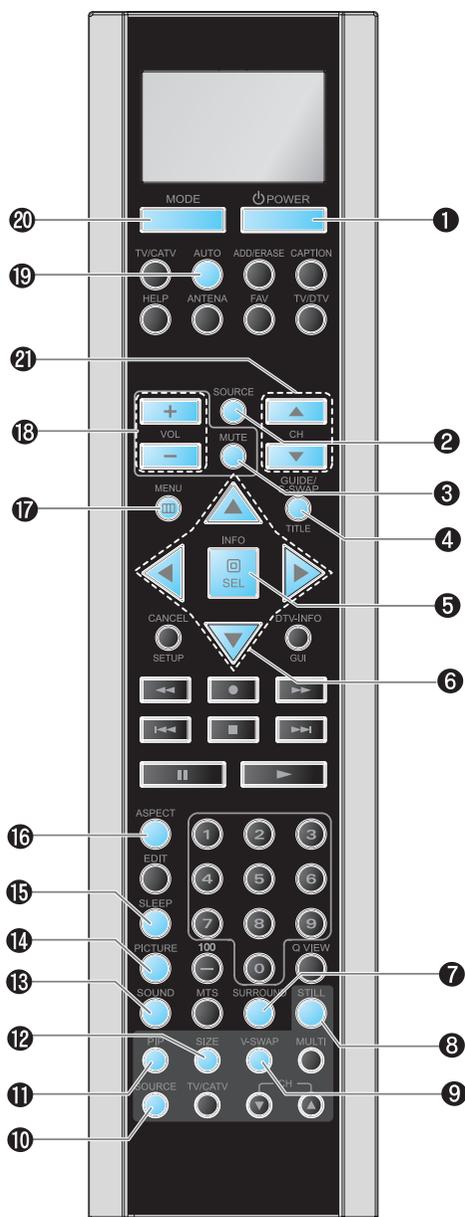
Source	
TV	TV
Video	Not Connected
S-Video	Not Connected
Component1	Not Connected
Component2	Not Connected
RGB	Connected
DVI	Not Connected

← Move □ Select ▢ Exit

Setting up Your LCD TV Plug and Play

Our adoption of the new VESA® Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your LCD TV in a Plug and Play compatible system without the usual hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This LCD TV automatically tells the PC system its Extended Display Identification Data(EDID) using Display Data Channel(DDC) protocols so the PC system can automatically configure itself to use the flat panel display.

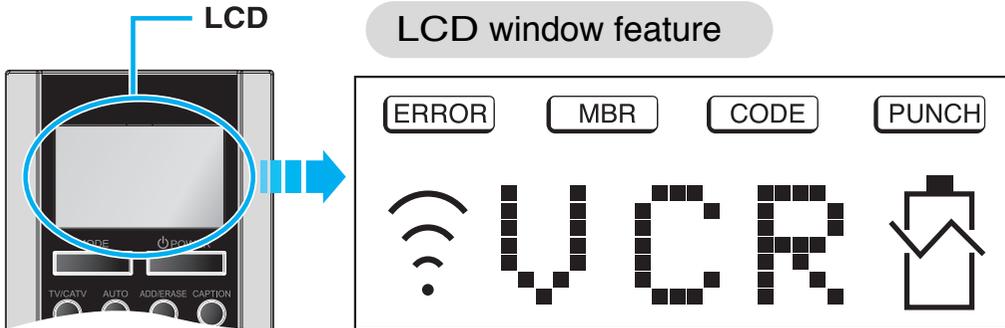
Remote Control Buttons



- ❶ **POWER** : Switches Power ON/OFF.
- ❷ **SOURCE** : Press this button to select a video source from among Video, S-Video, Component1, Component2, RGB and DVI.
- ❸ **MUTE** : Mutes the sound.
- ❹ **S-SWAP** : Exchanges main sound with sub-sound.
- ❺ **SELECT** : Press this button to select a menu item or to enter the sub-menu.
- ❻ **JOYSTICK** : ◀/▶ Adjust, ▲/▼ Move.
Use these buttons to move the cursor and adjust the values of the menu items.
- ❼ **SURROUND** : Press this button to hear 3D sound.
- ❽ **STILL** : Freezes the PIP picture.
- ❾ **V-SWAP** : Exchanges Main Picture with Sub-picture.
- ❿ **SOURCE** : Selects the PIP video source.
- ⓫ **PIP** : Turns the PIP on/off.
- ⓬ **SIZE** : Changes the size of the PIP.
- ⓭ **SOUND** : Changes the sound mode.
- ⓮ **PICTURE** : Switches the picture modes.
- ⓯ **SLEEP** : Sets the automatic power-off time.
- ⓰ **ASPECT** : Changes the size of the picture.
- ⓱ **MENU** : Displays the OSD (On screen Display).
- ⓲ **VOL +/-** : Increases or decreases the sound level.
- ⓳ **AUTO** : Searches for activated channel automatically in TV mode; adjusts the position, frequency, and phase automatically in PC mode.
- ⓴ **MODE** : Selects a product.
- ⓵ **CHANNEL** : Moves to the next higher or lower channel.

LCD Window Feature

This remote control is MBR (Multi-Brand Remote Control). This means you can control all products (TV, MNT, VCR, DVD, CBL, STB), including other manufacturers, using this remote control.



1. Function Icons



Select when you want to control a product other than this LCD TV.



Select when you want to know the code for this remote control.



Select when you want to set the fixed button.

2. Status Icons



Indicates that the button you pressed is not operating.



Indicates that the button pressed is operating.



Indicates that the battery is empty.

3. Product Indication Window



Indicates the product currently controlled by this remote control.

How to Control Other Brand Products

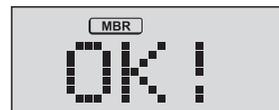
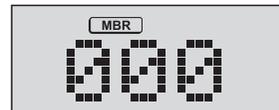
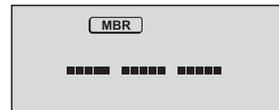
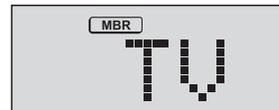
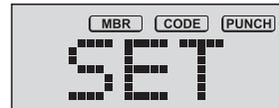
MBR

Setting Up the MBR

● CASE 1

Follow the process below when you know the remote control code of the product you want to control, or when you have the code table as on page 58~60.

- ❶ Turn on the product you want to control.
 - ❷ Press the MENU + SEL buttons simultaneously for 2 seconds (until the function icons appear).
 - ❸ The MBR icon will appear and blink.
 - ❹ Press the SEL button. The word TV will appear in the product indication window.
Using the ◀/▶ buttons, select the product you want to control (TV, VCR, DVD, CBL, SAT). Note that you cannot set up the MBR for MNT.
 - ❺ Press the SEL button. The sign --- will appear in the product indication window.
 - ❻ Refer to the "MBR Code Table" to find the product's corresponding code, then input the three-number code in sequence.
 - ❼ Press the SEL button. The current code is saved and the OK! sign appears.
 - ❽ Press the CANCEL button to finish the setup. Test the remote control.
 - ❾ If the remote control doesn't work with the product, return to step 2 above and set up the MBR repeatedly until you find the correct code.
- ※ To stop the process during the MBR setup, press the CANCEL button.
- ※ If the remote control doesn't work after you have input all the codes in the "MBR Code Table," refer to CASE 2 on the following page.

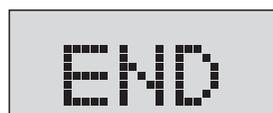
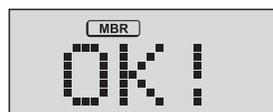
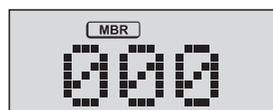
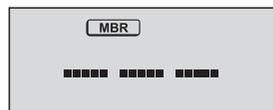
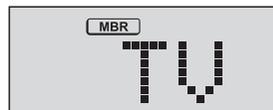
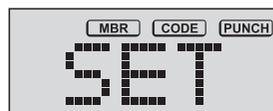


Setting Up the MBR

● CASE 2

Follow the process below when you don't know the remote control code of the product you want to control, or when you don't have the code table as on page 58~60.

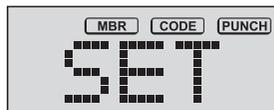
- ❶ Turn on the product you want to control.
- ❷ Press the MENU + SEL buttons simultaneously for 2 seconds (until the function icons appear).
- ❸ The MBR icon will appear and blink.
- ❹ Press the SEL button. The word TV will appear in the product indication window.
Using the ◀/ ▶ buttons, select the product you want to control (TV, VCR, DVD, CBL, SAT). Note that you cannot set up the MBR for MNT.
- ❺ Press the SEL button. The - - - sign will appear in the product indication window.
- ❻ Press the ▲ OR ▼ button at 1-second intervals. Each time you press the button, a new signal is transmitted.
- ❼ As soon as the product turns off, release the button. Press the SEL button. The OK! sign appears, the current code is saved, and the setup process automatically returns to step 5. If you want to set up another product, repeat steps 5 to 7. When you have completed the MBR setup up process, press the CANCEL button.
- ❽ Test whether the remote control works with the product. If not, return to step 2 above and set up the MBR repeatedly until you find the correct code.
- ❾ To stop the process during the MBR setup, press the CANCEL button.



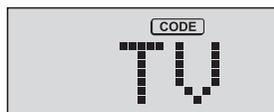
How to Confirm the MBR Code

▶ Confirming the MBR Code in Your Remote Control

- 1 Press the MENU + SEL buttons simultaneously for 2 seconds (until the function icons appear).

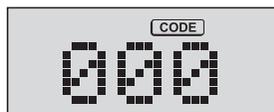


- 2 Using the ◀/▶ buttons, move to the CODE icon and press the SEL button.



