User Guide
42" LED TV

Before using your new product, please read these instructions to prevent any damage.
Contents

CHILD SAFETY ................................................................. 1
Important Safety Instructions .................................................. 2
  WARNING ................................................................. 2
  CAUTION ............................................................... 3
Introduction ................................................................. 4
  MHL™ .............................................................. 4
  CEC Control ......................................................... 4
  Motion Enhancement .................................................. 4
  DTS Sound™ .......................................................... 4
  Game mode ............................................................. 4
Installing the stand or wall-mount bracket .................................. 5
  Installing the stand ..................................................... 5
  Installing a wall-mount bracket ....................................... 6
TV components .......................................................... 8
  Package contents ....................................................... 8
  Front ................................................................. 8
  Side ................................................................. 9
  Back ................................................................. 10
  Remote control ........................................................ 11
What connection should I use? ................................................ 12
Connecting a cable or satellite box ........................................... 13
  Using HDMI (best) .................................................... 13
  Using DVI (same as HDMI but requires an audio connection) ..... 14
  Using component video (better) ...................................... 15
  Using composite video (good) ........................................ 16
  Using coaxial (good) .................................................. 17
Connecting an antenna or cable TV (no box) ............................... 18
Connecting a DVD or Blu-ray player ......................................... 19
  Using HDMI (best) .................................................... 19
  Using DVI (same as HDMI but requires an audio connection) ..... 20
  Using component video (better) ...................................... 21
  Using composite video (good) ........................................ 22
Connecting an MHL-enabled device .......................................... 23
Connecting a game console .................................................. 24
  Using HDMI (best) .................................................... 24
  Using component video (better) ...................................... 25
  Using composite video (good) ........................................ 26
### Connecting a computer
- Using VGA (most common) .......................... 27
- Using HDMI (best) .................................. 27
- Using DVI (same as HDMI but requires an audio connection) .................. 28

### Connecting a USB flash drive .......................... 30

### Connecting headphones .................................. 31

### Connecting a basic home theater system .................. 32
- Using digital audio .................................. 32
- Using analog audio .................................. 33

### Connecting a home theater system with multiple devices .................. 34

### Connecting power .................................. 35
- Installing remote control batteries .................. 36
- Aiming the remote control .................. 36

### Turning on your TV for the first time .................. 37

### Understanding the basics .................. 39
- Turning your TV on or off .................. 39
- Selecting the video input source .................. 39
- Navigating the menus .................. 40
- Selecting a channel .................. 41
- Adjusting the volume .................. 41
- Viewing channel information .................. 41

### Adjusting the picture .................. 42
- Adjusting the TV picture .................. 42
- Setting the power on picture mode .................. 43
- Adjusting the computer image .................. 44

### Adjusting the sound .................. 44
- Adjusting sound settings .................. 44
- Selecting the audio out mode .................. 45
- Playing TV audio only .................. 46

### Changing channel settings .................. 46
- Automatically scanning for channels .................. 46
- Hiding channels .................. 48
- Setting up a favorite channel list .................. 48
- Viewing a favorite channel .................. 48
- Adding or changing a channel label .................. 49
- Checking the digital signal strength .................. 49
- Automatically adjusting the aspect ratio .................. 50

### Setting parental controls .................. 50
- Setting or changing the password .................. 50
- Locking control buttons .................. 51
- Blocking unrated TV .................. 51
- Setting parental control levels .................. 52
- Downloading rating information .................. 53
Using closed captioning ........................................... 54
Turning closed captioning on or off .................. 54
Selecting the analog closed captioning mode ........ 55
Selecting the digital closed captioning mode .......... 55
Customizing digital closed captioning settings ....... 56
Adjusting time settings ......................................... 57
Setting the clock ................................................. 57
Setting the sleep timer ....................................... 58
Adjusting menu settings ...................................... 58
Selecting the menu language .............................. 58
Turning Input Sensor on or off ......................... 58
Labeling an input source .................................... 59
Using CEC Control .............................................. 59
Turning CEC Control on or off ......................... 59
Turning Device Auto Power Off on or off .......... 60
Turning TV Auto Power On on or off ............... 60
Turning Audio Return Channel on or off .......... 61
Displaying a list of CEC-compatible devices ..... 61
Waking CEC-compatible devices ..................... 62
Opening a CEC-compatible device's root menu . 62
Using an MHL-enabled device or Roku Streaming Stick .................. 63
Using an MHL-enabled device ......................... 63
Using a Roku Streaming Stick ....................... 64
Using a USB flash drive ...................................... 65
Switching to USB mode .................................... 65
Browsing photos ............................................. 65
Viewing favorite photos ................................. 66
Viewing photos in a slideshow ....................... 66
Customizing slideshow settings ..................... 67
Maintaining ....................................................... 67
Cleaning the TV cabinet .................................. 67
Cleaning the TV screen .................................. 67
Troubleshooting ................................................ 68
Restoring settings to the defaults .................. 68
Viewing system information ......................... 68
Video and audio ............................................. 69
Remote control ............................................... 71
General ......................................................... 71
MHL-enabled device or Roku Streaming Stick .... 72
CEC-compatible device .................................. 73
Specifications .................................................. 75
Programming universal remote controls ............ 76
Common universal remote control codes .......... 76
Legal notices .................................................... 77
One-year limited warranty - Sharp Televisions .... 78
As you enjoy your new product, keep these safety tips in mind

The issue

The home theater entertainment experience is a growing trend, and larger TVs are popular purchases. However, TVs are not always supported on the proper stands or installed according to the manufacturer’s recommendations. We and the consumer electronics industry are committed to making home entertainment enjoyable and safe.

TVs that are inappropriately placed on dressers, bookcases, shelves, desks, speakers, chests, or carts may fall over and cause injury.

Tune into safety

- One size of TV stand does not fit all. Use only a TV stand rated for the weight of your TV.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don’t let children climb on or play with entertainment system furniture and TVs.
- Don’t place TVs on furniture that can easily be used as steps, such as a crate or chest of drawers.
- Remember that children can become excited while watching a program, especially on a “larger-than-life” TV. Make sure that you place or install the TV where it cannot be pushed, pulled over, or knocked down.
- Make sure that you route all cords and cables so that they cannot be pulled or grabbed by curious children.

Wall mounting

If you decide to wall mount your TV, always remember:

- One size of wall mount does not fit all. Use only a wall mount rated for the weight of your TV and that has been recommended by this TV manufacturer, listed in this manual, or otherwise listed by an independent laboratory as suitable for your TV.
- Follow all instructions supplied by the TV and wall mount manufacturers.
- If you have any doubts about your ability to safely wall mount your TV, get help from a professional installer.
- Make sure that the wall where you are mounting the TV is appropriate. Some wall mounts are not designed to be mounted to walls backed with steel studs or cinder blocks. If you are unsure, ask a professional installer.
- TVs can be heavy. At least two people are required for safe wall mount installation.

www.sharpusa.com
Important Safety Instructions

**CAUTION**

RISK OF ELECTRIC SHOCK
DO NOT OPEN

- This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your TV. This label is located on the back of your TV.

- This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your TV.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The wall plug is the disconnecting device. The plug must remain readily operable.
16. Remote control batteries should not be exposed to excessive heat such as sunshine, fire, or the like.
17. The apparatus should not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, should be placed on the apparatus.

