APPENDIX H

: USER'S MANUAL

LG

LCD TV

OWNER'S MANUAL

MODEL: 23LX1RV

RW DVD+ReWritable | **DVD** VIDEO | **DivX** VIDEO | **PROGRESSIVE SCAN** | **COMPACT disc** DIGITAL AUDIO

RW COMPATIBLE | **MP3** | Plays Windows Media™ | **DD DOLBY** DIGITAL | **DIGITAL dts** SURROUND

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

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

Warning

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**

WARNING:

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

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to
the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of suffi-
cient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of
important operating and maintenance (servicing) instructions in the literature accompanying the appli-
ance.

NOTE TO CABLE/TV INSTALLER:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the National Electric
Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable
ground shall be connected to the grounding system of the building, as close to the point of the cable entry as prac-
tical.

REGULATORY INFORMATION

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 in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee 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 by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

CAUTION:

Do not attempt to modify this product in any way without written authorization from LG Electronics Corporation.
Unauthorized modification could void the user's authority to operate this product.

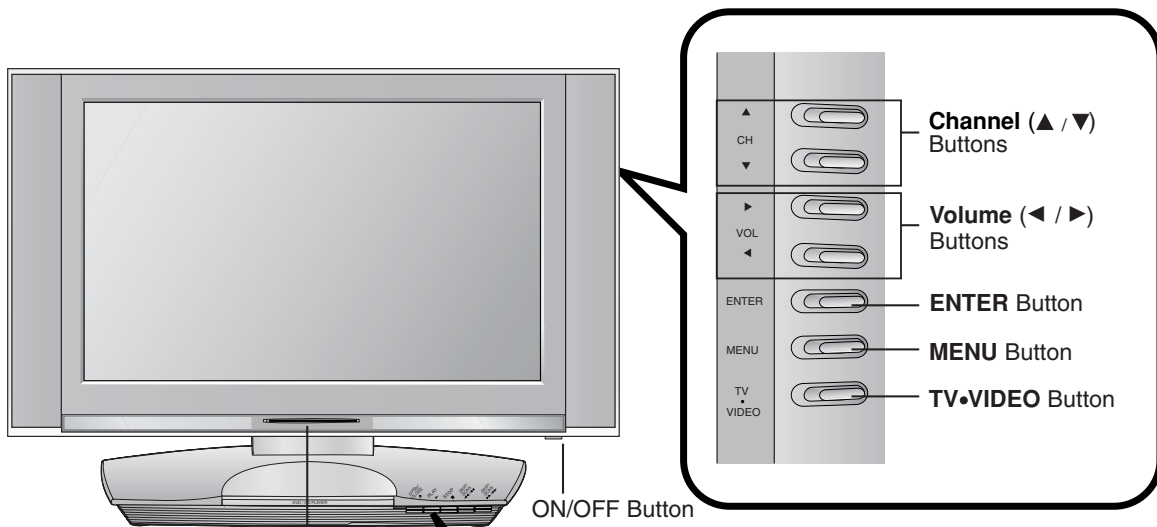**U.S.A. only --**

COMPLIANCE:

The responsible party for this product's compliance is:
LG Electronics U.S.A., Inc.
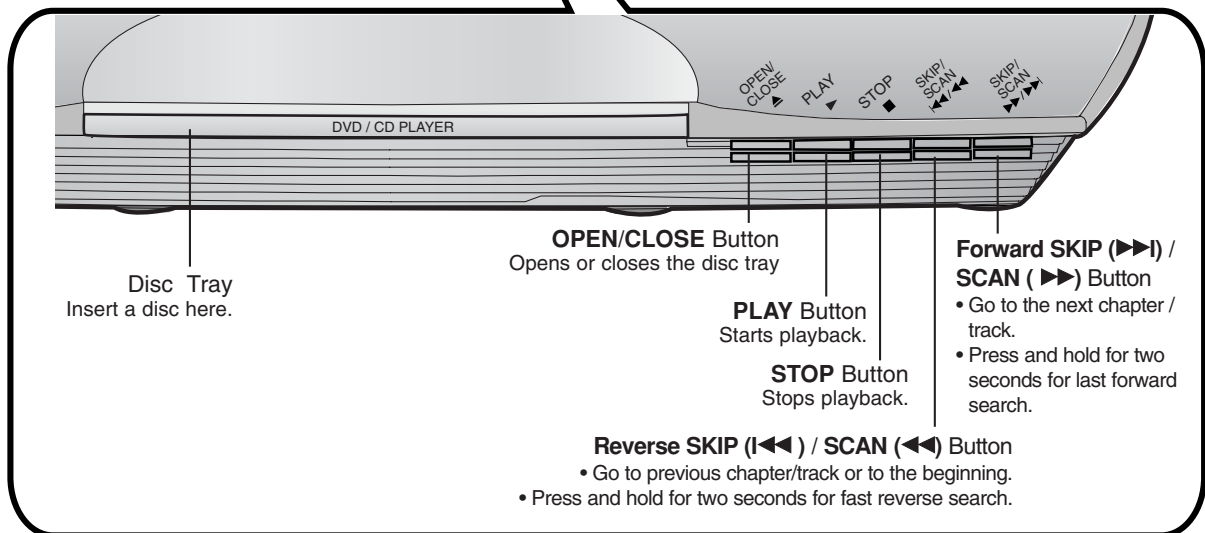1000 Sylvan Avenue, Englewood Cliffs, NJ 07632
Phone: 1-201-816-2000
http://www.lgusa.com
--