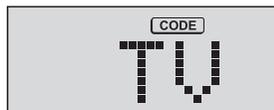
- 3 The word TV will appear in the product indication window.

- 4 Using the ◀/▶ buttons, select the product you want to confirm (TV, VCR, DVD, CBL, SAT). Press the SEL button. The three-number MBR code will appear.



- 5 After 3 seconds, the process will automatically return to step 3.

- 6 If you want to confirm the MBR code of another product, select the product using the buttons, then press the SEL button. Press the CANCEL ◀/▶ button if you want to exit this process.



- ※ To stop the MBR code confirmation process, press the CANCEL button.



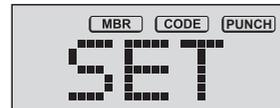
PUNCH Buttons

🔍 How to Set Up the Fixed Buttons - PUNCH Buttons

※ Types of PUNCH Button.

- **TV** : VOLUME (+/-) , MUTE
→ If you select the TV PUNCH, these buttons are operated only on the TV.
- **VCR** : 
→ If you select the VCR PUNCH, these buttons are operated only on the VCR.
- **DVD** : 
→ If you select the DVD PUNCH, these buttons are operated only on the DVD.
- **DEL**
→ Cancel the PUNCH setting.

❶ Press the MENU + SEL buttons simultaneously for 2 seconds (until the function icons appear).



❷ Using the ◀/▶ buttons, select the PUNCH icon and press the SEL button.

❸ The word TV will appear in the product indication window.



❹ Using the ◀/▶ buttons, select the PUNCH mode from among TV, VCR, DVD, and DEL.

❺ Press the SEL button. The OK! sign will appear and the PUNCH mode is saved.
The process automatically returns to step 3.
If you don't want to set another PUNCH mode, press the CANCEL button.



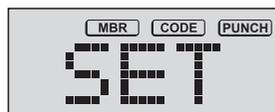
※ When you press the buttons you have set to PUNCH mode, the product name will show along with the PUNCH icon in the product indication window.



※ To stop the PUNCH setup process, press the CANCEL button.

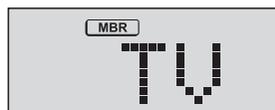
▶ How to Reset the Remote Control

❶ Press the MENU + SEL buttons simultaneously for 2 seconds (until the function icons appear).



❷ The MBR icon will appear and blink.

❸ Press the SEL button. The word TV will appear in the product indication window.



❹ Press the SEL button. The - - - sign will appear in the product indication window.

❺ Input the reset code "975" and press the SEL button. The remote control will return to its initial state.



Basic operation

Turning the LCD TV On and Off

- 1 Connect the Power Cord to the AC input on the back of your LCD TV.
- 2 Insert the Plug for the LCD TV into a nearby electrical outlet.
→ The standby indicator lights up on the front panel.
- 3 Press the **POWER** () button on the remote control.
→ The LED lamp will change to light off and your LCD TV will be turned on.
- 4 To switch your LCD TV off, press the **POWER** () button again.



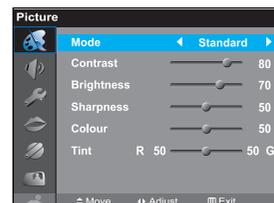
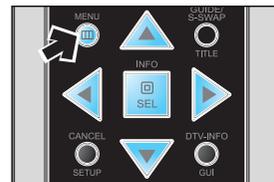
● Indicator Lights

Status	Lamp
Standby Mode	Blue
Power On	Light off
Power Saving	Flickering

Viewing the OSD Menu

- 1 With the power on, press the **MENU** () button on the remote control.
→ The main menu appears on the screen.
- 2 Use the  or  button to move the cursor on the OSD menu. Use the  or  button to adjust the selected items.
- 3 Use the **SEL** () button to select the sub-menu.

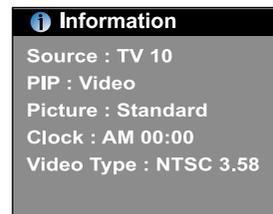
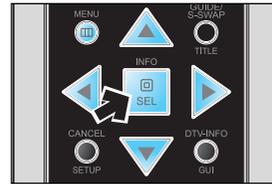
- The OSD(On-Screen Display) disappears automatically after a few seconds without pressing other buttons or you can also press the MENU button to return to the previous menu or press the MENU button once or more to exit the OSD.



Basic operation

▶ Displaying Status Information

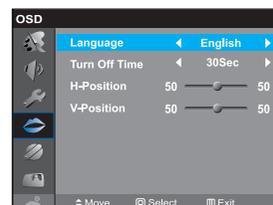
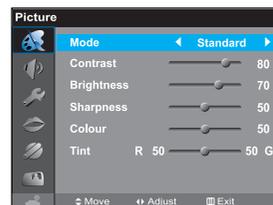
- 1 With the OSD, press the **INFO** button on the remote control.
→ The LCD TV will display the external source, Picture Mode, Aspect Ratio, Clock and Video type.



▶ Selecting your Language

When the LCD TV is initially powered ON, you must select the language in which to display all on-screen menus.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **OSD** () icon; then press the **SEL** () or ► button to select the **Language**.
- 3 Select the appropriate language by pressing the ◀ or ▶ button repeatedly.
→ You can choose one of 9 languages.



※ **After adjustment:** Press the **MENU** button to exit.

Channel

Setting up Channels Automatically

Your LCD TV can memorize and store all of the available channels for both "TV(antenna) and cable channels.

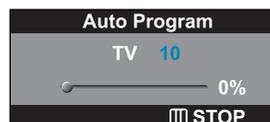
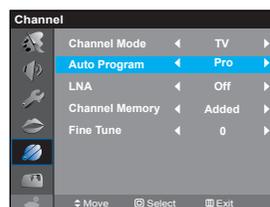
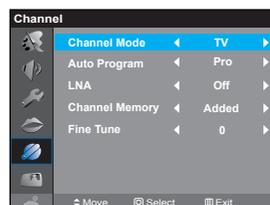
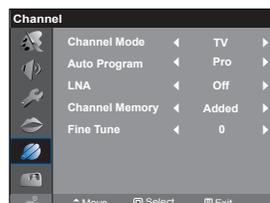
Therefore you must specify the type of signal source that is connected to the LCD TV.

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button to select the **Channel** () icon; then press the **SEL** () or **▶** button to select **Channel Mode**.
- 3 Press the **◀** or **▶** button to select the option (**TV** or **CATV**).
- 4 Press the **▲** or **▼** button to select **Auto Program**; then press the **SEL** () or **▶** button.
 - The LCD TV will begin memorizing all of the available channels.
 - To stop the search before it has finished, press **MENU** button.

※After adjustment: Press the **MENU** button to exit.

Quick Way

- Press the **AUTO** button on the remote control.

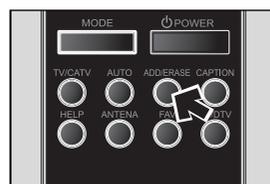


Adding and Erasing Channels

- 1 Select channel that you wish to add or erase by directly pressing the numeric buttons on the remote control.
- 2 Press the **ADD/ERASE** button on the remote control.
 - Repeatedly pressing this button will alternate between **Added** and **Erased**.

Added Channel : display in Green.

Erased Channel : display in Yellow.

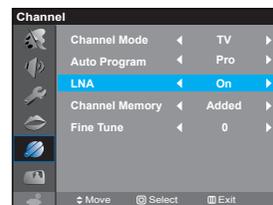
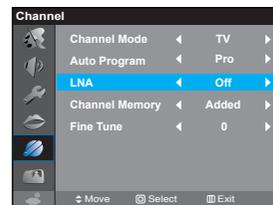
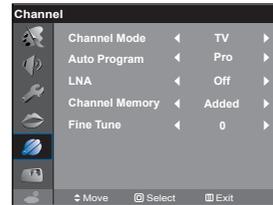


Channel

▶ Using the LNA(Low Noise Amplifier)

If the LCD TV is operating in a weak-signal area, sometimes the LNA function can improve the reception.

- 1 Press the **MENU** button.
- 2 Press the ◀ or ▶ button to select the **Channel** () icon; then press the **SEL** () ◀ or ▶ button.
- 3 Press the ▲ or ▼ button to select to the **LNA**.
- 4 Press the ◀ or ▶ button to select **On** or **Off**.

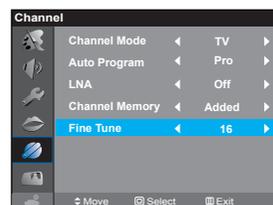
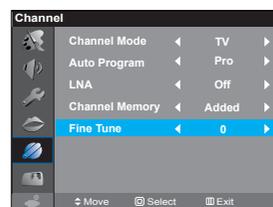


※**After adjustment:** Press the MENU button to exit.

▶ Fine Tuning Channels

If the reception signal is weak or distorted, you can adjust channel to manually using the fine tuning.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Channel** () icon; then press the **SEL** () or ▶ button.
- 3 Press the ▲ or ▼ button to select the **Fine Tune**.
- 4 Press the ◀ or ▶ button to adjust the Fine Tuning.



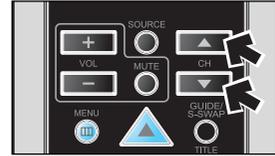
※**After adjustment:** Press the MENU button to exit.

Direct Access Features

▶ Selecting Channels

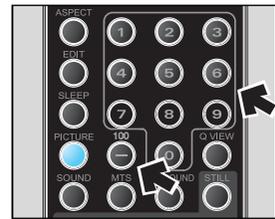
Using the Channel Buttons

- 1 Press the **CH ▲** or **CH ▼** button to selecting channels.
→ When you press the ▲ or ▼ button, the LCD TV changes channels in sequence. But you will not see channels that were either erased or not memorized.