**WARNING**

Electric shock hazard
To reduce the risk of fire or electric shock, do not remove any cover or expose the device to rain or moisture. No user-serviceable parts are inside. Refer servicing to qualified service technicians.

Lightning
For added protection for your device receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the power outlet and disconnect any antenna or cable system. This helps prevent property damage and personal injury from lightning and power line surges.

Power lines
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, take extreme care to keep from touching such power lines or circuits as contact with them might be fatal.

Handling the LCD panel
- Your TV's screen is made of glass. Do not drop your TV or hit, jolt, or press hard against the LCD panel. If the screen breaks, be careful of broken glass.
- If the LCD panel is broken, make absolutely sure that you do not touch the liquid in the panel. This may cause skin inflammation.
- If the liquid gets in your mouth, immediately gargle, rinse, and consult with your doctor. Also, if the liquid gets in your eyes or touches your skin, consult with your doctor after rinsing for at least 15 minutes or longer in clean water.

Replacement parts
When replacement parts are required, make sure that 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, personal injury, or other hazards.
Safety check
After completing any service or repair to this device, ask the service technician to perform routine safety checks to determine that your TV is in correct operating condition.

Power source
Operate your TV only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult an electrician or your local power company.

Servicing
These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

CAUTION
Damage requiring service
Unplug this TV from the power outlet and refer servicing to qualified service personnel under the following conditions:

- When the power supply cord or plug is damaged or frayed.
- If liquid has been spilled or objects have fallen into your TV.
- If your TV has been exposed to rain or water.
- If your TV does not operate normally by following the operating instructions, because incorrect adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore your TV to its normal operation.
- If your TV has been dropped or damaged in any way.
- When your TV exhibits a distinct change in performance.

Outdoor antenna grounding
If an outside antenna or cable system is connected to your TV, make sure that the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with respect to correct grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of the antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Note to CATV system installer
Article 820 of the National Electrical Code, ANSI/NFPA No. 40 provides guidance for correct grounding. Specifically, it states that the cable ground must be connected to the grounding system of the building as close to the point of cable entry as practical.

Condensation
Moisture will form on the TV if the TV is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, the TV's performance may be impaired. To prevent this, let the TV stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the TV is exposed to the breeze from an air conditioner. In such cases, change the location of the TV.

Mobile telephone warning
To avoid interference with your TV picture and sound, operating problems, or even damage, keep your cordless and cellular telephones away from the TV.

End of life directives
Your TV may contain materials that are regulated for environmental reasons. Your TV also contains materials that can be recycled and reused. To help protect the environment, contact your local authorities for information about disposal or recycling and about finding a recycler in your area before you dispose of your TV.

Non-active pixels
The LCD panel contains almost 3 million thin film transistors, which provide exceptionally sharp video quality. Occasionally, a few non-active pixels may appear on the screen as a fixed blue, green, or red point. These non-active pixels do not adversely affect the performance of your TV, and are not considered defects.
Introduction

Congratulations on your purchase of a high-quality Sharp product. Your LC-42LB150U represents the state of the art in LED TV design and is designed for reliable and trouble-free performance.

MHL™

Connect your MHL-enabled device, such as a cell phone or Roku Streaming Stick™, and view your device's screen on your TV. Supports 1080p HD video and 5.1 digital surround sound playback from your mobile device. (Requires an MHL-enabled phone or tablet and an MHL cable.) (See page 23 for connection instructions.)

CEC Control

Enjoy the benefit of having HDMI CEC compatible products plug and play! No setup is needed! CEC technology lets different components discover and communicate with each other. (See page 59 for instructions on how to use CEC Control.)

Motion Enhancement

With a 120 Hz screen refresh rate twice the rate of a 60 Hz screen, a screen with 1,080 lines of resolution (up from 720 lines in the last generation of HDTVs), and special motion-detection technology, you will experience a picture with clearer detail and brightness, smoother transitions, and reduced motion blurring, particularly when watching fast-motion sports and action scenes. (See the Motion Enhancement option in "Adjusting the TV picture" on page 42 for instructions on how to adjust the TV picture.)

DTS Sound™

DTS Sound delivers clear, crisp, and natural sound while providing deep enveloping bass.

Game mode

Video games generally require adjustments to the television picture settings to get the maximum experience. By simply pressing a button on your remote control, your television settings will automatically adjust for video games. It couldn't be easier. (See the Game option in "Adjusting the TV picture" on page 42 for instructions on how to select Game mode.)
Installing the stand or wall-mount bracket

Notes
- If you plan to wall-mount your TV, do not install the stand.
- Store the stand and stand screws in case you decide to use the stand in the future.

Installing the stand

To install the stand:
1. Secure the stand column to the TV stand using four of the provided screws.

<table>
<thead>
<tr>
<th>Screw type</th>
<th>Screw length</th>
<th># of screws</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4</td>
<td>12 mm</td>
<td>4</td>
</tr>
</tbody>
</table>

2. Carefully place your TV face-down on a cushioned, clean surface to protect the screen from damages and scratches.

3. Insert the stand column into the TV.
4 Secure the TV stand to your TV using four of the provided screws.

<table>
<thead>
<tr>
<th>Screw type</th>
<th>Screw length</th>
<th># of screws</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4</td>
<td>12 mm</td>
<td>4</td>
</tr>
</tbody>
</table>

**Installing a wall-mount bracket**

**Warning**
- This TV is intended to be supported by a UL Listed wall mount bracket with suitable weight/load. (See "Miscellaneous" on page 75.)
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

To attach your TV to a wall-mount bracket:
1. Carefully place your TV face-down on a cushioned, clean surface to protect the screen from damages and scratches.
2 If the TV stand is attached, remove the four screws that secure the stand to your TV.

3 Remove the TV stand.

4 Remove the screws in the mounting holes on the back of your TV, then follow the instructions that came with the wall-mount bracket.

**Notes**
- The length of the wall-mount screws vary depending on the wall-mount bracket you purchased. See the instructions that came with the wall-mount bracket for screw lengths.
- The mounting holes on the back of your TV take type M6 screws.
TV components

Package contents
• 42" LED TV
• Remote control and batteries (2 AAA)
• Stand column and screws (4)
• TV stand and screws (4)
• Power cord
• Quick Setup Guide
• Important Information