Introduction

Controls

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

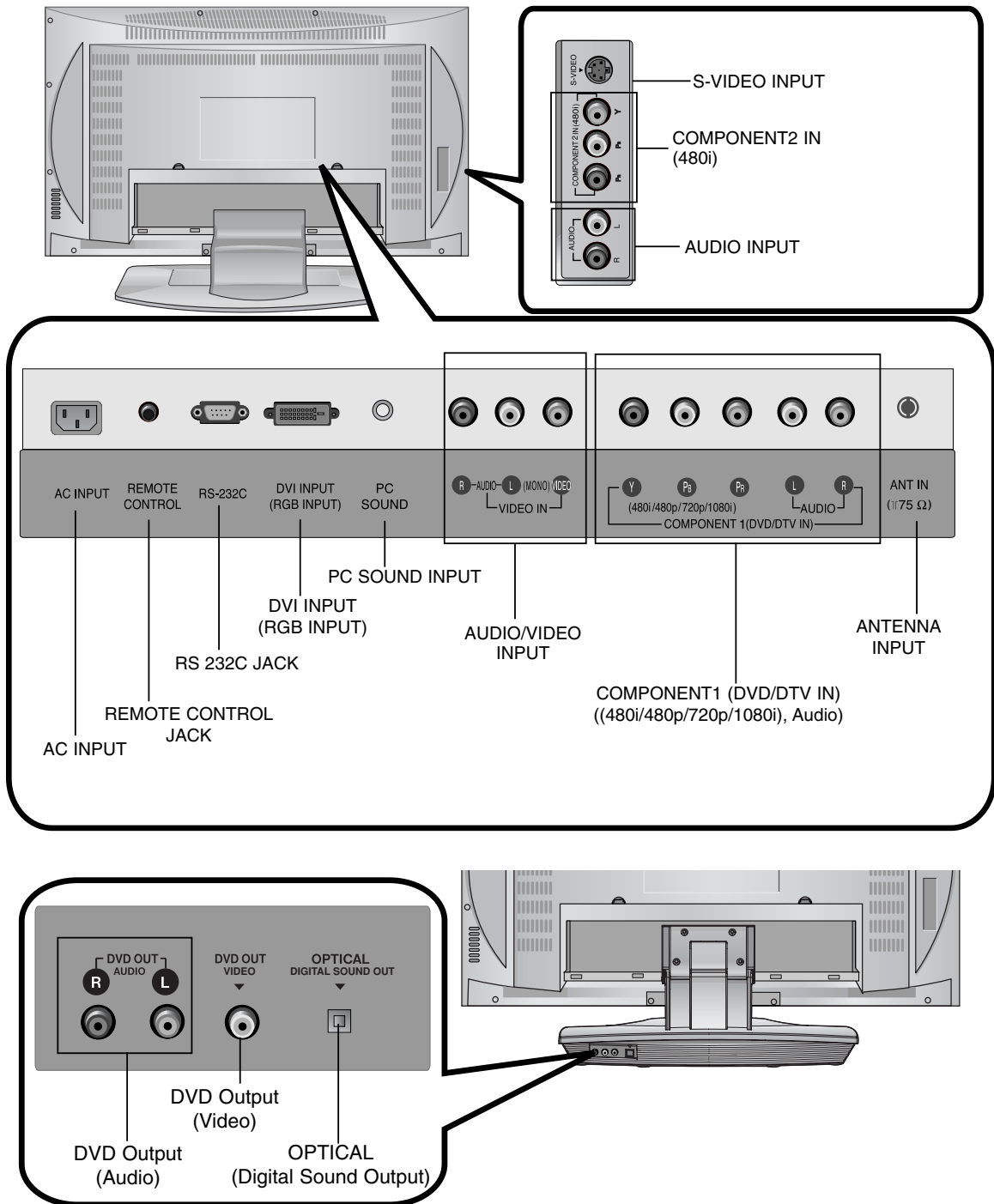**Channel (▲ / ▼)** Buttons

Volume (◄ / ►) Buttons

ENTER Button

MENU Button

TV•VIDEO Button

ON/OFF Button

Remote Control Sensor
Power/Standby Indicator
Illuminates red in standby mode, illuminates
green when the set is switched on.

DVD / CD PLAYER

**OPEN/CLOSE** Button
Opens or closes the disc tray

**Forward SKIP (►►I) /
SCAN (►►)** Button
• Go to the next chapter /
track.
• Press and hold for two
seconds for last forward
search.

Disc Tray
Insert a disc here.

PLAY Button
Starts playback.

STOP Button
Stops playback.

Reverse SKIP (I◄◄) / SCAN (◄◄) Button
• Go to previous chapter/track or to the beginning.
• Press and hold for two seconds for fast reverse search.

Introduction
Connection Options

S-VIDEO INPUT

COMPONENT2 IN
(480i)

AUDIO INPUT

AC INPUT

REMOTE
CONTROL

RS-232C

DVI INPUT
(RGB INPUT)

PC
SOUND

R —AUDIO— L (MONO) VIDEO

VIDEO IN

Y   PB   PR   L   R

(480i/480p/720p/1080i)   —AUDIO—

COMPONENT 1(DVD/DTV IN)

ANT IN
(ͳ75 Ω)

PC SOUND INPUT

DVI INPUT
(RGB INPUT)

AUDIO/VIDEO
INPUT

ANTENNA
INPUT

RS 232C JACK

COMPONENT1 (DVD/DTV IN)
((480i/480p/720p/1080i), Audio)

REMOTE CONTROL
JACK

AC INPUT

DVD OUT
AUDIO

R   L

DVD OUT
VIDEO
▼

OPTICAL
DIGITAL SOUND OUT

▼

DVD Output
(Video)

DVD Output
(Audio)

OPTICAL
(Digital Sound Output)

Installation
Basic Connection

1 Pull the back cover backside while pushing the two tabs and then lift it up.
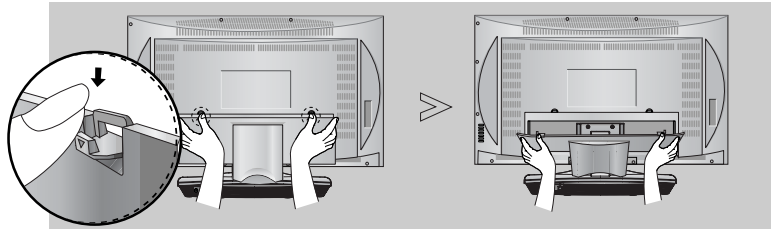
2 Connect the cables as necessary.

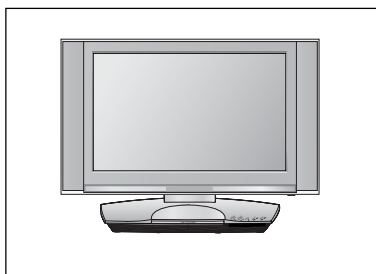To connect an additional equipment, see the **External equipment Connections** section.
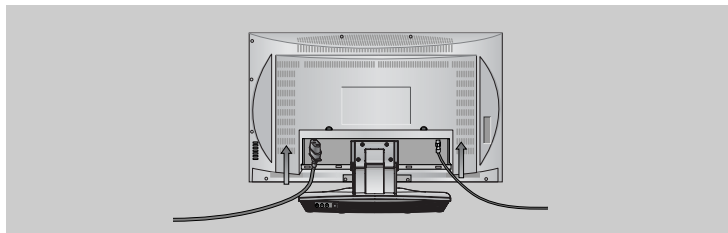
3 Align the holes on the TV back panel with the four protuberance on the rear AV cover and insert.
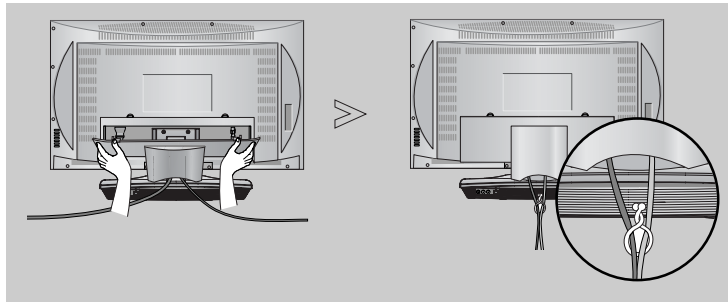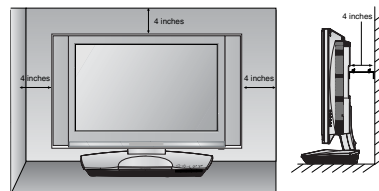
- **Cable Arranagement**
  Pull the cables through the hole on the set and bundle the cables using the supplied twister holder.

Desktop Pedestal Installation

For proper ventilation, allow a clearance of 4" on each side and from the wall.
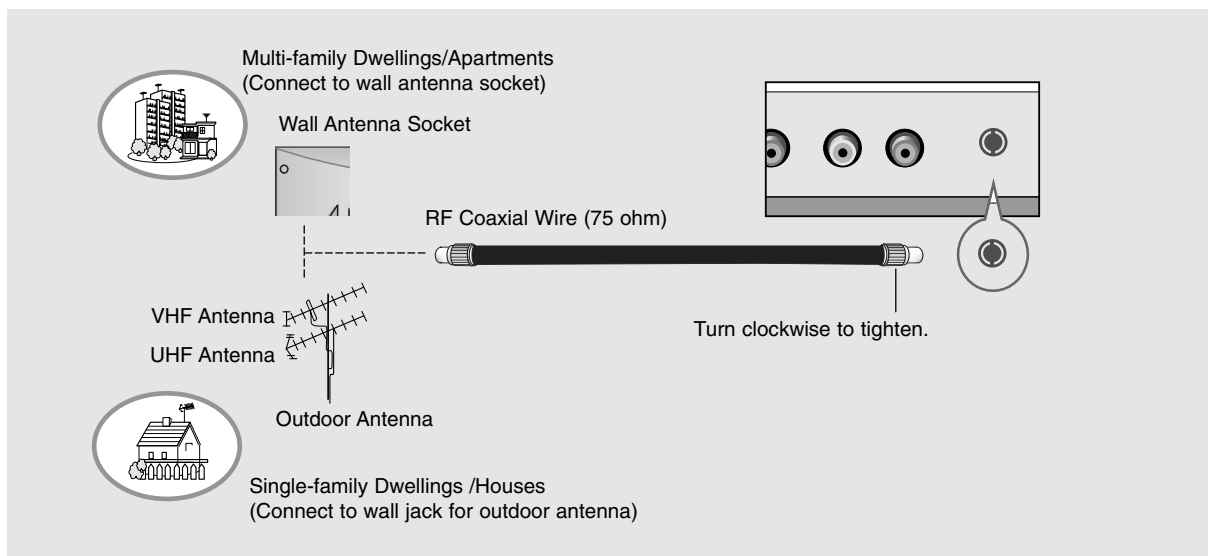
4 inches

4 inches

4 inches

4 inches

External Equipment Connections

To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.