Using the Direct Access Buttons

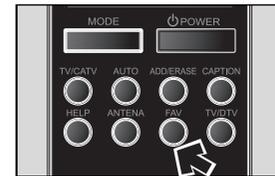
- 1 Press the numeric buttons to select directly to a channel.
 - Two digit channel selection:
For example, to select channel 36, press 3 then 6.
 - Three digit channel selection:
For channel 115, press 1, then 1, then 5 or press **100** button and then 1, then 5.



※After adjustment: Press the MENU button to exit.

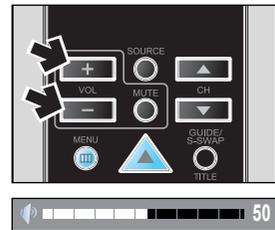
▶ Using the FAV button to select the previous channel

- 1 Press the **FAV** button on the remote control.
→ The LCD TV will switch to the last viewed channel.



▶ Adjusting the Volume

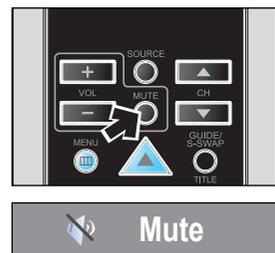
- 1 Press the **VOL+** or **VOL-** button to increase or decrease the Volume on the remote control.



▶ Switching the Sound Off Temporarily

You can temporarily cut off the sound using the Mute button.

- 1 Press the **MUTE** button on the remote control.
→ The sound is switched off and "Mute" is displayed.
- 2 When you wish to turn the sound back on, press the **MUTE** button again.

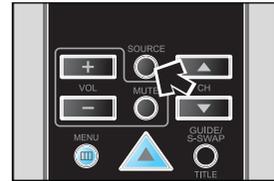


Direct Access Features

▶ Selecting a Device from External Sources

You can select the favorite signal from connected external sources such as DVD, VCR, STB, and TV(Antenna or Cable).

- 1 Press the **SOURCE** button on the remote control.
- 2 Press the ▲ or ▼ button to select signal source, then press the **SEL** () button.



Source	
TV	TV
Video	Connected
S-Video	Not Connected
Component1	Connected
Component2	Connected
RGB	Not Connected
DVI	Not Connected

↔ Move □ Select ☰ Exit

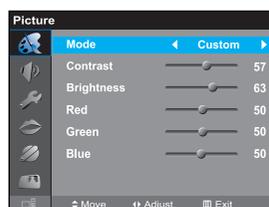
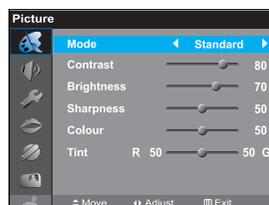
Picture

- You can select the type of picture which best corresponds to your viewing requirements or you can customize the picture setting.

➡ Changing the Picture standard

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **PICTURE** () icon; then press the **SEL** () or ► button.
- 3 Press the ◀ or ▶ button to select **Standard**, **Dynamic**, **Mild**, or **Custom** picture setting.

- **NOTE** : You can select a mode from among Middle, High, Low, or Custom modes in RGB/DVI input Sources.



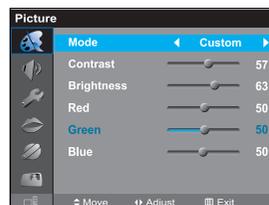
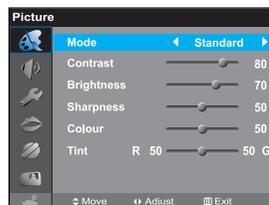
Quick Way

- Press the **PICTURE** button on the remote control.
- While pressing the button continuously, you can select the picture mode in the following sequence: Standard → Dynamic → Mild → Custom
- In RGB/DVI mode, you can select : Middle → High → Low → Custom

➡ Customizing the Picture

- 4 With Picture menu selected, press the ▲ or ▼ button to select an option (**Contrast**, **Brightness**, **Sharpness**, **Color**, or **Tint**-NTSC only) that you wish to change : then press the **SEL** () or ► button.
 - ➔ *If you adjust the Contrast, Brightness, Sharpness, Color, or Tint (NTSC only) settings on the Picture menu, the picture standard is automatically switched to custom.*
- 5 Press the ◀ or ▶ button to change the value of the item.

- **NOTE** : In the PC/DVI mode, the Sharpness, Color, or Tint feature does not work.



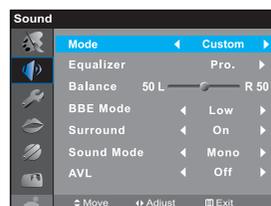
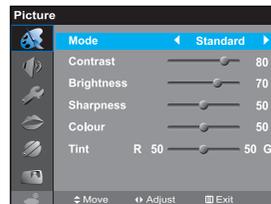
※**After adjustment:** Press the MENU button to exit.

Picture

- You can select the type of special sound effect to be used when watching a given broadcast or you can customize the sound to your personal preference.

➡ Changing the Sound Standard

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **SOUND** () icon; then press the **SEL** () or ► button.
- 3 Press the ◀ or ▶ button to select **Drama, Movie, Music, News, or Custom** sound setting.

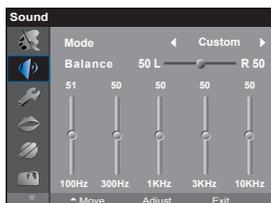
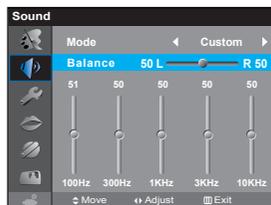
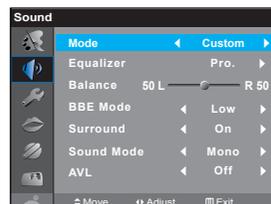


Quick Way

- Press the **SOUND** button on the remote control.
- While pressing the button continuously, you can select the sound mode in the following sequence:
Drama → Movie → Music → News → Custom
- In RGB/DVI mode, you can select : Middle → High → Low → Custom

➡ Customizing the Sound

- 4 With **Sound** menu selected, press the ▲ or ▼ button to select an **Equalizer**; then press the **SEL** () or ► button.
→ *The Equalizer menu is displayed with mode selected.*
- 5 Press the ▲ or ▼ button to select **Balance**.
Press the ◀ or ▶ button to reach the required setting;
then press the ▼ button.
- 6 Select a frequency (100Hz, 300Hz, 1KHz, 3KHz, or 10KHz) to be adjusted by pressing ◀ or ▶ button.
Press the ▲ or ▼ button to reach the required setting.



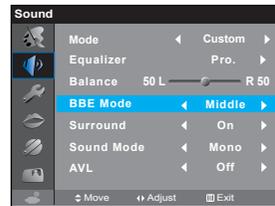
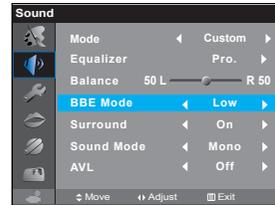
※**After adjustment:** Press the MENU button to exit.

Sound

▶ Setting the BBE Mode

This is a live sound effect . you can select an option (Off, Low, Middle, or High) to enjoy live sound when listening to music.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **SOUND** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ button to select **BBE Mode**; then press the **SEL** () or ► button.
- 4 Press the ◀ or ► button to select **Off, Low, Middle, or High**.

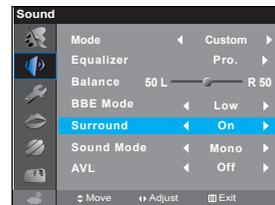
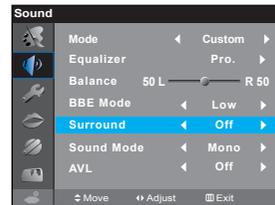


※**After adjustment:** Press the MENU button to exit.

▶ Setting the Surround Effect

This feature allows the TV's L/R speakers to provide a home theater-like surround are mixed into L/R speakers.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **SOUND** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ button to select **Surround**.
- 4 Press the ◀ or ► button to select **On** or **Off**



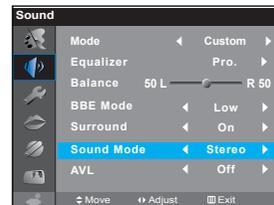
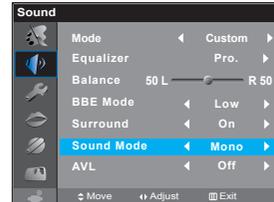
※**After adjustment:** Press the MENU button to exit.

Sound

➤ Selecting the Stereo Sound

Depending on the particular program broadcast, you can listen Stereo, Mono, SAP.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **SOUND** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ button to select **Sound Mode**; then press the **SEL** () or ► button.
- 4 Press the ◀ or ▶ button to select **Mono**, **Stereo** or **SAP**.



※ **After adjustment:** Press the MENU button to exit.

Stereo : Stereo broadcasting.

Mono : Mono broadcasting, or when the stereo signal is weak.

SAP : When you listen to the foreign language translation.

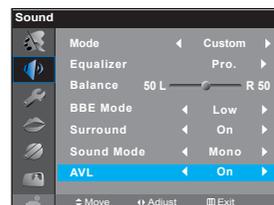
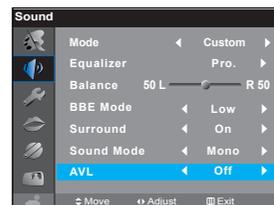
Quick Way

- Press the **MTS** button on the remote control.