Front

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remote control sensor and power indicator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The remote control sensor receives signals from the remote control. Do not block.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The power indicator:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lights blue when your TV is on.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lights red when your TV is off (standby mode).</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>MENU</td>
<td>Press to open the on-screen menu. For more information, see “Navigating the menus” on page 40.</td>
</tr>
<tr>
<td>3</td>
<td>INPUT</td>
<td>Press one or more times to select the video input source you want, then wait a few seconds. Your TV switches to the source you selected. For more information, see “Selecting the video input source” on page 39. In menu mode, press to confirm selections.</td>
</tr>
<tr>
<td>4</td>
<td>VOL+/VOL–</td>
<td>Press to increase or decrease the volume.</td>
</tr>
<tr>
<td>5</td>
<td>CH/CH</td>
<td>Press to go to the next or previous channel in the channel list. For more information, see “Selecting a channel” on page 41.</td>
</tr>
<tr>
<td>6</td>
<td>(power)</td>
<td>Press to turn your TV on or off (standby mode). Warning: When your TV is off, power still flows through it. To completely disconnect power, unplug the power cord.</td>
</tr>
<tr>
<td>#</td>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>≥/AUDIO OUT</td>
<td>Connect headphones, an analog audio amplifier, a home theater system, or a sound bar to this jack. For more information, see “Connecting headphones” on page 31 or “Using analog audio” on page 33.</td>
</tr>
<tr>
<td>2</td>
<td>HDMI 3/DVI</td>
<td>Connect an HDMI device to this jack. For more information, see “Using HDMI (best)” on pages 13, 19, 24, or 28. OR Connect the video for a DVI device to this jack. For more information, see “Using DVI (same as HDMI but requires an audio connection)” on pages 14, 20, or 29.</td>
</tr>
<tr>
<td>3</td>
<td>HDMI 2/MHL</td>
<td>Connect an HDMI device to this jack. For more information, see “Using HDMI (best)” on pages 13, 19, 24, or 28. OR Connect an MHL-enabled device, such as a cell phone or Roku Streaming Stick™, to this jack to view pictures and videos stored on the device. For more information, see “Connecting an MHL-enabled device” on page 23 and “Using an MHL-enabled device or Roku Streaming Stick” on page 63.</td>
</tr>
<tr>
<td>4</td>
<td>HDMI 1/ARC</td>
<td>Connect an HDMI device to this jack. For more information, see “Using HDMI (best)” on pages 13, 19, 24, or 28. OR Connect a home theater that supports ARC to this jack.</td>
</tr>
<tr>
<td>5</td>
<td>USB</td>
<td>Connect a USB flash drive to this jack to view compatible JPEG picture files. For more information, see “Connecting a USB flash drive” on page 30 and “Using a USB flash drive” on page 65.</td>
</tr>
<tr>
<td>#</td>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Power connector</td>
<td>Plug the power cord into this connector.</td>
</tr>
<tr>
<td>2</td>
<td>DIGITAL AUDIO OUTPUT (optical)</td>
<td>Connect a digital audio amplifier, home theater system, or sound bar to this jack to listen to TV audio through the external speakers. For more information, see “Using digital audio” on page 32.</td>
</tr>
<tr>
<td></td>
<td>COMPONENT/AV Y/VIDEO, Pb, Pr</td>
<td>The COMPONENT/AV Y/VIDEO jack works as one of the three component video jacks or as a composite video jack.</td>
</tr>
<tr>
<td></td>
<td>OR COMPONENT/AV Y/VIDEO</td>
<td>Connect the video for a component video device to these jacks. For more information, see “Using component video (better)” on page 15, 21, or 25.</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>Connect the video for a composite video device to the COMPONENT/AV Y/VIDEO jack. For more information, see “Using composite video (good)” on page 16, 22, or 26.</td>
</tr>
<tr>
<td>3</td>
<td>L and R (audio)</td>
<td>Connect the audio for a component video device to these jacks. For more information, see “Using component video (better)” on page 15, 21, or 25.</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>Connect the audio for a composite video device to these jacks. For more information, see “Using composite video (good)” on page 16, 22, or 26.</td>
</tr>
<tr>
<td>4</td>
<td>ANT/CABLE</td>
<td>Connect an antenna or cable TV to this jack. For more information, see “Using coaxial (good)” on page 17 or “Connecting an antenna or cable TV (no box)” on page 18.</td>
</tr>
<tr>
<td>5</td>
<td>PC IN</td>
<td>Connect the video (VGA) for a computer to this jack. For more information, see “Using VGA (most common)” on page 27.</td>
</tr>
<tr>
<td>6</td>
<td>PC/DVI AUDIO IN</td>
<td>Connect the audio for a computer to this jack. For more information see “Using VGA (most common)” on page 27.</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Connect the audio for a DVI device to this jack. For more information see, “Using DVI (same as HDMI but requires an audio connection)” on pages 14, 20, or 29.</td>
</tr>
</tbody>
</table>
Remote control

<table>
<thead>
<tr>
<th>#</th>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POWER</td>
<td>Press to turn your TV on or off (standby mode). Warning: When your TV is off, power still flows through it. To disconnect power, unplug the power cord.</td>
</tr>
<tr>
<td>2</td>
<td>Numbers</td>
<td>Press to enter channel numbers and the parental control password.</td>
</tr>
<tr>
<td>3</td>
<td>●</td>
<td>Press to enter a digital sub-channel number. For more information, see “Selecting a channel” on page 41.</td>
</tr>
</tbody>
</table>
| 4   | AUDIO  | Press to select the audio mode for an Analog program. You can select:  
  - Mono—Select this option if there is noise or static on weak stereo broadcasts.  
  - Stereo—Select this option for programs broadcast in stereo.  
  - SAP—Select this option to listen to a secondary audio program, if available.  
  OR  
  Press to select the audio language for a digital program, if alternate languages are available. |
| 5   | AV MODE| Press to select the AV (picture) mode. You can select Dynamic, Natural, Standard, Movie, Game, or User. |
| 6   | VOL +/−| Press to increase or decrease the volume. |
| 7   | FLASHBACK| In TV mode, press to return to the previous channel. |
| 8   | SLEEP  | Press to set the sleep timer. You can select Off, 5, 10, 15, 30, 60, 90, 120, 180, or 240 minutes. For more information, see “Setting the sleep timer” on page 58. |
| 9   | VIEW MODE | Press to change how the picture looks on the screen (aspect ratio). For more information, see “View Mode” option in “Adjusting the TV picture” on page 42. |
| 10  | MUTE   | Press to mute the sound. Press again to restore the sound. |
| 11  | CH / CH | Press to change TV channels. For more information, see “Selecting a channel” on page 41. |
| 12  | MENU   | Press to open the on-screen menu. |
| 13  | FAVORITE | Press to open the FAVORITES LIST. For more information, see “Setting up a favorite channel list” on page 48 and “Viewing a favorite channel” on page 48. |
| 14  | INFO*  | Press to display TV status information, such as the channel number, channel name (if available), or signal source. For more information, see “Viewing channel information” on page 41. |
| 15  | HOME   | Opens the MHL device's home menu when an MHL device is plugged in. For more information, see “Using an MHL-enabled device or Roku Streaming Stick” on page 63. |

Sharp 42” LED TV

www.sharpusa.com
What connection should I use?

Your TV has several connection types for connecting devices to your TV. For the best video quality, you should connect a device to the best available connection. Use the following tables to identify cables:

<table>
<thead>
<tr>
<th>Video quality</th>
<th>Connection type and jack</th>
<th>Cable connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best (use this if your devices have HDMI)</td>
<td>HDMI video/audio</td>
<td><img src="image" alt="HDMI cable" /></td>
</tr>
<tr>
<td>Better than composite or coaxial</td>
<td>Component video (requires an audio connection)</td>
<td><img src="image" alt="Component cable" /></td>
</tr>
<tr>
<td>Better than coaxial</td>
<td>Composite video (requires an audio connection)</td>
<td><img src="image" alt="Composite cable" /></td>
</tr>
<tr>
<td>Good</td>
<td>Coaxial video/audio</td>
<td><img src="image" alt="Coaxial cable" /></td>
</tr>
</tbody>
</table>

You can use the HDMI 3/DVI jack on your TV to connect a DVI device to your TV. You need to attach an HDMI-to-DVI adapter to the end of the HDMI cable that connects to the DVI device.