Antenna Connection

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

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

Wall Antenna Socket

RF Coaxial Wire (75 ohm)

Turn clockwise to tighten.

VHF Antenna

UHF Antenna

Outdoor Antenna

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

• In poor signal areas, to get better picture quality, install a signal amplifier to the antenna as shown to the right.
• If signal needs to be split for two TVs, use an antenna signal splitter for connection.

VHF   UHF

Signal Amplifier
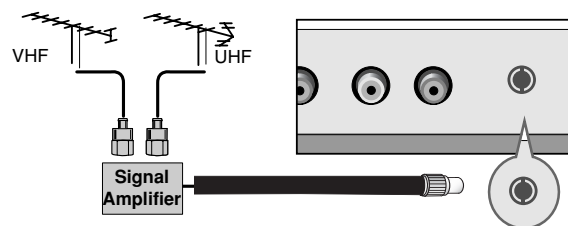
Installation
External Equipment Connections

VCR Setup

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- Typically a frozen still picture from a VCR. If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen.

When connecting with an antenna cable

TV Back panel

ANT IN
ANT OUT S-VIDEO
OUT
(R) AUDIO (L) VIDEO
IN

ANT IN
(75 Ω)

VCR

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

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

3 Set VCR output switch to 3 or 4 and then tune TV to the same channel number.

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

When connecting with a RCA cable

TV Back panel

AC INPUT REMOTE CONTROL RS-232C DVI INPUT (RGB INPUT) PC SOUND R—AUDIO—L (MONO) VIDEO VIDEO IN Y PB (480i/480p/720p/10 COMPONE

ANT IN
ANT OUT S-VIDEO
OUT
(R) AUDIO (L) VIDEO
IN

VCR

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

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

3 Select **Video** input source with using the **TV/AV** button on the remote control.

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

## When connecting with an S-Video cable

TV side panel
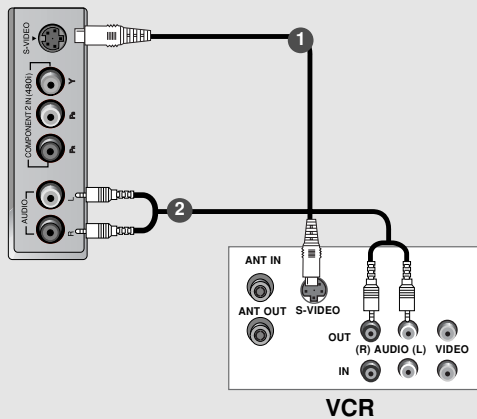
1. Connect the an S-VIDEO output of the VCR to the S-VIDEO input on the set. The picture quality is improved; compared to connecting a regular VCR to the Video input.
2. Connect the audio outputs of the VCR to the **AUDIO** input jacks on the set.
3. Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
4. Select **S-Video** input source with using the **TV**/**AV** button on the remote control.

VCR

ANT IN
ANT OUT   S-VIDEO
OUT
(R) AUDIO (L)   VIDEO
IN

⚠ Do not connect to both Video and S-Video at the same time.

External AV Source Setup

TV side panel
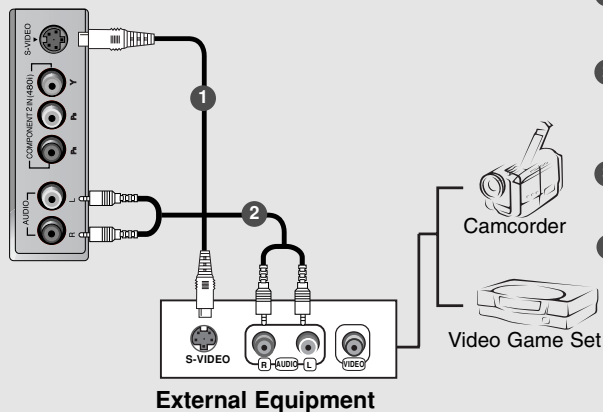
1. Connect the **S-VIDEO** output of the external equipment to the **S-VIDEO** input on the set.
2. Connect the **AUDIO** jacks between TV and external equipment. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red).
3. Select **S-Video** input source with using the **TV**/**AV** button on the remote control.
4. Operate the corresponding external equipment. Refer to external equipment operating guide.
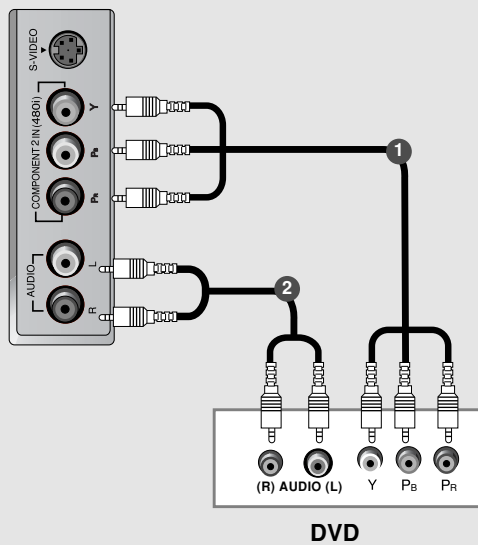
Camcorder

Video Game Set

S-VIDEO   R AUDIO L   VIDEO
External Equipment

Installation
External Equipment Connections

External DVD Setup

When connecting with a component cable

TV side panel

S-VIDEO

COMPONENT 2 IN (480i)
Y
PB
PR

AUDIO
L
R

(R) AUDIO (L)   Y   PB   PR

DVD

1. Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT DVD IN (Y, PB, PR)** jacks on the set.

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

3. Turn on the DVD player, insert a DVD.

4. Select **COMPONENT** input source with using the **TV/AV** button on the remote control.

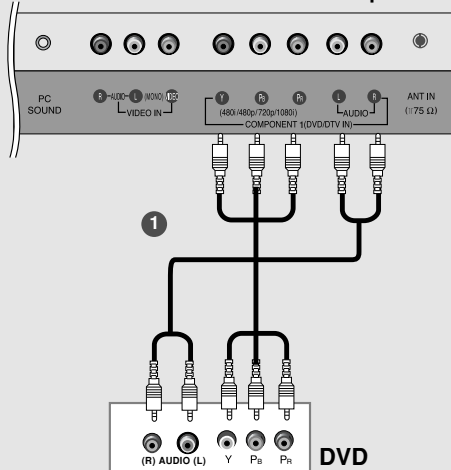5. Refer to the DVD player's manual for operating instructions.

• **Component Input ports**
  To get better picture quality, connect a DVD player to the component input ports as shown below.
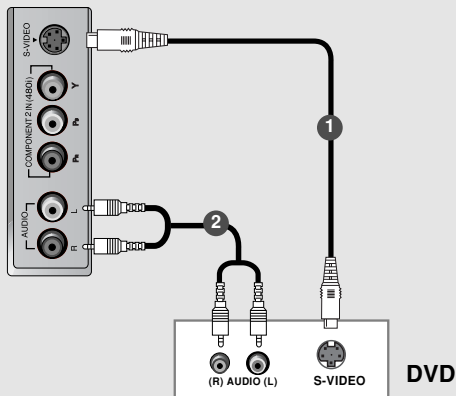
Component ports on the TV	Y	PB	PR
Video output ports on DVD player	Y	Pb	Pr
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	PB	PR

TV back panel

PC SOUND

AUDIO (MONO)
VIDEO IN

Y   PB   PR
(480i/480p/720p/1080i)
L   R
AUDIO
COMPONENT 1(DVD/DTV IN)

ANT IN
(75 Ω)

(R) AUDIO (L)   Y   PB   PR   **DVD**

When connecting with a S-Video cable

TV side panel

(R) AUDIO (L)   S-VIDEO   **DVD**
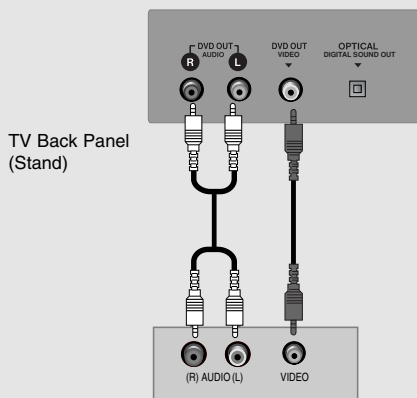
1 Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the set.