➤ Using the Auto Volume(AVL)

Each broadcasting channel has its own signal conditions which can make it necessary to adjust the volume every time the channel is changed. AVL lets you automatically adjust the volume between one channel and another.

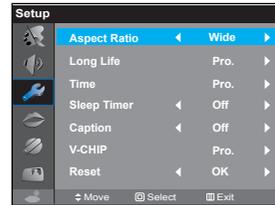
- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **SOUND** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ buttons to select **AVL**.
- 4 Press the ◀ or ▶ button **On** or **Off**.
→ The interval ranges from 5 to 120 minutes.



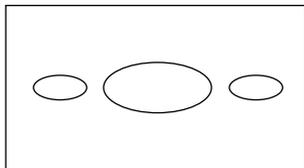
※ **After adjustment:** Press the MENU button to exit.

▶ Changing the Screen Size

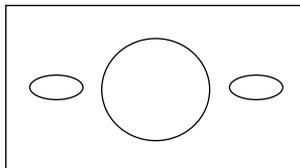
- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL** () or ► button.
- 3 With **Aspect Ratio** selected, press the ◀ or ▶ button to select the screen size you want.



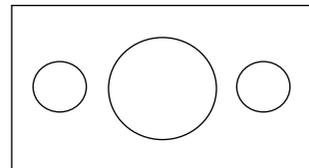
※**After adjustment:** Press the MENU button to exit.



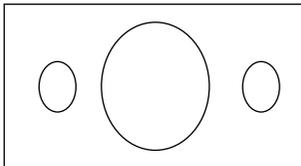
Wide



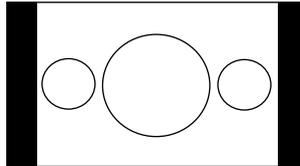
Panorama



Zoom1



Zoom2



Normal

Quick Way

- Press the **ASPECT** button on the remote control.

Setup

Protecting Screen burn(Long Life)

Displaying a still image on the LCD TV for more than several minutes can cause screen image retention. This image retention is also known as "screen burn". The Long Life function reduces such image retention.

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button to select the **Setup** () icon; then press the **SEL** () or **▶** button.
- 3 Press the **▲** or **▼** button to select **Long Life**; then press the **SEL** () or **▶** button.
- 4 Select an option (**Auto Pixel Shift**, **Inverse**, **Screen Wiper**, or **Side Panel Gray**) you wish to adjust by pressing **▲** or **▼** button.
- 5 Press **◀** or **▶** button to reach the required setting.

※ **After adjustment:** Press the MENU button to exit.

● Auto Pixel Shift

- This feature moves image 1 pixel per 2 minute, and after moving the set range, image starts to go back to the original position.

● Inverse

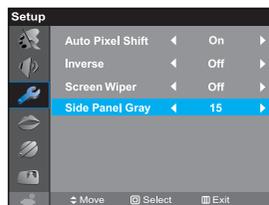
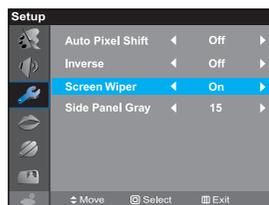
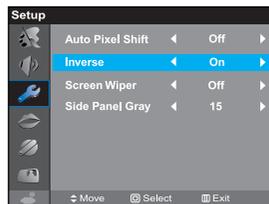
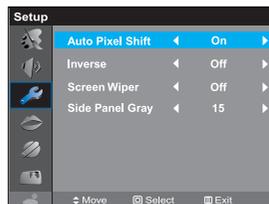
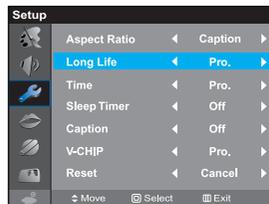
- This feature allows you to display white screen instead of noisescreen.

● Screen Wiper

- This feature allows you to filter out, reduce the image noise and improve picture quality automatically.

● Side Panel Gray

- This feature allows you to protect the LCD screen.
- If the picture size is 4 : 3, you can change the gray scale of the background picture.

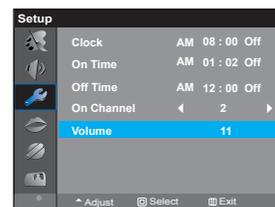
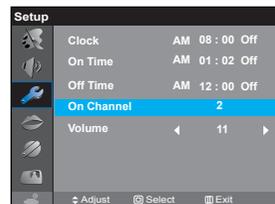
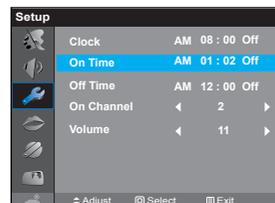
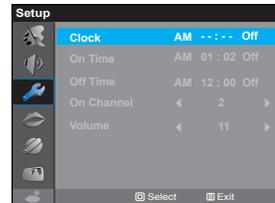
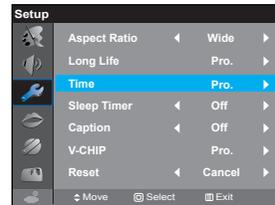


▶ Setting the Clock

Your LCD TV decodes and displays the closed captions that are broadcast with certain TV shows.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL** () button.
- 3 Press the ▲ or ▼ button to select **Time** ; then press the **SEL** () or ► button.
- 4 With **Clock** selected, press the ► button to move to the AM/PM, hour or minute; then Press the ▲ or ▼ button to adjust item.
Press the **MENU** button to set the setting.
- 5 Press the ▲ or ▼ button to select **On Time**; then set the time at which you wish the LCD TV to be switched on as above step.
- 6 In the same way, set the **Off Time** to switch off automatically.
- 7 To set the channel at which you wish the LCD TV to be switched on, press the ▲ or ▼ button to select **On Channel**; then press the ◀ or ▶ button to set channel.
- 8 To set the volume level at which you wish the LCD TV to be switched on, press the ▲ or ▼ button to select **Volume**; then press the ◀ or ▶ button to adjust the volume level.

※**After adjustment:** Press the MENU button to exit.

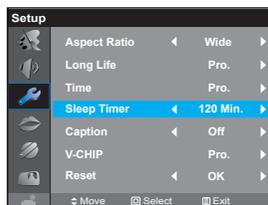
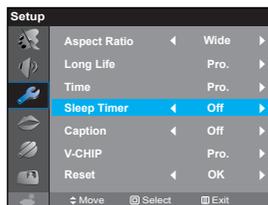


Setup

Setting the Sleep Timer

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button to select the **Setup** () icon; then press the **SEL** () or **▶** button.
- 3 Press the **▲** or **▼** buttons to select **Sleep Timer**.
- 4 Press the **◀** or **▶** button to select the preset time interval for the LCD TV to stay on.
The interval ranges from **5** to **120** minutes.

※**After adjustment:** Press the MENU button to exit.



Quick Way

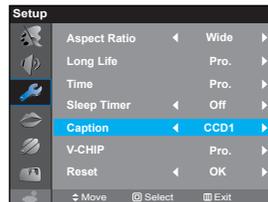
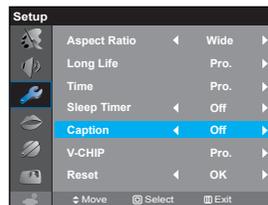
- Press the **SLEEP** button on the remote control.

Viewing the Closed Captions

Your LCD TV decodes and displays the closed captions that are broadcast with certain TV shows.

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button to select the **Setup** () icon; then press the **SEL** () or **▶** button.
- 3 Press the **▲** or **▼** buttons to select **Caption**.
- 4 Press the **◀** or **▶** button to select **Off**, **CCD1**, **CCD2**, **TEXT1**, or **TEXT2**.

※**After adjustment:** Press the MENU button to exit.



Quick Way

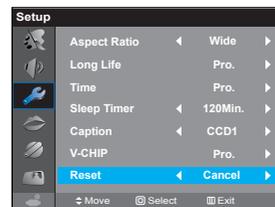
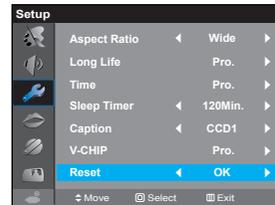
- Press the **CAPTION** button on the remote control.

Setup

Factory Reset

This feature reset the LCD TV to factory defaults.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ buttons to select **Reset**.
- 4 Press the ◀ or ► button to select **OK** or **Cancel**.



※**After adjustment:** Press the MENU button to exit.

PIP(Picture In Picture)

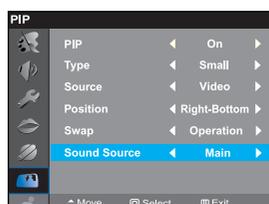
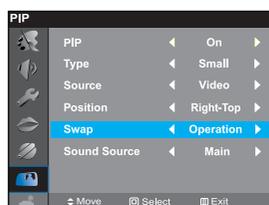
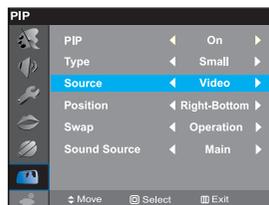
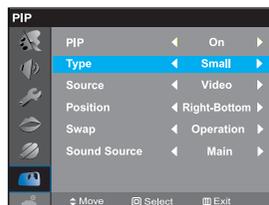
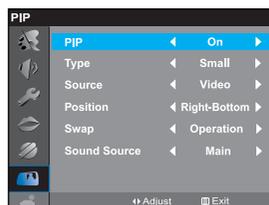
Viewing the Picture In Picture

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button to select the **PIP** () icon; then press the **SEL** () button.
- 3 Press the **◀** or **▶** button to select **On**.
→ When the PIP is on, the Sub-menu is activated.
- 4 Press the **▲** or **▼** button to select **Type**.
- 5 Select a **Type** (**Small**, **Double1**, **Double2**, or **Large**) of the sub picture by pressing the **◀** or **▶** button.
- 6 Press the **▲** or **▼** button to select **Source**.
Select a **Source** of the sub picture by pressing the **◀** or **▶** button.
→ Only the sources that are connected to LCD TV can be displayed.
- 7 Press the **▲** or **▼** button to select **position**.
Select a **Position** (**Right-Top**, **Left-Top**, **Left-Bottom**, and **Right-Bottom**) of the Sub picture by pressing the **◀** or **▶** button.
→ When the mode of sub picture is set to **Double**, this feature does not work.
- 8 Press the **▲** or **▼** button to select **Swap**.
→ The main picture and the sub picture are interchanged.
- 9 Press the **▲** or **▼** button to select **Sound Source**.
Select a Sound Source (**Main** or **Sub**) by pressing the **◀** or **▶** button.