**Cautions**

- Check the jacks for position and type before making any connections.
- Loose connections can result in image or color problems. Make sure that all connections are tight and secure.
- The external audio/video equipment shown may be different from your equipment. If you have questions, refer to the documentation that came with your equipment.
- Always unplug the power cord when connecting external equipment.
Connecting a cable or satellite box

Many cable or satellite TV boxes have more than one connection type. To get the best video, you should use the best connection type available. For more information, see “What connection should I use?” on page 12.

Using HDMI (best)

To connect a cable or satellite box using HDMI:

1. Make sure that your TV’s power cord is unplugged and all connected equipment is turned off.
2. Connect the incoming cable from the cable wall jack to the cable-in jack on the cable or satellite box.
3. Connect an HDMI cable (not provided) to one of the HDMI jacks on the side of your TV and to the HDMI OUT jack on the cable or satellite box.
4. Plug your TV’s power cord into a power outlet, turn on your TV, then turn on the cable or satellite box.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to highlight HDMI 1, HDMI 2, or HDMI 3, then press ENTER.

Note
An HDMI cable carries both audio and video. You do not need to use any audio cables.
Using DVI (same as HDMI but requires an audio connection)

Note
You must use the HDMI 3/DVI jack to connect a cable or satellite using DVI. If you use another HDMI jack, you will not hear sound from the TV speakers.

To connect a cable or satellite box using DVI:
1. Make sure that your TV's power cord is unplugged and all connected equipment is turned off.
2. Connect the incoming cable from the cable wall jack to the cable-in jack on the cable or satellite box.
3. Connect an HDMI-DVI adapter (not provided) to one end of an HDMI cable (not provided), then connect the adapter to the **DVI OUT** jack on the cable or satellite box.
4. Connect the other end of the cable to the **HDMI 3/DVI** jack on the side of your TV.
5. Connect a 3.5mm audio cable (not provided) to the **PC/DVI AUDIO IN** jack on the back of your TV and to the **AUDIO OUT** jacks on the cable or satellite box.

Note
When you connect the audio using the **PC/DVI AUDIO IN** jack, the audio output is analog.

6. Plug your TV's power cord into a power outlet, turn on your TV, then turn on the cable or satellite box.
7. Press **INPUT** to open the **INPUT SOURCE** list.
8. Press ▲ or ▼ to select **HDMI 3**, then press **ENTER**.
Using component video (better)

Note
Cables are often color-coded to match color-coded jacks.

On your TV

<table>
<thead>
<tr>
<th>Component video cable connectors</th>
<th>Analog audio cable connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component video jacks</td>
<td>Analog audio jacks</td>
</tr>
</tbody>
</table>

To connect a cable or satellite box using component video:
1. Make sure that your TV’s power cord is unplugged and all connected equipment is turned off.
2. Connect the incoming cable from the cable wall jack to the cable-in jack on the cable or satellite box.
3. Connect a component video cable (not provided) to the COMPONENT/AV Y/VIDEO, PB, and PR video jacks on the back of your TV and the component video out jacks on the cable or satellite box.
4. Connect an audio cable (not provided) to the L and R audio jacks on the back of your TV and to the audio out jacks on the cable or satellite TV box.

Notes
- The COMPONENT/AV Y/VIDEO, PB, and PR video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.

5. Plug your TV’s power cord into a power outlet, turn on your TV, then turn on the cable or satellite box.
6. Press INPUT to open the INPUT SOURCE list.
7. Press ▲ or ▼ to select Component, then press ENTER.
Using composite video (good)

Notes
- Cables are often color-coded to match color-coded jacks.
- The yellow video connector on the AV cable connects to the green COMPONENT/AV Y/VIDEO jack.

On your TV
- Composite video cable connector
- Analog audio cable connectors
- Composite video jack
- Analog audio jacks

To connect a cable or satellite box using composite video:
1. Make sure that your TV's power cord is unplugged and all connected equipment is turned off.
2. Connect the incoming cable from the cable wall jack to the cable-in jack on the cable or satellite box.
3. Connect an AV cable (not provided) to the COMPONENT/AV Y/VIDEO jack and L and R audio jacks on the back of your TV and to the composite video and audio out jacks on the cable or satellite box.

Notes
- The COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.

4. Plug your TV's power cord into a power outlet, turn on your TV, then turn on the cable or satellite box.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to select AV, then press ENTER.
Using coaxial (good)

To connect a cable or satellite box using coaxial:
1. Make sure that your TV’s power cord is unplugged and all connected equipment is turned off.
2. Connect the incoming cable from the cable wall jack to the cable-in jack on the cable or satellite box.
3. Connect a coaxial cable (not provided) to the ANT/CABLE jack on the back of your TV and to the coaxial out jack on the cable or satellite box.
4. Plug your TV’s power cord into a power outlet, turn on your TV, then turn on the cable or satellite box.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to highlight TV, then press ENTER.
7. If you cannot tune to channels you know exist, scan for channels. See “Automatically scanning for channels” on page 46.

Notes
- Use a coaxial cable to eliminate interference and noise from radio waves.
- Do not bundle the coaxial cable with the power cord or other cables.
Connecting an antenna or cable TV (no box)

1. Make sure that your TV’s power cord is unplugged and all connected equipment is turned off.
2. Connect a coaxial cable (not provided) to the ANT/CABLE jack on the back of your TV and to the antenna or cable TV wall jack.
3. Plug your TV’s power cord into a power outlet, then turn on your TV.
4. Press INPUT to open the INPUT SOURCE list.
5. Press ▲ or ▼ to highlight TV, then press ENTER.
6. If you cannot tune to channels you know exist, scan for channels. See “Automatically scanning for channels” on page 46.

Notes:
- Use a coaxial cable to eliminate interference and noise from radio waves.
- Do not bundle the coaxial cable with the power cord or other cables.
- If the antenna is not installed correctly, contact qualified service personnel to correct the problem.
- If the signal level for a channel is weak, the picture may be distorted. Adjust the antenna or use a highly directional outdoor or set-top antenna with a built-in amplifier.
- If the picture quality is good on some channels and poor on others, the problem may be caused by a poor or weak signal from the broadcaster or cable TV provider.
- If you connect to cable or satellite TV without a set-top box and experience poor picture quality, you may need to install a set-top box to improve signal reception and picture quality. Contact your cable or satellite TV provider about upgrading to a set-top box.
- Many high-definition (HD) channels upscale standard-definition (SD) content. The picture displayed on your TV is still displayed as SD, thus the picture quality will not be as clear or crisp as it would be if the content was originally recorded in HD.
Connecting a DVD or Blu-ray player

Many DVD or Blu-ray players have more than one connection type. To get the best video, you should use the best connection type available. For more information, see "What connection should I use?" on page 12.

Using HDMI (best)

To connect a DVD or Blu-ray player using HDMI:
1. Make sure that your TV's power cord is unplugged and the DVD or Blu-ray player is turned off.
2. Connect an HDMI cable (not provided) to one of the HDMI jacks on the side of your TV and to the HDMI OUT jack on the DVD or Blu-ray player.
3. Plug your TV's power cord into a power outlet, then turn on your TV.
4. Turn on the DVD or Blu-ray player, then set it to the correct output mode. For more information, see the documentation that came with the player.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to highlight HDMI 1, HDMI 2, or HDMI 3, then press ENTER.