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

3 Turn on the DVD player, insert a DVD.

4 Select **S-VIDEO** input source with using the **TV/AV** button on the remote control.

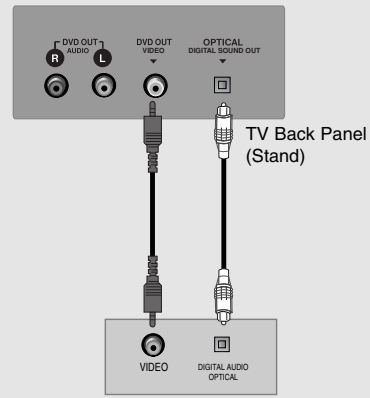5 Refer to the DVD player's manual for operating instructions.

DVD Output Setup

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

1 Connect the second TV or monitor to the TV's **DVD OUT (VIDEO)** and **DVD OUT (AUDIO)** jacks.

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

1 Connect the second TV or monitor to the TV's **DVD OUT (VIDEO)** and **OPTICAL DIGITAL SOUND OUT** jacks.

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

TV Back Panel (Stand)

OR

TV Back Panel (Stand)

(R) AUDIO (L)   VIDEO

Second TV or Monitor input terminals

VIDEO   DIGITAL AUDIO OPTICAL

Second TV or Monitor input terminals

Notes

a. If your second TV or monitor has no optical digital audio input jack, it's impossible to use DVD digital sound output.

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

c. If your external audio equipment has a digital audio input optical port, you can connect it to your TV.

# Installation
External Equipment Connections

DTV Setup

When connecting with a component cable

TV side panel

DTV Receiver (Set-top Box)

(R) AUDIO (L)   Y   PB   PR
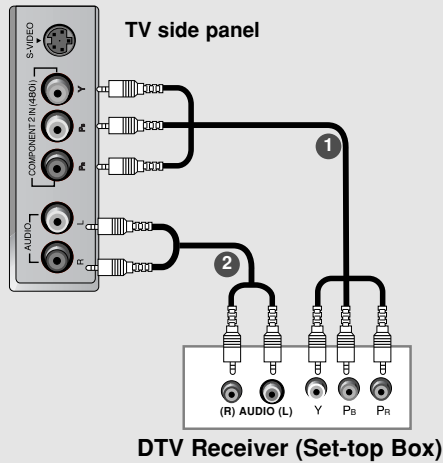
1. Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT DVD IN (Y, PB, PR)** jacks on the set.

2. Connect the audio outputs of the digital set-top box to the **AUDIO** input jacks on the set.

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

4. Select **COMPONENT** input source with using the **TV/AV** button on the remote control.

PC Setup

1. Connect the TV to the PC with the PC cable.

2. Connect the PC audio output to the TV's **PC SOUND** input.

3. Turn on the PC.

4. Use the **TV/AV** button on the remote control to select **PC**.

AC INPUT   REMOTE CONTROL   RS-232C   DVI INPUT (RGB INPUT)   PC SOUND
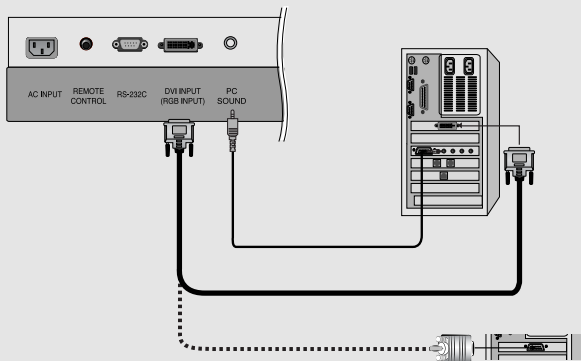
NOTE
Connect the signal cable (DVI-D cable, Not DVI to D-Sub cable) from the DVI output socket of the PC to the DVI input socket of the set when using a PC with DVI output. In some video cards, DVI-Analog output may not be supported.

Monitor Display Specifications

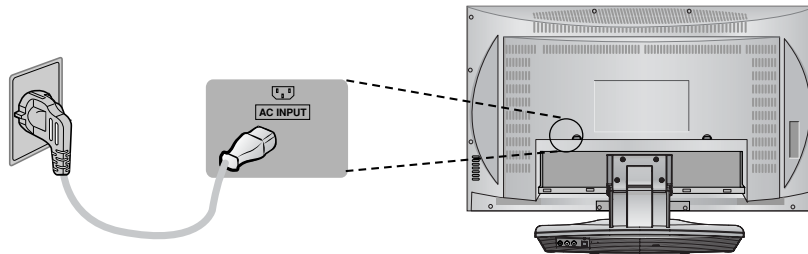| MODE	Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
VGA	640x480	31.4	60
SVGA	800x600	37.8	60
XGA	1024x768	48.3	60
WXGA	1280x768	47.6	60
	1360x768	47.6	60

Notes

a. For optimum picture quality, use standard WXGA 1280x768 computer output at a 60Hz refresh rate. Using other formats (VGA, SVGA, etc.) or refresh rates may result in reduced picture quality. (To change the computer video output format, please refer to the operating manual for the computer you are using).

b. If the message **Out of range** appears on the screen, adjust the PC output to a format listed in the **Monitor Display Specifications** table.

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

DPM (Display Power Management) mode
If the PC goes to power saving mode, the monitor automatically switches to DPM mode.
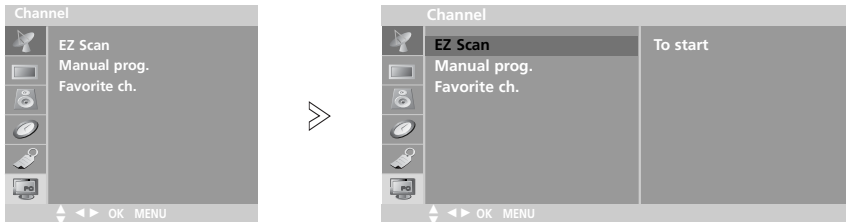If you don't use the PC cable provided, DPM mode may not work.

Power Cord Connection

- Connect the power cord correctly as shown.

Setting up TV stations

Memorizing the Channels with EZ scan

Channel	
EZ Scan	
Manual prog.	
Favorite ch.	

≫

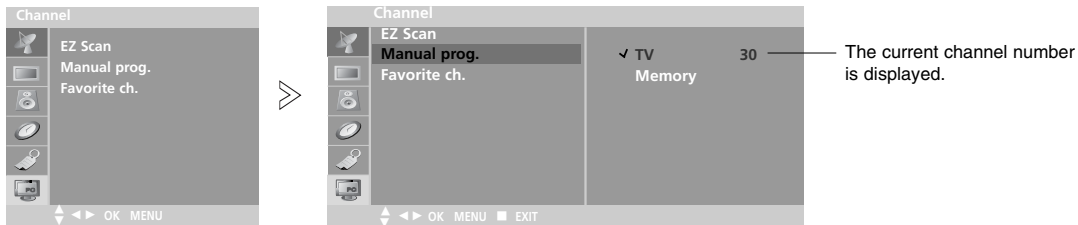| Channel	
EZ Scan	To start
Manual prog.	
Favorite ch.	

◄► OK MENU

- For Auto program to work, the programming source must be connected to the TV and the TV must be receiving programming signals either over-the-air or from a cable-type service provider.

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

2 Press the ► button and then use ▲ / ▼ button to select **EZ Scan**.

3 Press the ► button to begin the channel search.

• Wait for auto program to complete the channel search cycle before choosing a channel. The TV scans for over-the-air channels and then channels provided by a cable service.

Notes

a. When the channel search is complete, use the ▲ / ▼ buttons to review the memorized channels.

b. If you press the **ENTER** button in auto programming, the function will stop and only channels programming up to that time will remain.