※After adjustment: Press the MENU button to exit.

Quick Way

- Press the **PIP** buttons on the remote control.



Freezing the Sub-Picture

- 1 Press the **STILL** button on the remote control.
- 2 To return to normal viewing, press it again.



PIP(Picture In Picture)

Operating conditions of PIP

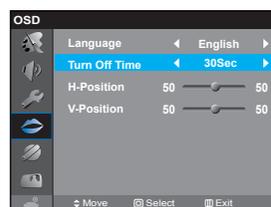
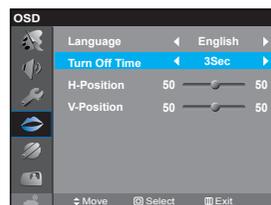
Table1. Operating conditions of PIP

Main Picture		Sub-Picture											RGB	DVI
		TV	CVBS	SVHS	COMP 1				COMP 2					
					DVD/480i	DVD/480p	DTV/480i	DTV/480p, 720p, 1080i	DVD/480i	DVD/480p	DTV/480i	DTV/480p, 720p, 1080i		
TV		X	O	O	O	O	O	O	O	O	O	O	O	O
CVBS		O	X	O	O	O	O	O	O	O	O	O	O	O
SVHS		O	O	X	O	O	O	O	O	O	O	O	O	O
COMP1	DVD/480i	O	O	X	X	X	X	X	X	O	X	O	O	O
	DVD/480p	O	O	O	X	X	X	X	O	X	O	X	X	X
	DTV/480i	O	O	O	X	X	X	X	X	O	X	O	O	O
COMP2	DTV/480p, 720p, 1080i	O	O	O	X	X	X	X	O	O	O	O	X	X
	DVD/480i	O	O	O	X	O	X	O	X	X	X	X	O	O
	DVD/480p	O	O	O	O	X	O	X	X	X	X	X	X	X
	DTV/480i	O	O	O	X	O	X	O	X	X	X	X	O	O
	DTV/480p, 720p, 1080i	O	O	O	O	X	O	X	X	X	X	X	X	X
RGB		O	O	O	O	X	O	X	O	X	O	X	X	X
DVI		O	O	O	O	X	O	X	O	X	O	X	X	X

Setting the OSD Time Out

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **OSD** () icon; then press the **SEL** () or ► button.
- 3 Press the ▲ or ▼ buttons to select **Turn off Time**.
- 4 Press the ◀ or ▶ button to set up the time length of OSD display.
→ you can adjust time length from 3 to 59 seconds.

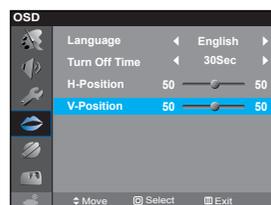
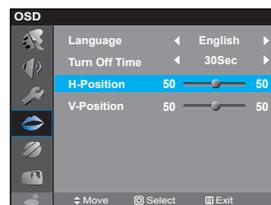
※**After adjustment:** Press the MENU button to exit.



Changing the OSD Position

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **OSD** () icon; then press the **SEL** () or ► button.
- 3 Select a item(**H-Position** or **V-Position**) that you wish to change by pressing the ▲ or ▼ button.
- 4 Press the ▲ or ▼ button to move OSD to up or down.
Press the ◀ or ▶ button to move OSD to left or right.

※**After adjustment:** Press the MENU button to exit.



V-CHIP Operation

▶ What is the V-CHIP?

The V-CHIP is a microprocessor control circuit that recognizes TV and Motion Picture Ratings. These ratings are contained in a special electronic identification signal that is part of many television programs and recorded videotapes.

An on screen menu allows parents to set a secret 4-digit personalized key combination Password. (Please note that we have set an initial Password at the factory.

This initial Password is the number 0,0,0,0).

Once set, the television will display only programs whose ratings fall within the standards the parent has chosen. Programs that do not fall within the standards the parent has chosen will not be displayed unless the Password is entered.

Some TV programs and movies may not be compatible with V-CHIP ratings.

▶ General Procedure

As shipped from the factory, the V-CHIP is not operational until you perform the following procedure:

- Enter your 4-digit Password to bring up the blocking menu.
For initial setup, we strongly recommend that you use the factory preset Password of 0,0,0,0. Instructions on changing the Password are at the end of this section.
- Enable MPAA rating and choose the MPAA ratings you wish to block.
- Enable TV Parental Guide Ratings and choose the TV Parental Guide Ratings you wish to block.

IMPORTANT NOTICE-READ BEFORE PROCEEDING FURTHER

We urge you to read the entire V-CHIP section in this manual and make certain you understand it thoroughly before proceeding further.

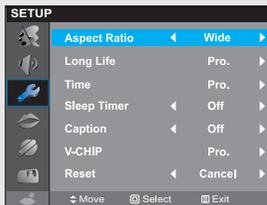
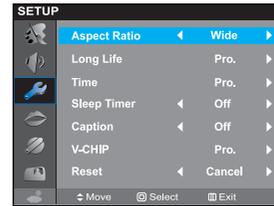
Once chosen and enabled, programs whose ratings have been blocked CANNOT be viewed unless you enter the 4-digit key combination Password.

If you forget the Password, the only way you can clear the settings is to take the television to an authorized service center. This is NOT covered under the warranty.

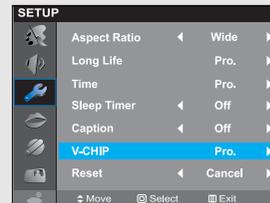
PLEASE NOTE THAT INITIAL V-CHIP PASSWORD AS SHIPPED FROM OUR FACTORY IS 0,0,0,0 (Press the 0 number key 4 times.)

V-CHIP Operation

- 1 Press the **MENU** button.
- 2 Press the **▲** or **▼** button, to select the **Setup**() icon; then press the **SEL**() or **▶** button.
- 3 Use the **▲** or **▼** button to select V-CHIP.
- 4 Press **SEL**() or **▶** button.



SETUP MENU



V-CHIP MENU



PASSWORD

- Enter the passwords you have chosen.
For initial set-up, use the factory.



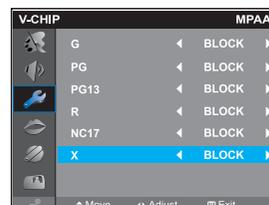
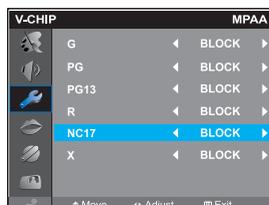
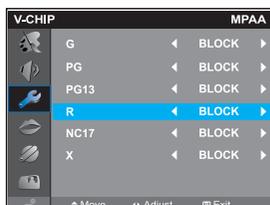
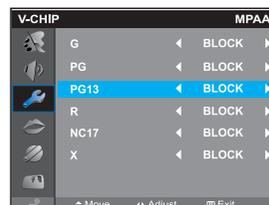
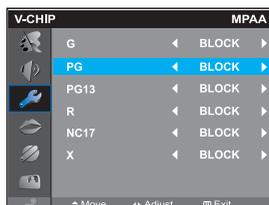
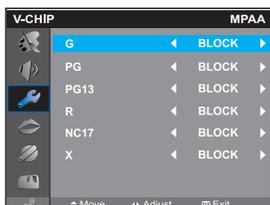
BLOCKING MENU

- As soon as you press the password, the BLOCKING menu appears on the screen.

※**After adjustment** : Press the MENU button to exit.

▶ MPAA (Motion Picture Association of America)

- 1 Press the ▲ or ▼ button to select the ratings which you wish to block.
- 2 If you wish to select the **MPAA** menu, press the ▶ button.
- 3 To change the selected rating, press the ◀ or ▶ button.
(UNBLOCK ↔ BLOCK)



● MPAA RATINGS

RATING	REMARKS
G(general audience)	All ages admitted.
PG(Parental guidance suggested)	Some material may not be suited for children.
PG13(Parents strongly cautioned) for children under age 13	Some material may not be inappropriate for children under age 13
R(Restricted) adult guardian.	Under 17 requires accompanying parent or adult guardian.
NC17(No one 17 and under admitted) X(Adult only)	

V-CHIP Operation

Before proceeding with the TV Parental Guide Rating, please read the following to content labels.

TV Parental Guide Rating

This procedure allows parents to block programs that contains TV Parental Guide Ratings they consider inappropriate. Content labels are designed to indicate specific contents of TV programs within each TV Parental Guide Rating.

For example, if a program rated TV-Y7 has strong Fantasy Violence content, the program will be labeled as TV- Y7-FV. The TV Parental Guide menu allows you to block all FV labeled programs but view all regular TV-Y7 programs

TV Parental Guidelines may have one or more letters added to the basic rating to let parent know that a program contains higher levels of potentially offensive material.

Note that the content Label should be considered with respect to its associated rating.