Note

An HDMI cable carries both audio and video. You do not need to use any audio cables.
Using DVI (same as HDMI but requires an audio connection)

To connect a DVD or Blu-ray player using DVI:

1. Make sure that your TV’s power cord is unplugged and the DVD or Blu-ray player is turned off.
2. Connect an HDMI-DVI adapter (not provided) to one end of an HDMI cable (not provided), then connect the adapter to the DVI OUT jack on the DVD or Blu-ray player.
3. Connect the other end of the cable to the HDMI 3/DVI jack on the side of your TV.
4. Connect a 3.5mm audio cable (not provided) to the PC/DVI AUDIO IN jack on the back of your TV and to the AUDIO OUT jacks on the DVD or Blu-ray player.
5. Plug your TV’s power cord into a power outlet, then turn on your TV.
6. Turn on the DVD or Blu-ray player, then set it to the correct output mode. For more information, see the documentation that came with the player.
7. Press INPUT to open the INPUT SOURCE list.
8. Press ▲ or ▼ to select HDMI 3, then press ENTER.

Note: You must use the HDMI 3/DVI jack to connect a DVD or Blu-ray player using DVI. If you use another HDMI jack, you will not hear sound from the TV speakers.

Note: When you connect the audio using the PC/DVI AUDIO IN jack, the audio output is analog.
Using component video (better)

**Note**
Cables are often color-coded to match color-coded jacks.

To connect a DVD or Blu-ray player using component video:
1. Make sure that your TV’s power cord is unplugged and the DVD or Blu-ray player is turned off.
2. Connect a component video cable (not provided) to the COMPONENT/AV Y/VIDEO, Pb, and Pr jacks on the back of your TV and to the COMPONENT OUT jacks on the DVD or Blu-ray player.
3. Connect an audio cable (not provided) to the COMPONENT/AV L and R audio jacks on the back of your TV and to the L and R AUDIO OUT jacks on the DVD or Blu-ray player.

**Notes**
- The COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.

4. Plug your TV’s power cord into a power outlet, then turn on your TV.
5. Turn on the DVD or Blu-ray player, then set it to the correct output mode. For more information, see the documentation that came with the player.
6. Press INPUT to open the INPUT SOURCE list.
7. Press ▲ or ▼ to select Component, then press ENTER.
Using composite video (good)

**Notes**
- Cables are often color-coded to match color-coded jacks.
- The yellow video connector on the AV cable connects to the green COMPONENT/AV Y/VIDEO jack.

To connect a DVD or Blu-ray player using composite video:
1. Make sure that your TV’s power cord is unplugged and the DVD or Blu-ray player is turned off.
2. Connect an AV cable (not provided) to the COMPONENT/AV Y/VIDEO jack and L and R audio jacks on the back of your TV and to the AV OUT jacks on the DVD or Blu-ray player.
3. Plug your TV’s power cord into a power outlet, then turn on your TV.
4. Turn on the DVD or Blu-ray player, then set it to the correct output mode. For more information, see the documentation that came with the player.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to select AV, then press ENTER.

**Notes**
- The COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.
Connecting an MHL-enabled device

You can connect an MHL-enabled device, such as a cell phone or Roku Streaming Stick™, and view your device's screen on your TV.

To connect an MHL-enabled device:
1. Connect the small connector on an MHL cable (not provided) to the micro USB port on the MHL-enabled device.
2. Connect the other end of the cable to the HDMI 2/MHL jack on the side of your TV.
3. Turn on the MHL-enabled device.
4. If your TV is turned on, press ENTER when a message appears. Your MHL-enabled device's menu opens.
   OR
   If your TV is turned off, turn on your TV. Press HOME. Your MHL-enabled device's menu opens.

Notes
- You can also switch to MHL mode by:
  • Pressing INPUT and selecting HDMI 2 (MHL/ACC) or HDMI 2 (Roku)
  • Pressing MENU and selecting MHL/ACC or Streaming
- For instructions on using your MHL-enabled device, see “Using an MHL-enabled device or Roku Streaming Stick” on page 63.
Connecting a game console

Using HDMI (best)

**To connect a game console using HDMI:**

1. Make sure that your TV's power cord is unplugged and the game console is turned off.
2. Connect an HDMI cable (not provided) to one of the HDMI jacks on the side of your TV and to the HDMI OUT jack on the game console.
3. Plug your TV's power cord into a power outlet, then turn on your TV.
4. Turn on the game console, then set it to the correct output mode. For more information, see the documentation that came with the console.
5. Press **INPUT** to open the **INPUT SOURCE** list.
6. Press **▲** or **▼** to highlight **HDMI 1**, **HDMI 2**, or **HDMI 3**, then press **ENTER**.

**Note:**

An HDMI cable carries both audio and video. You do not need to use any audio cables.
Using component video (better)

**Note**
Cables are often color-coded to match color-coded jacks.

<table>
<thead>
<tr>
<th>On your TV</th>
<th>Game console</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component video jacks</td>
<td>Console-specific component video and audio cable</td>
</tr>
<tr>
<td>Analog audio jacks</td>
<td>Back of TV</td>
</tr>
<tr>
<td>Component video connectors</td>
<td>Analog audio connectors</td>
</tr>
<tr>
<td>Analog audio connectors</td>
<td></td>
</tr>
</tbody>
</table>

To connect a game console using component video:

1. Make sure that your TV's power cord is unplugged and the game console is turned off.
2. Connect the video and audio connectors on the component video cable (not provided) to the COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks and COMPONENT/AV L and R audio jacks on the back of your TV and to the component jack(s) on the game console.

**Note**
- Your game console may require a special component video cable. See the documentation that came with your game console or check the manufacturer's website.
- The COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.

3. Plug your TV's power cord into a power outlet, then turn on your TV.
4. Turn on the game console, then set it to the correct output mode. For more information, see the documentation that came with the console.
5. Press **INPUT** to open the **INPUT SOURCE** list.
6. Press ▲ or ▼ to select **Component**, then press **ENTER**.
Using composite video (good)

Notes
- Cables are often color-coded to match color-coded jacks.
- The yellow video connector on the AV cable connects to the green COMPONENT/AV Y/VIDEO jack.

To connect a game console using composite video:

1. Make sure that your TV’s power cord is unplugged and the game console is turned off.
2. Connect the video and audio connectors on the game console’s AV cable (not provided) to the COMPONENT/AV Y/VIDEO jack and L and R audio jacks on the back of your TV and to the composite jack(s) on the game console.
3. Plug your TV’s power cord into a power outlet, then turn on your TV.
4. Turn on the game console, then set it to the correct output mode. For more information, see the documentation that came with the console.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to select AV, then press ENTER.