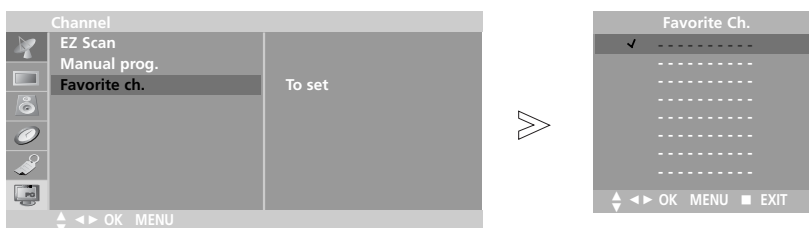c. Auto program function can memorize only the channels which are being received at that time.
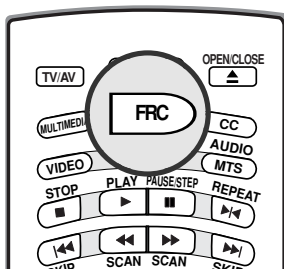
Add/Delete Channels with Manual program

Channel

- EZ Scan
- Manual prog.
- Favorite ch.

◄► OK MENU

Channel

- EZ Scan
- **Manual prog.**
- Favorite ch.

✓ TV   30
  Memory

◄► OK MENU ■ EXIT

The current channel number is displayed.

- You can manually include or erase individual channels.

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

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

3 Press the ► button and then use ▲ / ▼ button to select a channel you want to add to memory or erase.

4 Press the ▼ button and then use ▲ / ▼ button to select **Memory (add)** or **Erase (delete)**.

5 Press the **ENTER** button to save. The current channel is added to Memory or Erased from the channel list.

Favourite Channels Setup

Channel

- EZ Scan
- Manual prog.
- **Favorite ch.**   To set

◄► OK MENU

Favorite Ch.

✓ - - - - - - - - - -
   - - - - - - - - - -
   - - - - - - - - - -
   - - - - - - - - - -
   - - - - - - - - - -
   - - - - - - - - - -
   - - - - - - - - - -
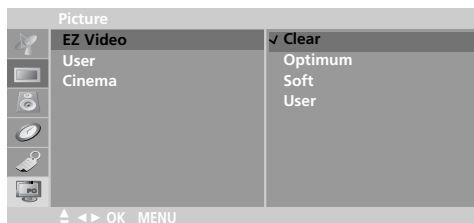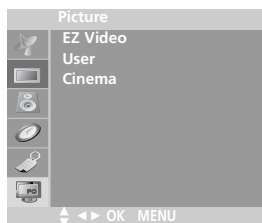   - - - - - - - - - -

◄► OK MENU ■ EXIT

- Favorite Channel lets you quickly tune in up to 8 channels of your choice without having to wait for the TV to scan through all the in-between channels.
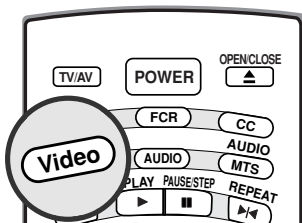
TV/AV   OPEN/CLOSE ⏏

MULTIMEDIA   FRC   CC
                        AUDIO
VIDEO   MTS
       PLAY PAUSE/STEP REPEAT
STOP   ►   ■   ►I
■
I◄◄   ◄◄   ►►   ►►I
      SCAN SCAN

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

2 Press the ► button and then use ▲ / ▼ button to select **Favorite ch.**.

3 Press the ► button and then use ▲ / ▼ button to select the first favorite channel position.

4 Use the ◄ / ► button to set the desired channel number for first favorite channel.

5 Repeat steps 3 to 4 to memorize other channels.

6 Press the **ENTER** button to save.

Picture Menu Options

EZ Video

Picture	
EZ Video	
User	
Cinema	

▲▼ ◀▶ OK MENU

≫

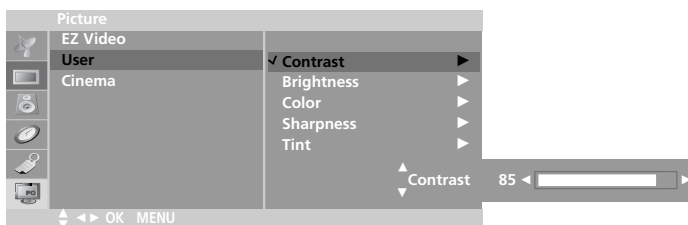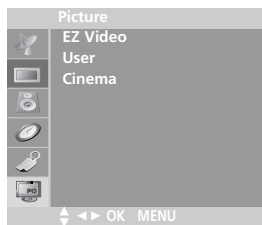| Picture	
EZ Video	√ **Clear**
User	**Optimum**
Cinema	**Soft**
	User

▲▼ ◀▶ OK MENU

- This function adjusts the TV for the best picture appearance.

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

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

3 Press the ▶ button and then ▲ / ▼ button to select a picture setting on the **EZ Video** menu.

4 Press the **ENTER** button.

Manual Picture Control (User option)

Picture	
EZ Video	
User	
Cinema	

▲▼ ◀▶ OK MENU

≫

Picture	
EZ Video	
User	√ **Contrast** ▶
Cinema	**Brightness** ▶
	Color ▶
	Sharpness ▶
	Tint ▶
	▲ Contrast 85 ◀ ▶

▲▼ ◀▶ OK MENU

- You can adjust picture contrast, brightness, color, sharpness and tint to the levels you prefer.

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

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

3 Press the ▶ button and then use ▲ / ▼ button to select the desired picture option (**Contrast, Brightness, Color, Sharpness, Tint**).

4 Use the ▲ / ▼ button to make appropriate adjustments.

• Contrast, Brightness, Color, and Sharpness are adjustable from 0 to 100.
• Tint is adjustable from - 50 to + 50.
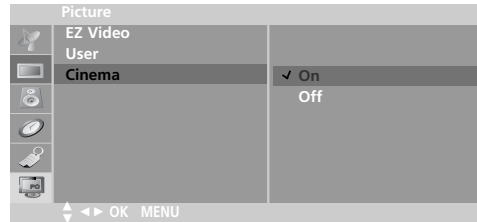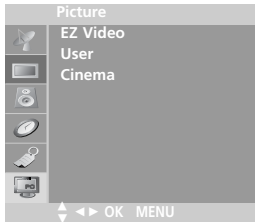
5 Press the **ENTER** button to save.

Notes

a. Only **Contrast** and **Brightness** are displayed in PC mode.

Picture Menu Options

Cinema Mode Setup

```
Picture
  EZ Video
  User
  Cinema
        ◄ ► OK  MENU
```

≫

```
Picture
  EZ Video
  User
  Cinema         ✓ On
                   Off
        ◄ ► OK  MENU
```

- *Sets up the TV for the best picture appearance for viewing movies.*

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

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

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

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

Picture format (ARC-Aspect Ratio Correction)
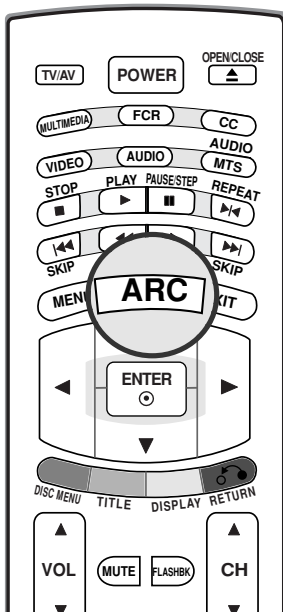
- You can watch TV in various picture formats; **16:9, Zoom, 4:3.** Repeatedly press the **ARC** button to select your desired picture format.

• 16:9
Displays video in 16:9 Widescreen mode. A 4:3 signal will be stretched to fill the screen.

• Zoom

A 4:3 signal is magnified to the upper / lower and left / right sides so that the signal fills the16:9 screen. The bottom and top of the picture will be cut off.
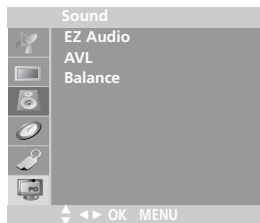
• 4:3
Standard TV format.
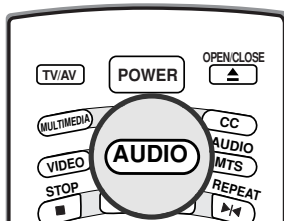
Notes

a. **Zoom** is not available in PC mode.