For example, a “V”label is likely to designate considerably more intense violence when associated with a TV-MA rated program than when associated with a TV-PG rated program.



Note : Each rating has a different set of content labels that you can choose to block or View. Labels that show --- cannot be changed within the selected rating. Refer to the rating and content label guides on the following pages.

V	Violence	D	Suggestive dialogue
S	Sexual situations	FV	Fantasy violence
L	Coarse or crude indecent language		



Note :

- You do not need to block each TV Parental Guide rating individually. The TV-Y and TV-Y7 ratings are handled as a group, and the TV-G, TV-PG, TV-14, and TV-MA ratings are handled as a group.

For example, if you choose a program with a TV-14 rating, the V-CHIP will automatically also block TV-MA rated programs. Likewise, passing (unblocking) the TV-MA as passes TV-14 rated programs.

Content Labels

- Also note that you have the option of pass or block programs based on their content label (D,L,S,V,FV) without necessarily blocking all programs that carry a special rating. For example, you may pass some TV-PG programs, but not those that also carry a “V” (moderate violence) content label. In this case, the V-CHIP will automatically block TV-14 and TV-MA rated programs labeled “V”.

TV Parental Guide Rating

TV-Y (All children)

This rating is designed to be appropriate for all children. Whether animated or live action, the themes and elements in this program are specifically designed for a very young audience, including from 2~6. All content labels are blocked

V-CHIP	TV Parent Guide					
	ALL	FV	V	S	L	D
TV-Y	U					
TV-Y7	U	U				
TV-G	U					
TV-PG	U		U	U	U	U
TV-14	U		U	U	U	U
TV-MA	U		U	U	U	U

TV-Y7 (FV : Directed to older children)

This program is designed for children age 7 and above. It may be more appropriate for children who have acquired the developmental skills needed to distinguish between make-believe and reality.

Themes and elements in this program may include mild fantasy violence or comedic violence that may frighten children under the age of 7. Therefore, parents may wish to consider the suitability of this program for their very young children.

V-CHIP	TV Parent Guide					
	ALL	FV	V	S	L	D
TV-Y	U					
TV-Y7	U	U				
TV-G	U					
TV-PG	U		U	U	U	U
TV-14	U		U	U	U	U
TV-MA	U		U	U	U	U



Note : Programs in which fantasy violence may be more intense or more combative than other programs in this category may be designated TV-Y7-FV.

TV-G (General audience)

Most parents would find this rating suitable for all ages. Although this rating does not signify a program designed specifically for children, most parents may let younger children watch TV-G programs unattended. They contain little or no violence, no strong language, and little or no sexual dialogue or situations.

V-CHIP	TV Parent Guide					
	ALL	FV	V	S	L	D
TV-Y	U					
TV-Y7	U	U				
TV-G	U					
TV-PG	U		U	U	U	U
TV-14	U		U	U	U	U
TV-MA	U		U	U	U	U

TV-PG (D/L/S/V : Parental guidance suggested)

This rating contains material that parents may find unsuitable for younger children. Many parents may want to watch it with their younger children. The theme itself may call for parental guidance, and/or the program contains one or more of the following.

Moderate violence(V), some sexual situations(S), Infrequent coarse language(L), or some suggestive dialogue(D).

V-CHIP	TV Parent Guide					
	ALL	FV	V	S	L	D
TV-Y	U					
TV-Y7	U	U				
TV-G	U					
TV-PG	U		U	U	U	U
TV-14	U		U	U	U	U
TV-MA	U		U	U	U	U

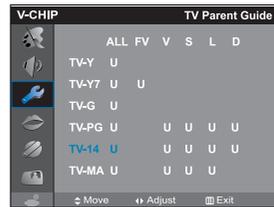
V-CHIP Operation

TV-14 (D/L/S/V : Parental caution recommended)

This rating contains some material that many parents would find unsuitable for children under 14 years of age.

Parents are strongly urged to exercise great care in monitoring these programs, and are cautioned against letting children under the age of 14 watch unattended.

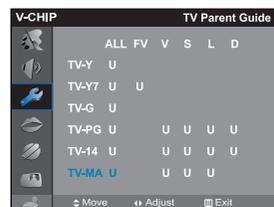
TV-14 rated programs contain one or more of the following:
Intense violence(V), intense sexual situations(S), strong coarse language(L), or intense suggestive dialogue(D).



TV-MA (L/S/V : Mature audience only)

This rating is specifically designed to be viewed by adults and may, therefore, be unsuitable for children under age 17.

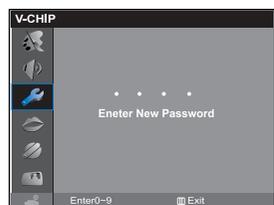
TV-MA rated programs contain one or more of the following:
Graphic violence(V), explicit sexual activity(S), or crude indecent language(L).



Changing the Password

- This procedure allows you to choose a private 4 digit key combination to the Password.

- 1 Press ▲ or ▼ button to select Change Pass word; then SEL() or ► button.
→ 'Enter New Password' screen will appear.
- 2 Enter a new 4 digit Password; then 'Password change successful' screen will appear.



※After adjustment: Press the **MENU** button to exit.

Input the new 4-digit key combination in the vacant spaces.



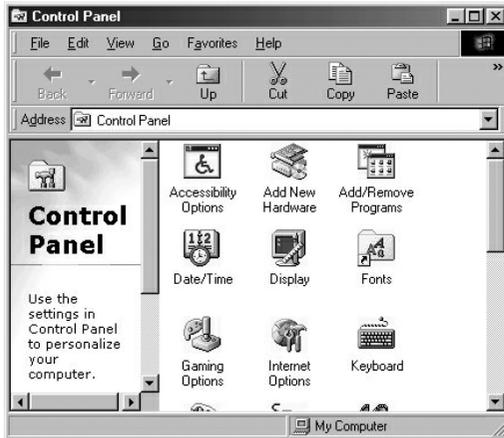
Note :

- The Power, Video, Up/Down keys may not be used for the 4-digit Password Combination.
- If you forget the Password, the only way that you can clear the settings is to take the TV to an authorized service center.

Display Settings

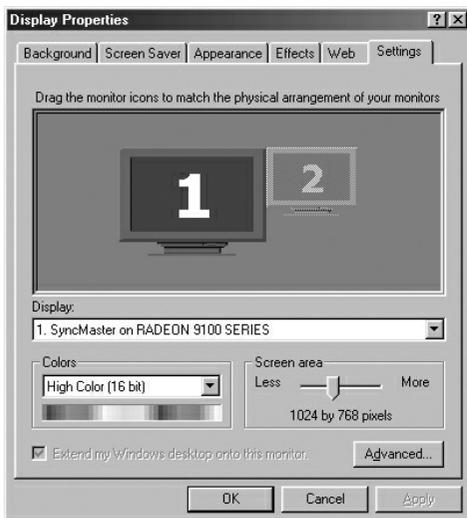
How to Set Up Your Display Setting (for Windows)

The Windows display settings for a typical computer are shown below. The actual screens on your PC, however, will probably be different, depending upon your particular version of Windows and your particular video card. But even if your actual screens look different, the same basic setup information will apply in most cases. (If not, contact your computer manufacturer.)



On the Windows screen, select in the following sequence : **Start → Settings → Control Panel.**

When the control panel screen appears, double click the Display icon  and a display dialog box will appear.



Select the "Settings" tab in the display dialog box. The two key variables that apply to the LCD TV interface are "**resolution**" and "**colors.**" The correct settings for these two variables are as follows:

- Size (resolution): 1024 x 768 pixels
 - Color: 24-bit color (16 million colors)
- If a vertical-frequency option exists in your display settings dialog box, the correct value is 60 or 60 Hz. Otherwise, simply click **OK** and exit the dialog box.

- NOTE :**
- When this LCD TV is used as a PC display, 24-bit color is supported (over 16 million colors).
 - Your PC display screen may be different, depending on the manufacturer and your particular version of Windows.

Display Settings

Both screen position and size will vary, depending on the type of PC monitor and its resolution. The table below shows all the display modes that are supported:

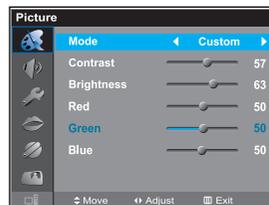
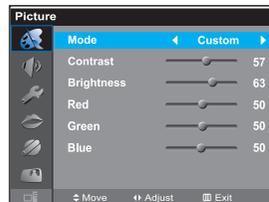
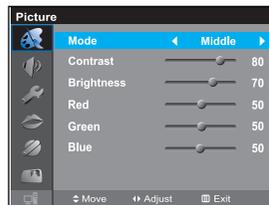
	Dot x Line	Vertical Frequency(Hz)	Horizontal Frequency(KHz)	DDC Protocol Support	
IBM PC/AT Compatibles Or Apple MAC	640 X 350	70.086	31.469		
	EGA	85.080	37.861		
	640 X 400	85.080	37.861		
	720 X 480		70.087	31.469	O
			85.039	37.927	O
	640 X 480 VGA		59.940	31.469	O
			66.670	35.000	O
			72.809	37.861	O
			75.000	37.000	O
			85.008	43.269	O
	848 X 480		60.000	29.838	
			72.000	35.156	
			75.000	36.072	
			85.000	37.650	
	800 X 600 SVGA		56.250	35.156	O
			60.317	37.879	O
			72.188	48.077	O
			75.000	46.875	O
			85.061	53.674	O
	832 X 624	74.550	49.726	O	
	1024 X 768		60.001	48.780	O
			60.004	48.363	O
			70.069	56.476	O
			74.927	60.241	O
			75.029	60.023	O
	1152 X 864	60.050	54.348	O	
	1280 X 768 WXGA		60.000	47.700	
		75.000	60.150		
1280 X 960	60.000	60.000	O		
1280 X 1024 SXGA	60.020	63.981	O		

- The LCD TV might operate abnormally if a non-standard video format is selected.
- The best resolution for this LCD TV is 1024X768 60Hz.
- This LCD TV provides plug and play capability.