Note
- Most game consoles come with a special AV (composite video) cable. See the documentation that came with your game console or check the manufacturer’s Web site.
- The COMPONENT/AV Y/VIDEO, Pb, and Pr video jacks (used to connect a component video device) share the L and R audio jacks with the COMPONENT/AV Y/VIDEO jack (used to connect a composite video device).
- When you connect the audio using the L and R audio jacks, the audio output is analog.
Connecting a computer

Using VGA (most common)

To connect a computer using VGA:

1. Make sure that your TV's power cord is unplugged and the computer is turned off.
2. Connect a VGA cable (not provided) to the PC IN jack on the back of your TV and to the VGA jack on the computer.
3. Connect an audio cable with a stereo mini plug (not provided) to the PC/DVI AUDIO IN jack on the back of your TV and to the AUDIO OUT (headphone) jack on the computer.
4. Plug your TV's power cord into a power outlet, then turn on your TV and the computer.
5. Press INPUT to open the INPUT SOURCE list.
6. Press ▲ or ▼ to select PC, then press ENTER.
7. Adjust the display properties on the computer, if necessary.
Using HDMI (best)

To connect a computer using HDMI:
1. Make sure that your TV’s power cord is unplugged and the computer is turned off.
2. Connect an HDMI cable (not provided) to one of the HDMI jacks on the side of your TV and to the HDMI OUT jack on the computer.
3. Plug your TV’s power cord into a power outlet, then turn on your TV and the computer.
4. Press INPUT to open the INPUT SOURCE list.
5. Press ▲ or ▼ to highlight HDMI 1, HDMI 2, or HDMI 3, then press ENTER.
6. Adjust the display properties on the computer, if necessary.
Using DVI (same as HDMI but requires an audio connection)

To connect a computer using DVI:
1. Make sure that your TV's power cord is unplugged and the computer is turned off.
2. Connect an HDMI-DVI adapter (not provided) to one end of an HDMI cable (not provided), then connect the adapter to the DVI OUT jack on the computer.
3. Connect the other end of the cable to the HDMI 3/DVI jack on the side of your TV.
4. Connect an audio cable with a stereo mini plug (not provided) to the PC/DVI AUDIO IN jack on the back of your TV and to the AUDIO OUT (headphone) jack on the computer.

Note
You must use the HDMI 3/DVI jack to connect a computer using DVI. If you use another HDMI jack, you will not hear sound from the TV speakers.

Note
When you connect the audio using the PC/DVI AUDIO IN jack, the audio output is analog.

5. Plug your TV's power cord into a power outlet, then turn on your TV and the computer.
6. Press INPUT to open the INPUT SOURCE list.
7. Press ▲ or ▼ to select HDMI 3, then press ENTER.
8. Adjust the display properties on the computer, if necessary.
Connecting a USB flash drive

To connect a USB flash drive:

1. Plug a USB flash drive into the USB port on the side of your TV.

   **Caution**
   
   Do not remove the USB flash drive or turn off the TV while using the USB flash drive. You may lose data or damage the USB flash drive.

2. If your TV is turned on when you connect the USB flash drive, press ▲ or ▼ to select Yes in the message that appears, then press ENTER. The PHOTOS menu opens.

   OR

   If you switch to a different video input source after you plug in the USB flash drive and want to switch back to the drive, press INPUT to open the INPUT SOURCE list, press ▲ or ▼ to select USB(Photos), then press ENTER. The PHOTOS menu opens.

   **Note**

   The PHOTOS viewer only supports JPEG format images (with "jpg" file extensions) and not all JPEG files are compatible with your TV.

   For more information, see "Using a USB flash drive" on page 65.
Connecting headphones

When you connect headphones, the TV speakers muted.

Warning
Loud noise can damage your hearing. When using headphones, use the lowest volume setting on your headphones that still lets you hear the sound.

To connect headphones:
1. Connect the headphones to the AUDIO OUT jack on the side of your TV.
2. In the screen that opens, press ◀ or ▶ to highlight Headphone, then press ENTER. For more information, see “Selecting the audio out mode” on page 45.

Notes
- If you connect headphones when your TV is turned off, then you turn on your TV, the TV speakers are muted and the audio plays through the headphones.
- You can also connect an amplifier, home theater system, or sound bar to the AUDIO OUT jack. If you want to connect an amplifier, home theater system, or sound bar, you need to disconnect the headphones.
Connecting a basic home theater system

Using digital audio

To connect a basic home theater system or sound bar using digital audio:

1. Make sure that your TV's power cord is unplugged and the home theater system or sound bar is turned off.
2. Connect a digital optical audio cable (not provided) to the **DIGITAL AUDIO OUTPUT** jack on the back of your TV and to the optical **AUDIO IN** jack on the digital home theater system or sound bar.
3. Plug your TV's power cord into a power outlet, then turn on your TV.
4. Turn on the home theater system or sound bar, then set it to the correct source. For more information, see the documentation that came with the home theater system or sound bar.
5. On your TV, set the **Digital Audio OUT** option on the **SOUND** menu to **PCM**. See "Adjusting sound settings" on page 44.
Using analog audio

When you connect a home theater system or sound bar to the AUDIO OUT jack, the TV speakers are muted.

To connect a home theater system or sound bar using analog audio:

1. Make sure that your TV’s power cord is unplugged and the home theater system or sound bar is turned off.
2. Connect a 3.5mm audio cable (not provided) to the AUDIO OUT jack on the side of your TV and to the AUDIO IN jacks on the analog home theater system or sound bar.
3. Plug your TV’s power cord into a power outlet, then turn on your TV.
4. Turn on the home theater system or sound bar, then set it to the correct source. For more information, see the documentation that came with the home theater system or sound bar.

Notes

- For information about selecting the audio out mode for a home theater or sound bar, see the Headphones/Audio Out option in “Adjusting sound settings” on page 44.
- You can connect headphones to the AUDIO OUT jack. If you want to use headphones, you need to disconnect the amplifier, home theater system, or sound bar.
Connecting a home theater system with multiple devices

The connections you make depend on the video and audio jacks available on your devices. Refer to the documentation that came with your devices for connection information. Just remember to use the best connection types available for the best picture and sound. For information about connection types, see "What connection should I use?" on page 12.
Connecting power

To connect the power:
1 Connect the AC power cord to the AC IN connector on the back of your TV.
2 Connect the other end of the cord to a power outlet.

Caution
• Your TV should only be operated from the power source indicated on the label.
• Always unplug the AC power cord from the power outlet when you will not be using your TV for an extended period of time.
Using the remote control

Installing remote control batteries

To install remote control batteries:

1. While pressing the release latch on the back of the remote control, lift the battery compartment cover off of the remote control.

2. Insert two AAA batteries into the battery compartment. Make sure that you match the + and – symbols on the batteries with the + and – symbols in the battery compartment.

3. Replace the battery compartment cover.

Cautions

- Batteries should not be exposed to excessive heat, such as sunshine, heat registers, or fire.
- Battery chemicals can cause a rash. If the batteries leak, clean the battery compartment with a cloth. If chemicals touch your skin, wash immediately.
- Make sure that batteries are disposed of correctly. Do not burn or incinerate.

Notes

- Do not mix batteries of different types.
- Do not mix old and new batteries.
- Remove batteries when the charge is depleted.
- If the remote control is not going to be used for an extended period of time, remove the batteries.

Aiming the remote control

To aim the remote control:

- Point the remote control towards the remote sensor on the front of your TV. For the location of the remote sensor, see "Front" on page 8.
Turning on your TV for the first time

The first time you turn on your TV, the EZ SETUP wizard opens. The wizard guides you through setting up basic settings including the menu language, time setting, picture mode, TV signal source, and channel list.