Sound Menu Options

```
Sound
  EZ Audio
  AVL
  Balance

    ◄► OK  MENU
```

>>

```
Sound
  EZ Audio        Flat          ►
  AVL             Music
  Balance         Movie
                  Sports
                  User

    ◄► OK  MENU
```
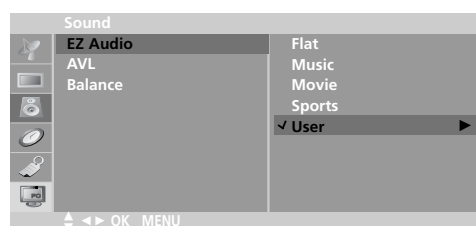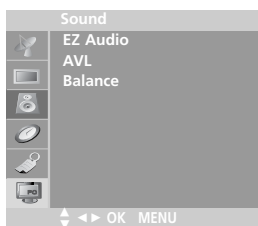
- This function lets you enjoy the best sound without any special adjustment because the TV selects the appropriate sound option based on the program content.

```
  TV/AV    POWER    OPEN/CLOSE
                       ▲
MULTIMEDIA           CC
         AUDIO    AUDIO
 VIDEO           MTS
 STOP            REPEAT
   ■              ►I◄
```

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

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

3 Press the ► button and then use the ▲ / ▼ button to select the appropriate sound option; **Flat, Music, Movie, Sports.**

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

```
Sound
  EZ Audio
  AVL
  Balance

    ◄► OK  MENU
```

>>

```
Sound
  EZ Audio        Flat
  AVL             Music
  Balance         Movie
                  Sports
                ✓ User        ►

    ◄► OK  MENU
```

>>

```
┌──────────────────────┐
│ █  │  │  │  │  │      │
│ █  │  │  │  │  │      │
│                      │
│ 0.1 0.5  1   5  10 KHz│
│ ◄► Move ▲ Adjust ■ Exit│
└──────────────────────┘
```

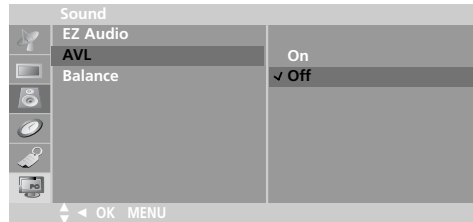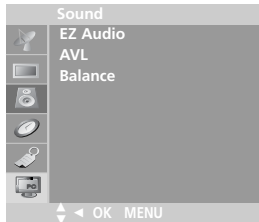**1** Press the **MENU** button and then ▲ / ▼ button to select the **Sound** menu.

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

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

4 Press the ► button and then use the ◄ / ► button to select the band you want to adjust. Then, use the ▲ / ▼ button to adjust the band level.

**5** Press the **ENTER** button to save.

Sound Menu Options

AVL (Auto Volume Leveler)

Sound	
EZ Audio	
AVL	
Balance	

≫

Sound		
EZ Audio		
AVL	On	
Balance	√ Off	

- AVL (Auto Volume Leveler) maintains an equal volume level automatically even if the programme is changed.

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

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

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

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

Sound Balance
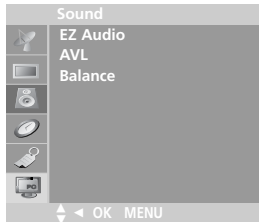
Sound	
EZ Audio	
AVL	
Balance	

≫

Sound		
EZ Audio		
AVL		
Balance	0	
	− ▬ +	

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

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

3 Press the ► button and then use the ◄ / ► button to adjust the sound balance.

 • Balance is adjustable from Left 50 to Right 50.

4 Press the **ENTER** button to save.
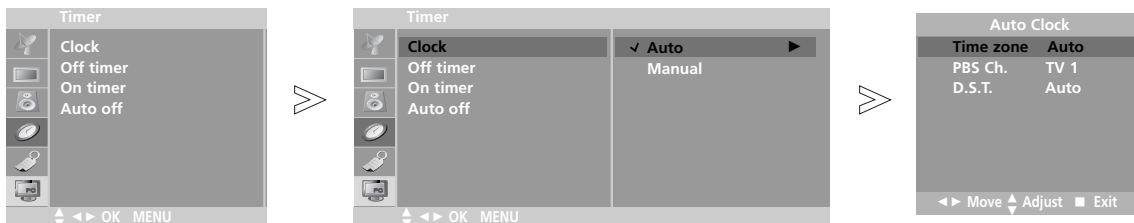
Sound Menu Options
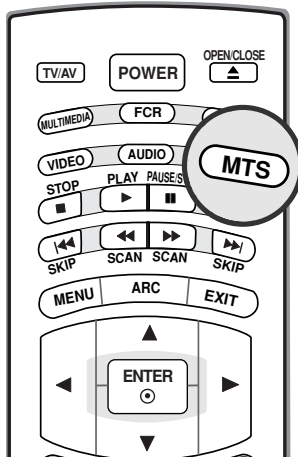
- The TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program, if the broadcaster transmits an additional sound signal as well as the original one.
- Mono: The primary language is heard from left and right speakers. Signal mode is mono.
- Stereo: The primary language is heard from left and right speakers. Signal mode is stereo.
- SAP: The secondary language is heard from left and right speakers.

1. Press the **MTS** button repeatedly.

- Select mono sound mode if the signal is not clear or in poor signal reception areas.
- **Stereo, SAP** mode are available only if included on the broadcast signal.
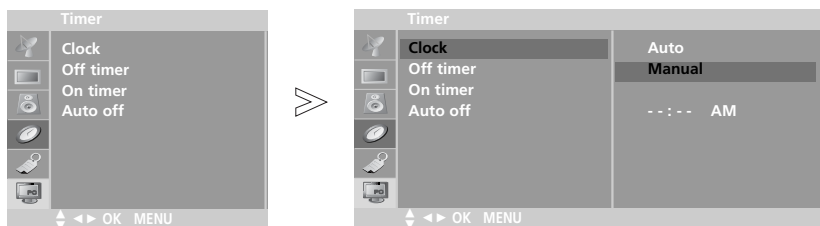
Timer menu Options

Auto Clock Setup

Timer	
Clock	
Off timer	
On timer	
Auto off	
	◆ ◄► OK MENU

Timer	
Clock	✓ **Auto** ►
Off timer	Manual
On timer	
Auto off	
	◆ ◄► OK MENU

Auto Clock	
Time zone	**Auto**
PBS Ch.	TV 1
D.S.T.	Auto
◄► Move ▲ Adjust ■ Exit	

- *The time can be automatically set using information from your local PBS TV station. The PBS channel signal includes information for the correct time and daylight savings time.*

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

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

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

4 Press the ► button and then use ▲ / ▼ button to select the time zone for your viewing area. Your choices are: **Auto, E.S.T.** (Eastern Standard Time), **C.S.T.** (Central Standard Time), **M.S.T.** (Mountain Standard Time), **P.S.T.** (Pacific Standard Time), **Alaska,** and **Hawaii**.

5 Press the ► button and then use ▲ / ▼ button to set **PBS channel.**

6 Press the ► button and then use ▲ / ▼ button to set **D.S.T.** (Daylight Savings Time) **Auto, Off** or **On,** depending on whether or not your viewing area observes Daylight Savings Time.

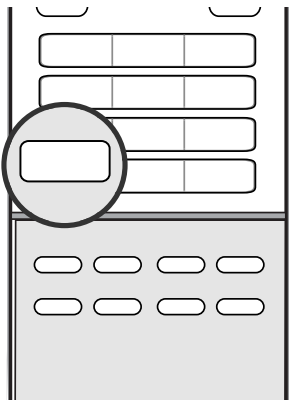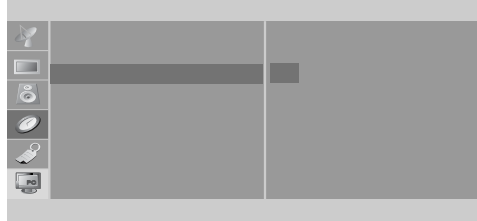**7** Press the **ENTER** button to save.