Picture Color Adjustment

▶ Adjusting RGB Color

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Picture** () icon; then press the **SEL** () or ► button.
- 3 Press the ◀ or ▶ button to select **Custom Mode**.
- 4 Press the ▲ or ▼ button to select the item you wish to change.
- 5 Press the ◀ or ▶ button to adjust the color.



※ **After adjustment:** Press the MENU button to exit.

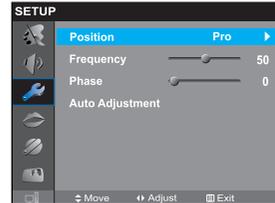
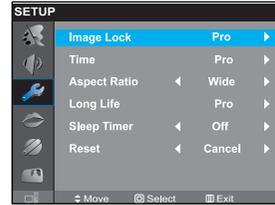


Picture Position Adjustment

Changing the image position

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL**() or ► button.
- 3 Press the **SEL**() or ► button to select **Position**; then press the ▲▼ or ◀▶ buttons to adjust the position of the screen.

※**After adjustment:** Press the MENU button to exit.

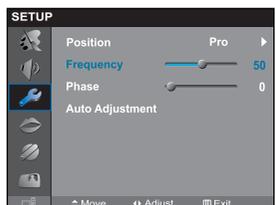
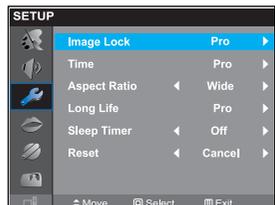


Frequency Adjustment

Fine Tuning of the Image

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup**() icon; then press the **SEL**() or ► button.
- 3 Press the ▲ or ▼ button to select **Frequency**.
- 4 Press the ◀ or ▶ button to remove picture noise on the screen.

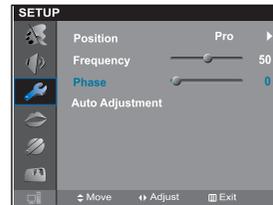
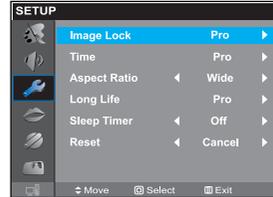
※**After adjustment:** Press the MENU button to exit.



Phase Adjustment

Adjusting Phase

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL**() or ► button.
- 3 Press the ▲ or ▼ buttons to select **Phase**.
- 4 Press the ◀ or ▶ button to remove picture noise on the screen.



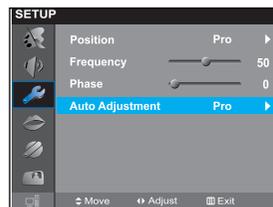
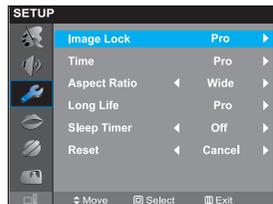
※**After adjustment:** Press the MENU button to exit.

Automatic Quality Adjustment

Adjusting the PC Screen Automatically

This function adjusts the Position, Frequency and Phase automatically.

- 1 Press the **MENU** button.
- 2 Press the ▲ or ▼ button to select the **Setup** () icon; then press the **SEL**() or ► button.
- 3 Press the ▲ or ▼ button to select **Auto Adjustment**.
- 4 Press the **SEL**() or ► button to execute **Auto**.



※**After adjustment:** Press the MENU button to exit.

Quick Way

- Press the **AUTO** button on the remote control.
- This function is for automatic adjustment of the screen position, clock, and phase. The displayed image will disappear for a few seconds while the Auto-Adjustment is in progress.

Auto Adjustment

Serial Control Using RS-232C

Serial Control Using RS-232C Cable (optional)

■ Use RS-232C cable when you control the LCD TV using the PC.

This function is called PC Remote Control and is the same as the physical Remote control.

It will provide you an additional convenience when you use the LCD TV connected with a PC.

(The RS-232C cable is not included with the LCD TV. Separately sold RS-232C cable is required.)

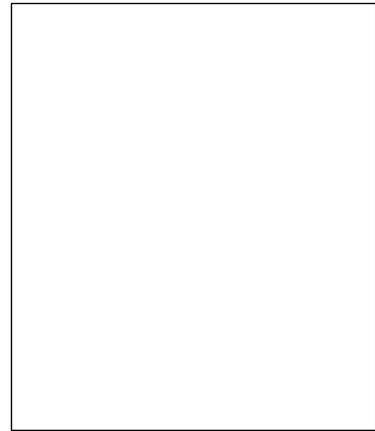
First, connect the RS-232C cable between the PC and the LCD TV RS-232C input port. Refer to the following method for using this function.

☛ Installing Hyper terminal

From the Windows original disks.

On most Windows 95/98/2000 machines, Hyperterminal should be installed without explicitly requesting it. If you need to install a copy of the standard Hyperterminal program, go to the **Start** menu, chose the **setting** option, and **click** on **Control Panels** option.

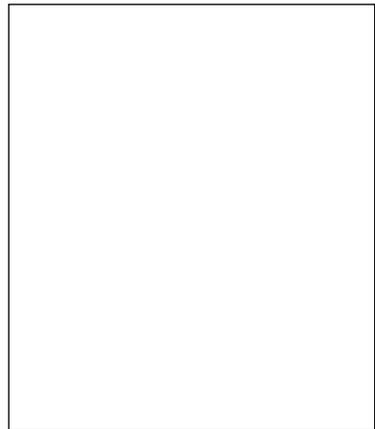
Double Click on the Add/Remove Programs icon and **click** on the Windows **Setup** tab at the top of the window. Hyperterminal is located in the Communications group.



☛ Using the Hyper terminal

The program that starts Hyperterminal is HYPERTRM.EXE. It is located under Start Menu;

Go to **Start** → **Programs** → **Accessories** → (communications) Hyperterminal.



Serial Control Using RS-232C

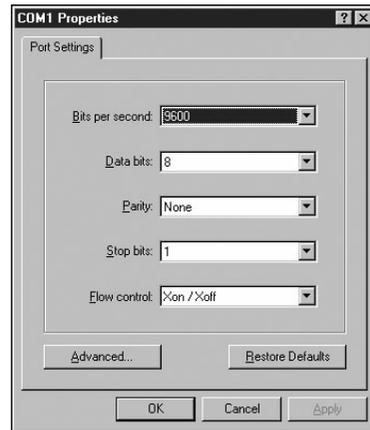
Using the Hyper Terminal

Hyperterminal is an application for serial communications. It is offered as part of the basic MS Windows operating system.

- ① After executing Hyperterminal, set up as follows.

[COM1 Property dialog window]

Bits/sec : 9600 bps
Data Bits : 8 bits
Parity Bits : None
Stop Bits : 1 bit
Flow Control : None

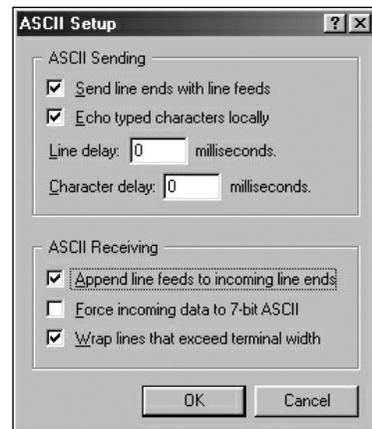


Using the Hyper terminal

- ② At the connected Hyperterminal Window:

File → Preference → Setup → ASCII Setup dialog window

1. Check the two items in the ASCII Sending section.
2. Check the first and third items in the ASCII receiving section.



You have completed the preparations to communicate with the LCD TV using your PC. If you enter the following commands in Hyperterminal, the LCD TV will execute your commands.

General RS-232C command structure

Mode	Command	Remark
Power	pwr=0 pwr=1	power off power on
Source	inp=rf inp=vid inp=svd inp=rgb inp=yuv inp=vga inp=dvi	• Refer to 1)
Volume	vol=12	• Refer to 1) 2) Range → 0~31
Contrast	con(rf)=24	
Brightness	bri(vid)+16	
Color	col(vga)-10	
Tint	tin(rf)=?	
IR Spoofing	sir=vup sir=vdn sir=mnu sir=aup sir=and sir=alt sir=art sir=ke0 sir=ke1 sir=ke2 sir=ke3 sir=ke4 sir=ke5 sir=ke6 sir=ke7 sir=ke8 sir=ke9	vup=volume up button vdn=volume down button mnu=menu button aup=arrow up button and=arrow down button alt=arrow left button art=arrow right button ke0=number pad 0 ke1=number pad 1 ke2=number pad 2 ke3=number pad 3 ke4=number pad 4 ke5=number pad 5 ke6=number pad 6 ke7=number pad 7 ke8=number pad 8 ke9=number pad 9
Red gain Green gain Blue gain	gar(vga)+178 gag(vga)=? gab(dvi). 57	• Refer to 1) 2) 3) Range --> 0~255
Miscellaneous	ind=0 ind=1	.ind. --> display information mode .0. --> infor off .1. --> infor on
	mnu=0 mnu=1	.mnu. --> on screen display mode .0. --> menu off .1. --> menu on

• Refer

1) Red, Green, Blue gains operate only RGB, DVI mode

2) + increase value

– decrease value

= change into input value

? return to previous value before change

3) rf = TV, vid=VIDEO, svd=S-VIDEO, rgb=COMPONENT1, yuv=COMPONENT2, vga=RGB, dvi=DVI

Troubleshooting

• Before you call a service technician, please review this list of problems and possible solutions. It may save you time and money.