To set up your TV:
1. Make sure that you have:
   - Installed the remote control batteries. (See page 36 for details.)
   - Connected an antenna, cable TV, or satellite TV. (See page 13 through 18 for details.)
   - Connected the power cord. (See page 35 for details.)
2. Press \( \text{(power)} \) to turn on your TV. The Please select your language screen opens.
3. Press \( \uparrow \) or \( \downarrow \) to highlight the language you want, then press \( \text{ENTER} \). The time setting screen opens.
4. Press \( \uparrow \) or \( \downarrow \) to highlight Mode, then press \( \text{ENTER} \) to access the setting.
5. Press \( \uparrow \) or \( \downarrow \) to select Manual (to set the date and time manually) or Auto (to set the date and time automatically from a TV signal source based on the time zone you select), then press \( \text{ENTER, MENU, or EXIT} \).

Note
If you select Auto, the displayed time will be incorrect until your TV gets the correct time from a TV signal source.

6. Press \( \uparrow \) or \( \downarrow \) to highlight Time Zone, then press \( \text{ENTER} \) to access the setting.
7. Press \( \uparrow \) or \( \downarrow \) to select your time zone. You can select Eastern, Central, Mountain, Pacific, Alaska, Hawaii, Atlantic, or Newfoundland, then press \( \text{ENTER, MENU, or EXIT} \).
8. Press \( \uparrow \) or \( \downarrow \) to highlight Daylight Saving, then press \( \text{ENTER} \) to access the setting.
9. Press \( \uparrow \) or \( \downarrow \) to select On (if your viewing area observes Daylight Saving Time) or Off (if your viewing area does not observe Daylight Saving Time), then press \( \text{ENTER, MENU, or EXIT} \).
10. If you selected Manual for Mode:
    - Press \( \uparrow \) or \( \downarrow \) to highlight Year, Month, or Day, then press \( \text{ENTER} \) to access the setting. Press \( \uparrow \) or \( \downarrow \) to adjust the setting, then press \( \text{ENTER} \).
    - Press \( \uparrow \) or \( \downarrow \) to highlight Time, then press \( \text{ENTER} \) to access the setting. Press \( \uparrow \) or \( \downarrow \) to highlight the hour, minute, or AM/PM field, then press \( \text{ENTER} \) or \( \text{EXIT} \) to adjust the setting. When you are finished, press \( \text{EXIT} \).
11. When you have finished setting the time, press \( \text{ENTER} \). The Please select your viewing environment screen opens.
12. Press \( \uparrow \) or \( \downarrow \) to highlight Home or Store, then press \( \text{ENTER} \).
   If you selected Store mode, a message asks if you are sure you want this mode. Select Yes to continue using Store mode or select No to change your selection, then press \( \text{ENTER} \). Store mode is not an energy savings mode and displays a retail banner.
   The Please select your tuner mode screen opens.
Press A or V to highlight Antenna, Cable, or Satellite Box, then press ENTER.

A If you select Antenna, your TV scans for available channels. The scan may take several minutes.

B If you select Cable, a message asks if you have a cable box:

- Select No, then press ENTER if no cable box is connected. Your TV scans for available channels. The scan may take several minutes.
- Select Yes, then press ENTER if a cable box is connected. A message asks how you connected the cable box to your TV.

- Select HDMI, Component, or AV, then press ENTER if you connected a cable box to your TV using one of these cables. Read the message, then press ENTER to close the wizard.
- Select Coaxial, then press ENTER if you connected a cable box to your TV using a coaxial cable. Read the message, then press ENTER to start the channel scan (VHF channels only).

Note You can press EXIT to stop the auto channel search, but you will need to run the auto channel search again to create a channel list.
If you select Satellite Box, a message asks how you connected the satellite box to your TV.

- Select HDMI, Component, or AV, then press ENTER if you connected a satellite box to your TV using one of these cables. Read the message, then press ENTER to close the wizard.
- Select Coaxial, then press ENTER if you connected a satellite box to your TV using a coaxial cable. Read the message, then press ENTER to start the channel scan (VHF channels only).

### Note
You can press EXIT to stop the auto channel search, but you will need to run the auto channel search again to create a channel list.

To watch TV, press INPUT, press ▲ or ▼ to highlight the video input source for your TV in the INPUT SOURCE list, then press ENTER.

- If your TV is connected to an antenna, cable TV (no box), or cable or satellite TV box using a coaxial cable, select TV.
- If your TV is connected to a cable or satellite box using an HDMI cable or HDMI cable with a DVI adapter, select HDMI 1, HDMI 2, or HDMI 3.
- If your TV is connected to a cable or satellite box using a component video cable, select Component.
- If your TV is connected to a cable or satellite box using a composite video cable, select AV.

14 To turn your TV on or off:
1. Make sure that the power cord is connected to your TV and a power outlet. See "Connecting power" on page 35.
2. Press ◂ POWER to turn on your TV. The power indicator turns blue.
3. Press ◂ POWER again to turn off your TV. Your TV enters standby mode, and the power indicator turns red.

### Warning
When your TV is in standby mode, it is still receiving power. To completely disconnect power, unplug the power cord.

### Note
If your TV does not receive an input signal for several minutes, it automatically goes into standby mode.

### Selecting the video input source
To select the video input source:
1. Turn on your TV, then press INPUT. The INPUT SOURCE list opens.
2. Press ▲ or ▼ to select a video input source, then press ENTER.

### Note
The INPUT SOURCE list displays Component when a component video device is connected or displays AV when a composite video device is connected.
On-screen menu overview

Notes

- Depending on the signal source selected, you may see different options on your screen.
- Menu items that are not selectable are grayed out.
- Menus in this manual are described in TV mode, unless otherwise indicated.
- The screens shown in this manual are for explanation purposes and may vary from the actual screens on your TV.

PICTURE menu (TV mode)

<table>
<thead>
<tr>
<th>Picture Mode</th>
<th>Standard</th>
<th>Vivid</th>
<th>Dynamic</th>
<th>Theater</th>
<th>Custom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brightness</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Contrast</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Sharpness</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Smoothness</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Adjust settings to achieve your ideal picture quality.

Navigating the menus

- Press MENU to open the on-screen menu.
- Press the right or left arrow to move the cursor on the screen or to adjust a selected item.
- Press the up or down arrow to select menu options.
- Press ENTER to confirm a selection or enter a sub-menu.
- Press MENU to return to the previous menu.
- Press EXIT to close the menu.

SETUP menu (TV mode)

PHOTOS menu (USB mode)

Navigating the menus

- Press MENU to open the on-screen menu.
- Press the right or left arrow to move the cursor on the screen or to adjust a selected item.
- Press the up or down arrow to select menu options.
- Press ENTER to confirm a selection or enter a sub-menu.
- Press MENU to return to the previous menu.
- Press EXIT to close the menu.
Selecting a channel

To select a channel:
- Press CH or CH to go to the next or previous channel on the memorized channel list.
- Press the number buttons to enter the channel number you want, then wait for the channel to change or press ENTER to immediately change the channel.
- To select a digital sub-channel, press the number buttons to enter the main digital channel, press (sub-channel), then press the number button for the sub-channel. Wait for the channel to change, or press ENTER to immediately change the channel. For example, to tune to channel 5.1, press 5, (sub-channel), then 1.
- Press FLASHBACK to go to the last viewed channel.
- Press FAVORITE to open the favorite channel list, press or to highlight a channel, then press ENTER. For information about setting up a favorite channel list, see “Setting up a favorite channel list” on page 48.