Auto Clock Setup

Timer	
Clock	
Off timer	
On timer	
Auto off	
	◆ ◄► OK MENU

Timer	
Clock	Auto
Off timer	**Manual**
On timer	
Auto off	- - : - - AM
	◆ ◄► OK MENU

- *If the time on the clock is incorrect, reset the clock manually.*

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

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

3 Press the ► button and then ▲ / ▼ button to adjust the hour.

4 Press the ► button and then ▲ / ▼ button to adjust the minute.
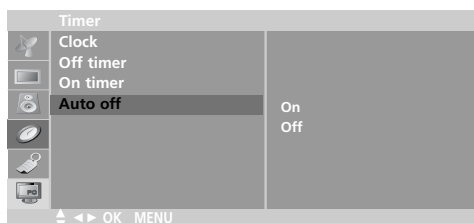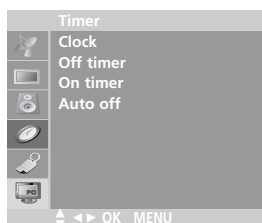
5 Press the **ENTER** button to save.

SLEEP button once.

4 To cancel the Sleep Timer, press the **SLEEP** button repeatedly until **Sleep ---** appears.

Timer menu Options

> ≫

Auto off

```
   Timer
   Clock
   Off timer
   On timer
   Auto off




   ◄► OK   MENU
```

≫

```
   Timer
   Clock
   Off timer
   On timer
   Auto off        On
                   Off



   ◄► OK   MENU
```

- *If you select **On** on the **Auto off** menu, the set will automatically switch itself to standby mode approximately ten minutes after a TV station stops broadcasting.*
- *In the **Component**, or **PC** mode, **Auto off** is not available.*

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

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

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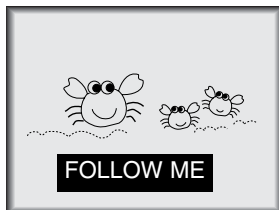
4 Press the **ENTER** button to save.

🔑 Special Menu Options

Closed Captions

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

Using Closed Captions

FOLLOW ME

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

• The picture at left shows a typical caption.

Caption Tips

• Not all TV broadcasts include closed caption signals.
• Sometimes TV stations broadcast four different caption signals on the same channel. By selecting **From CC 1 to CC 4**, you can choose which signal you view. **CC 1** is usually the signal with the captions, while **Another mode** might show demonstration or programming information.
• Your TV might not receive caption signals normally in the following situations.

1. Poor reception conditions are encountered:

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

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

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

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

Caption/Text
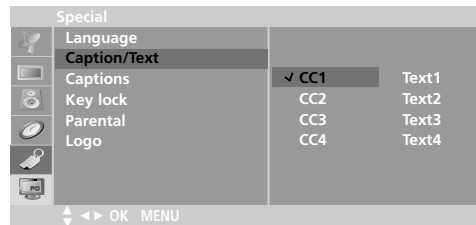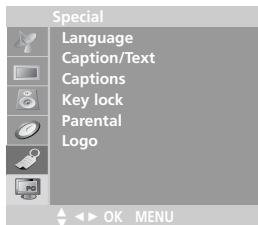
Special	
Language	
Caption/Text	
Captions	
Key lock	
Parental	
Logo	

$\gg$

Special		
Language		
Caption/Text	✓ CC1	Text1
Captions	CC2	Text2
Key lock	CC3	Text3
Parental	CC4	Text4
Logo		

◀ ▶ OK MENU

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

2 Press the ▶ button and then use ▲ / ▼ button to select **Caption / Text.**

3 Press the ▶ button and then use ▲ / ▼ button to select caption: **CC1, CC2, CC3, CC4, Text1, Text2, Text3,** or **Text4.**

  • **CAPTION**
  The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.

  • **TEXT**
  The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

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

Captions
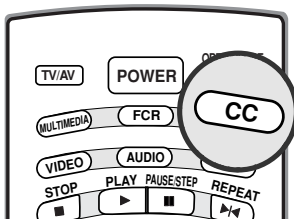
1 Use the **CC** button repeatedly to select Caption **Off, EZ Mute** or **On.**
  • **EZ Mute** shows the selected captions option (if available on program) when the TV sound is muted

2 Press the **ENTER** button to save.

Key Lock

```
Special
  Language
  Caption/Text
  Captions
  Key lock
  Parental
  Logo

  ▲▼ ◄► OK  MENU
```

≫

```
Special
  Language
  Caption/Text
  Captions
  Key lock          On
  Parental        √ Off
  Logo

  ▲▼ ◄► OK  MENU
```
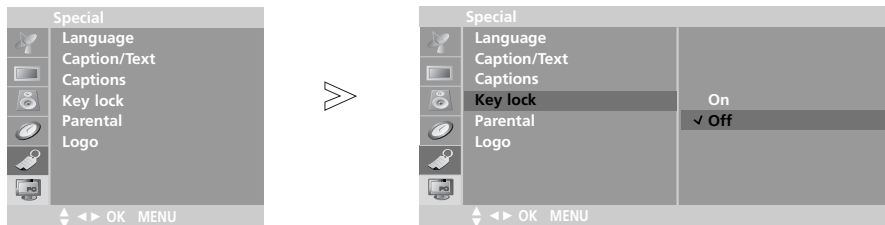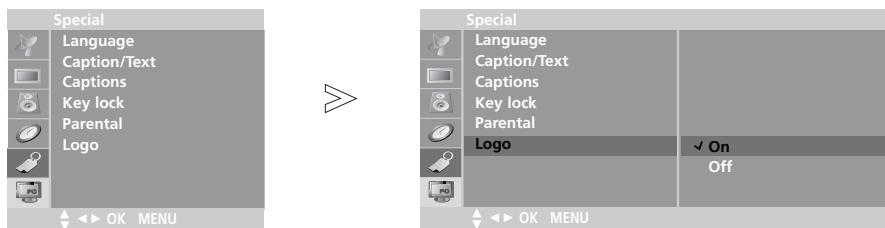
- *The TV can be set up so that it can only be used with the remote control to prevent unauthorized viewing.*

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

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

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

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

Lightening Logo Display Lamp

```
Special
  Language
  Caption/Text
  Captions
  Key lock
  Parental
  Logo

  ▲▼ ◄► OK  MENU
```

≫

```
Special
  Language
  Caption/Text
  Captions
  Key lock
  Parental
  Logo            √ On
                    Off

  ▲▼ ◄► OK  MENU
```

- *If you select on, "Liquid Crystal Display" of TV front panel turns on.*

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

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

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

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

Parental Menu Options

Parental Control can be used to block specific channels, ratings and other viewing sources.

The Parental Control Function (V-Chip) is used to block program viewing based on the ratings sent by the broadcast station. The default setting is to allow all programs to be viewed. Viewing can be blocked by the type of program and by the categories chosen to be blocked. It is also possible to block all program viewing for a time period. To use this function, the following must be set :
  1. Ratings and categories to be blocked.
  2. Set a password
  3. Enable the lock

V-Chip rating and categories
Rating guidelines are provided by broadcast stations. Most television programs and television movies can be blocked by TV Rating and/or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

For Movies previously shown in theaters :

Movie Ratings :
- Unblocked
- G and Above   (general audience)
- PG and Above   (parental guidance suggested)
- PG-13 and Above   (13 years and older)
- R and above   (restricted)
- NC-17 and Above   (18 years and older)
- X   (adult)

If you set PG-13 and Above : G and PG movies will be available , PG-13, R, NC-17 and X will be blocked.