Problems	Possible Solution
No Power	<ul style="list-style-type: none"> ■ Make sure the power cord is connected to the AC outlet. ■ Make sure the power cord is connected to a wall socket correctly.
Poor or no picture	<ul style="list-style-type: none"> ■ Check all wire connections. ■ Check for source of reception disturbance. ■ Try another channel. ■ Check CATV connection or VHF/UHF ANT. ■ At PC(RGB) mode, check the resolution. <ul style="list-style-type: none"> - The best resolution for this LCD TV is 1024 x 768, 60Hz.
Poor or no Sound	<ul style="list-style-type: none"> ■ Try another channel. ■ Press Mute button again on the remote control. ■ Press the VOL ► button to increase the volume. ■ Check CATV connection or VHF/UHF ANT.
No image on a specific channel	<ul style="list-style-type: none"> ■ Make sure the channel selection is correct. ■ Change the antenna direction to the right or left. ■ Adjust the fine tuning of the channel.
TV shuts off	<ul style="list-style-type: none"> ■ Set sleep timer to "OFF".
Closed Caption does not working	<ul style="list-style-type: none"> ■ Try another channel. ■ Press the CAPTION button on the remote control.
V-CHIP does not working properly	<ul style="list-style-type: none"> ■ Set the Block item "ON". ■ V-CHIP does not work in the PIP(picture in picture) ■ Set the ratings as desired.
No CATV reception	<ul style="list-style-type: none"> ■ Set TV/CATV to CATV.
Remote control does not working	<ul style="list-style-type: none"> ■ Batteries could be weak. Replace the batteries to a new ones. ■ Locate the LCD TV at least one meter away from fluorescent lights. ■ Clean the transmission window of the remote control.
Sometimes there is a rapping sound in the middle of viewing or after viewing	<ul style="list-style-type: none"> ■ This could be caused by the deflation or expansion of plastic products due to a change in the surrounding environment, such as humidity, temperature etc. When you turn the LCD TV on and off, a rapping sound indicates a high voltage charge/discharge in the LCD TV. Please note that this is not a defect.

Specifications

Model Name		L3040
Panel	Size	30.0 inch Diagonal
	Display Size	29.53" (Diagonal)
	Type	a-si TFT active matrix
	Pixel pitch	0.5025mm × 0.1675mm × RGB
	Viewing Angle	85° (H) / 85° (V)
Frequency	Horizontal	30 ~ 61 kHz
	Vertical	56 ~ 85 Hz
	Display Color	16.7 M colors
Display Resolution	Maximum Mode	1280 x 768 @ 75 Hz
Aspect Ratio		15 : 9
Input Terminals	TV	1 ~ 125 channels
	VIDEO	1.0Vp-p / 75Ω
	S-Video	Y: 1.0Vp-p / 75Ω
		C: 0.3Vp-p / 75Ω
	Component1 (D-TV, DVD)	Y : 1.0Vp-p / 75Ω
		Pb(cb) : 0.7Vp-p / 75Ω
		Pr(cr) : 0.7Vp-p / 75Ω
	Component2 (D-TV, DVD)	Y : 1.0Vp-p / 75Ω
		Cb(pb) : 0.7Vp-p / 75Ω
		Cr(pr) : 0.7Vp-p / 75Ω
RGB (Analog)	Mini D-SUB 15 pin	
DVI (Digital)	DVI-I 29 pin (But, the Analog input is not supported)	
Input Sound	Stereo RCA(L/R) x 4 (Video & S-Video, Component1, Component2, DVI & RGB)	
Output Terminals	Sound	Stereo L/R x 1, (Attached speaker)
		Max 14W(7W/7W), 8Ω
		Stereo RCA(L/R) 500mV rms
	Video	RCA(Monitor out) x 1
Power Supply		AC 120V, 60Hz
Power Consumption		160 W
Dimensions (W x H x D)		34.45 x 21.89 x 7.48 inch (875 x 556 x190mm)
Weight		44.09 lbs (20 kg)
External Control	RS-232C	D-SUB 9 pin

* Design and specifications are subject to change without notice.

Manufacturer MBR Codes

■ Individual Manufacturer's MBR Code Table



MANUFACTURER	CODE
ANAM	000 001 002 003 004 005
CROWN	076
DAEWOO	110 113 097 056 112 114 117 102 074 107 076 084 053 062 063
FUTURETECH	076
GE	057 058 073 106
LG(GOLDSTAR)	106 104 118 103 100 101 109
HITACHI	060 059 053 085
INKEL	115
JCP	051 058
JVC	075 089
KEC	076
KENWOOD	093
MARANTZ	051
MINIBITS	051 053 071 106
NEC	051 053 056 062 065 106
NIKEL	076
PANASONIC	042 073 120
PHILCO	010 051 052 053 106
PHILIPS	051 052 053 106
PIONEER	069 064 070
RADIO SHARK	065 076 079
RCA	051 053
SAMPO	051 062
SAMSUNG	012 106 119 072 091 104 118 099 096 087
SANYO	056 066 067 072 082
SHARP	044 065 068
SONY	088 077 095
TAEKWANG	094
TECHWOOD	053
TOSHIBA	092 056 061 096 119
UNIVERSAL	057 058
YAMAHA	053



MANUFACTURER	CODE											
ANAM	000	001	002	003	004	005						
AIWA	066	071										
CANNON	060	063	065									
DAEWOO	109	114	116	122	082	083	043	040	038	118	093	
	126	115										
EMERSON	039	050	057	059	061	066	067	068	069	073	103	
GE	063	065										
LG(GOLDSTAR)	103	112	045	046	053	091	092	096	124	097	100	
	108	120										
HITACHI	037	046	051	053	058	066	098	102				
JVC	063	065	127	074								
KENWOOD	047											
MARANTZ	045	063	065									
MINOLTA	046	053										
MITSUBISHI	035											
NEC	045	048	056									
PANASONIC	063	065	128	101								
PENTAX	046	053	063	065								
PHILCO	063	065	066									
PHILIPS	063	065	066	081								
PILOT	103											
PIONEER	054											
RCA	046	053	063	065								
SAMSUNG	104	072	064	107	110	088	106	111	113	117	121	
	119	123										
SANYO	036	040	047	089								
TAEKWANG	094											
TEAC	066											
TOSHIBA	041	050	110									
YAMAHA	045	066										
ZENITH	076	078										

DUD

MANUFACTURER	CODE
ANAM	000 001 002
APEN	015 025
HARMAN/KARDON	009
JVC	008
KENWOOD	023
LG	005
MEGAVOX	024
MITSUBISHI	019
ONKYO	024
PANASONIC	013
PIONEER	021 014 026
PROSCAN	020
RCA	020
SAMSUNG	004 017
SHERWOOD	016 004
SONY	022
TECHNICS	013
TOSHIBA	024
ZENITH	024 010

SAT

MANUFACTURER	CODE
ANAM	000
KIRYUNG	025
DAERYUNG	046 047 048 055
IELEC	050
HUNGCHANG	056
AIWA	036
ASHIN	031
DABONE	030
LG	051
HITACHI	029
HYUNDAI	027
INAX	032
KMEN	022
KONIC	054
MIRAERO	031
PANASONIC	057 058
SAMSUNG	019 020 054
SANYO	034 040
SATVILLE	033
SKY LIFE	001
SONY	028
STAR TRAK EIGHT	052
STS	041
SUNLINE	024 035 038 039
TELESAT	037
TOSHIBA	023
UNISAT	042
VALIANT	031 043 044 045

CBL

MANUFACTURER	CODE
NOW	042
DONGGUK	040
SAEWOO	041
WOORYOUNGTECH	044
PACIFIC	039
LG	035 037
SAMSUNG	040
TAEKWANG	043
TAIHAN	038

How to Set Up the Lockout Function

• **Lockout** : This is a function to Lock/Unlock the Front button by using a Remote Key Combination.

Set Up the Lockout Function of the Front Button Using a Remote Key Combination.

Combination key: + number + number + number

	Function	Remote Key Combination
Lock/	Front Key lock on	HELP +1 + 0 + 3
Unlock	Front Key lock off	HELP +1 + 0 + 2

	Function	Remote Key Combination
Power	Power on	HELP +1 + 0 + 0
On/Off	Power off	HELP +1 + 0 + 1

	Function	Remote Key Combination
Source On/Off	TV	HELP +2 + 0 + 0
	Video	HELP +2 + 0 + 1
	S - Video	HELP +2 + 0 + 2
	Componet 1	HELP +2 + 0 + 3
	Componet 2	HELP +2 + 0 + 4
	RGB	HELP +2 + 0 + 5
	DVI	HELP +2 + 0 + 6

APPENDIX

Care and Maintenance

- With proper care, your LCD TV will give you many years of service.
Please follow these guidelines to get the maximum performance from your LCD TV.

Identifying Problems

- Do not put the LCD TV near extremely hot, cold, humid, or dusty places.
- Do not put the LCD TV near appliances that create magnetic fields.
- Keep the ventilation openings clear.
- Do not place the LCD TV on a rough and slanted surface, such as cloth or paper.

Liquids

- Do not handle liquids near or on the LCD TV.

Cabinet

- Never open the cabinet or touch the parts inside.
- Wipe your LCD TV with a clean, dry cloth. Never use water, cleaning fluids, wax, or chemicals.
- Do not place heavy objects on top of the cabinet.

Temperature

- If your LCD TV is suddenly moved from a cold to a warm place, unplug the power cord for at least two hours so any moisture that may have formed inside the unit can dry completely.