For Television programs including made-for-TV movies:

General TV Ratings:
- Unblocked
- TV-G and Above   (general audience) (individual categories do not apply)
- TV-PG and Above   (parental guidance suggested)
- TV-14 and Above   (14 years and older)
- TV-MA   (mature audience)

Children TV Ratings:
- Unblocked
- TV-Y and Above   (youth) (individual content categories do not apply)
- TV-Y7   (youth, 7 years and up)

Content Categories:
- Dialog - sexual dialogue   (applies to TV-PG and Above, TV-14)
- Language - adult language   (applies to TV-PG and Above, TV-14 and Above, TV-MA)
- Sex scenes - sexual situations   (applies to TV-PG and Above, TV-14 and Above, TV-MA)
- Violence   (applies to TV-PG and Above, TV-14 and Above, TV-MA)
- F Violence - fantasy violence   (applies only to TV-Y7)
- No Rating   (blocks all viewing)

For Canadian English/French language rating system:

Canadian English language rating system:
- C and Above   (Children)
- C8+   (8 years and older)
- G and Above   (General programming. Suitable for all audiences.)
- PG and Above   (Parental guidance suggested)
- 14+   (Viewer 14 years and older)
- 18+   (Adult programming)

Canadian French language rating system:
- G and Above   (General)
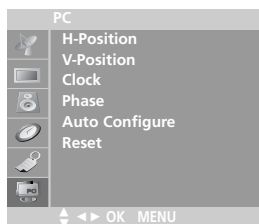- 8 ans+   (8 years and older)
- 13 ans+   (13 years and older)
- 16 ans+   (16 years and older)
- 18 ans+   (Adults only)

PC Menu Options

After setup, be sure to select **PC** source to see the PC image the on TV screen.
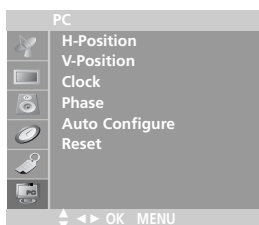
Auto Configure

PC	
H-Position	
V-Position	
Clock	
Phase	
Auto Configure	
Reset	

◆◄► OK MENU

≫

PC	
H-Position	
V-Position	
Clock	
Phase	
Auto Configure	To Set
Reset	

◆◄► OK MENU

- Automatically adjusts the screen position, clock, and clock phase. (The displayed image will disappear for a few seconds while Auto-configuration is in progress.)

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

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

3 Press the ► button to start **Auto Configure**.

H-Position / V-Position

PC	
H-Position	
V-Position	
Clock	
Phase	
Auto Configure	
Reset	

◆◄► OK MENU

≫

PC	
H-Position	85
V-Position	
Clock	
Phase	
Auto Configure	
Reset	

◆◄► OK MENU

• H position / V Position
This function is to adjust picture to left/right and up/down as you prefer.

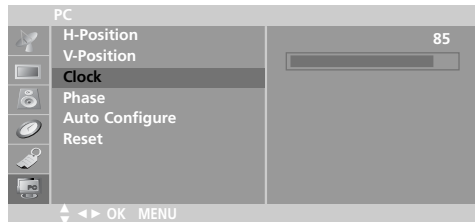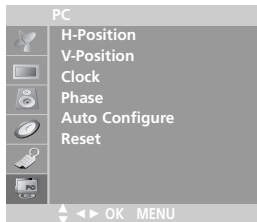**1** Press the **MENU** button and then use the ▲ / ▼ button to select the **PC** menu.

2 Press the ► button and then use the ▲ / ▼ button to select **H-Position** or **V-Position**.

3 Use the ◄ / ► button to make appropriate adjustments.

Notes

Depending on the specification of the PC you are playing the DVD VIDEO on, and the DVD's title, some scenes may be skipped, or you may not be able to pause during multi-angle scenes.

Clock / Phase

PC	
H-Position	
V-Position	
Clock	
Phase	
Auto Configure	
Reset	
▲▼ ◄► OK MENU	

≫

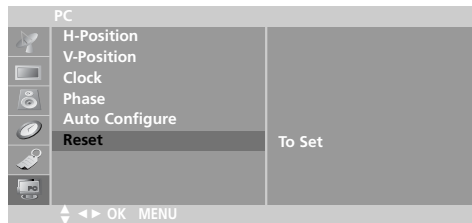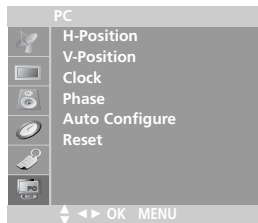| PC		
H-Position		85
V-Position		
Clock		▓▓▓▓▓▓▓▓░
Phase		
Auto Configure		
Reset		
▲▼ ◄► OK MENU		

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

• Phase
This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

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

2 Press the ► button and then use the ▲ / ▼ button to select **Clock** or **Phase**.

3 Use the ◄ / ► button to make appropriate adjustments.

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

Reset

PC	
H-Position	
V-Position	
Clock	
Phase	
Auto Configure	
Reset	
▲▼ ◄► OK MENU	

≫

PC		
H-Position		
V-Position		
Clock		
Phase		
Auto Configure		
Reset		To Set
▲▼ ◄► OK MENU		

- *Returns to the default settings programmed at the factory; default settings cannot be changed.*

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

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

3 Press the ► button to start **Reset**.

Reference

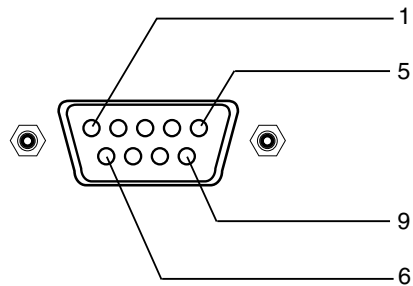## External Control Device Setup ; RS-232C

- Connect the RS-232C input jack to an external control device (such as a computer or an A/V control system) and control the TV's functions externally.
- Connect the serial port of the control device to the RS-232C jack on the TV back panel.
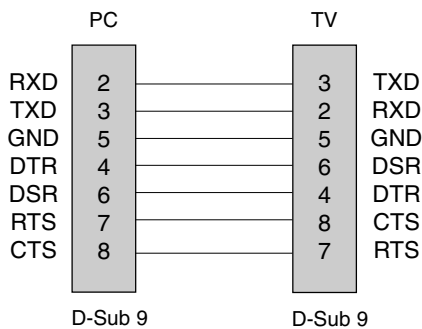- RS-232C connection cable is not supplied with the TV.

RS-232C Setup

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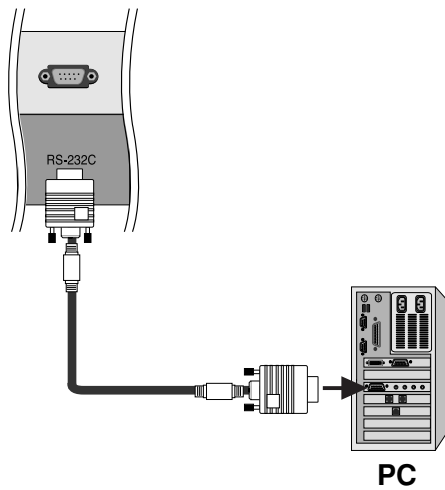
Type of Connector; D-Sub 9-Pin Male

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

RS-232C Configurations

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

PC			TV	
RXD	2		3	TXD
TXD	3		2	RXD
GND	5		5	GND
DTR	4		6	DSR
DSR	6		4	DTR
RTS	7		8	CTS
CTS	8		7	RTS

D-Sub 9   D-Sub 9

3-Wire Configurations
(Not standard)

PC			TV	
RXD	2		3	TXD
TXD	3		2	RXD
GND	5		5	GND
DTR	4		4	DTR
DSR	6		6	DSR
RTS	7		7	RTS
CTS	8		8	CTS

D-Sub 9   D-Sub 9
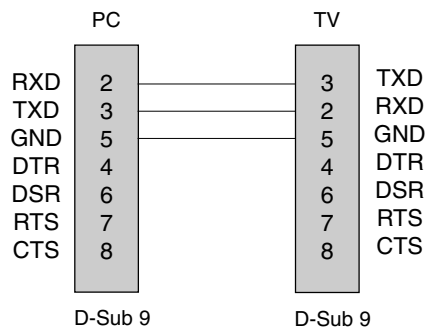
Reference
Maintenance

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

Cleaning the Screen

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

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

Cleaning the Cabinet

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

Extended Absence

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

Product Specifications

Power Requirement	AC 100-240V∼ 50/60Hz 1.4A
Power Consumption	120W
Television System	NTSC , PAL - M/N
Television Channel	VHF : 2 ∼ 13, UHF : 14 ∼ 69, Cable : 01 ∼ 125
Television Screen	LCD Panel
External Antenna Impedance	75 Ω
Audio Output	7 W + 7 W