Note
Button presses must be within three seconds of each other.

Viewing channel information

To view channel information:
- Press INFO* to view an information banner. The information banner shows the current program information such as channel number, video input source, and resolution.
- Digital channel information—Displays the channel number, station name, channel label, broadcast program name, TV rating, signal type, audio information, resolution, current time, signal strength, day of the week, date and current program start and end times, if provided by the broadcaster.
- Analog channel information—Displays channel number, channel label, signal type, audio information, day of the week, date, and resolution, if provided by the broadcaster.

Note
Button presses must be within three seconds of each other.

Adjusting the volume

To adjust the volume:
- Press VOL+ or VOL− to increase or decrease the volume.
- Press MUTE to turn off the sound. Press MUTE again to turn the sound back on.
Adjusting the picture

Adjusting the TV picture

You can adjust various settings to improve the quality of the TV picture. Also, you can reset all picture settings to the factory default.

To adjust the TV picture:
1. Press MENU. The on-screen menu opens with the PICTURE menu displayed.

2. Press ▲ or ENTER to access the menu.
3. Press ▲ or ▼ to highlight an option, then press ENTER to access the option. You can select:
   - AV Mode—Selects the picture mode. You can select:
     - Dynamic—(a bright and vivid picture). Significantly increases the contrast, brightness, and sharpness. This selection is good for video games, animation, and in bright light environments.
     - Natural—(a standard picture). Moderately increases the contrast, brightness, and sharpness. This selection is good for standard TV broadcasts.
     - Standard—(the backlight brightness is decreased). Your TV has a backlight that provides light for displaying a picture. By reducing the amount of light, your TV uses less energy.
     - Movie—(a finely detailed picture). Adjusts the brightness and contrast and lowers the sharpness for a more realistic picture. This selection is good for watching the highest quality video such as Blu-ray Discs, DVDs, and HDTV.
     - Game—Adjusts the picture for the ultimate gaming experience. This option is available when the video input source is set to HDMI, Component, AV, or VGA.
     - User—(customized picture). Lets you manually adjust picture settings such as brightness, contrast, and sharpness.
   - Backlight—Sets the overall brilliance of the screen.
   - Brightness—Adjusts the brightness of the dark areas of the picture.
   - Contrast—Adjusts the brightness of the light areas of the picture.
   - Color—Adjusts the color intensity of the picture. A low setting may make the color look faded. A high setting may make the color look artificial.
   - Tint—Adjusts the color balance of the picture. Use this control to make skin tones look more natural.
   - Sharpness—Adjusts the color detail of images. If you set this control too high, dark images may appear with light or white edges.
   - Advanced Settings—Opens the PICTURE - ADVANCED SETTINGS menu where you can adjust additional video options.

4. To access the PICTURE - ADVANCED SETTINGS menu:
   - Press AV MODE to select the picture mode.

5. To select Aspect ratio options:
   - Normal: Displays the image in the original aspect ratio. Black bars appear if the image is not in the widescreen (16:9) aspect ratio.
   - Zoom: Expands the image to fill the screen. The top and bottom of the image may be cropped.
   - Wide: Use this option to view content recorded in a 16:9 (widescreen) aspect ratio.
   - Cinema: Stretches the image at the edges, but keeps a clear image in the center.
   - Auto: Automatically adjusts the image based on the screen size and the TV program.

6. Press VIEW MODE to select the aspect ratio.

Note
You can also press AV MODE to select the picture mode.

Note
You can also press VIEW MODE to select the aspect ratio.
• Overscan—Extends text and images past the screen edges to hide edge artifacts. You can select On or Off.
• Active Backlight—Enhances the contrast ratio between light and dark areas of the picture. You can select On or Off.
• Motion Enhancement—Reduces motion blur and eliminates film judder with clear detail and smooth motion. You can select Off, On (Low), On (High), or Film Mode.
• Color Temperature—Selects the color temperature. You can select Cool (to enhance the blues), Normal, or Warm (to enhance the reds).
• Noise Reduction—Selects the noise reduction mode to reduce picture noise (snow). You can select Off, Low, Middle, or High.
• Active Contrast—Automatically adjusts picture detail and brightness. You can select On or Off.
• Reset Picture Settings—Resets all picture settings to factory mode.

4 Press ▼ or ► to adjust the option, or press ▲ or ◀ to select a setting.
5 Press MENU to return to the previous option, or press EXIT to close the menu.

Setting the power on picture mode
You can set the picture mode your TV uses when you turn it on.

To set the power on picture mode:
1 Press MENU. The on-screen menu opens.
2 Press ◄ or ► to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3 Press ▼ or ◀ to highlight Reset All, then press ENTER. The SETUP · RESET ALL menu opens.
4 Press ▼ or ◀ to highlight Power on in Dynamic Mode, then press ENTER.
5 Press ▼ or ◀ to highlight On (when you turn on your TV, it will be in Dynamic picture mode) or Off (when you turn on your TV, it will be in the picture mode it was in before you turned it off), then press ENTER.
6 Press MENU to return to the previous menu, or press EXIT to close the menu.
Adjusting the computer image

When you connect a computer to your TV using the PC IN jack, you may need to adjust the computer image to improve the quality.

To adjust the computer image:
1. Make sure that your TV is in PC mode. For more information, see “Selecting the video input source” on page 39.
2. Press [MENU]. The on-screen menu opens.
3. Press [ or ] to highlight SETUP, then press [ENTER]. The SETUP menu opens.
4. Press [ or ] to highlight an option, then press [ENTER] to access the option. You can select:
   - Auto Adjust—Automatically adjusts the image settings such as position and phase.
   - H. Position—Moves the image right or left.
   - V. Position—Moves the image up or down.
   - Clock—Minimizes vertical stripes in the screen image.
   - Phase—Adjusts the focus of stable images.
   - Reset PC Settings—Resets all computer settings to factory mode.
5. Press [ or ] to highlight an option, then press [ENTER] to access the option. You can select:
   - Sound Mode—Selects the sound mode. You can select:
     - Standard—Balances treble and bass. This setting is good for watching standard TV broadcasts.
     - Movie—Enhances treble and bass for a rich sound experience. This setting is good for watching DVDs, Blu-ray Discs, and HDTV.
     - Music—Preserves the original sound. This setting is good for listening to music.
     - Voice—Enhances vocals for TV audio. This setting is good for watching news broadcasts.
     - User—Lets you manually adjust sound settings.
   - Balance—Adjusts the balance between the left and right audio channels.
   - Bass—Adjusts the low sounds.
   - Treble—Adjusts the high sounds.
   - Speaker—Selects where the TV audio is played. You can select On (default setting) to play audio through the TV speakers, or select Off to turn off the TV speakers and play audio through a connected sound system.
   - Digital Audio Out—Sends digital audio to an external audio system. You can select:
     - Dolby Digital—Outputs the original digital audio sound.
     - PCM—Outputs audio in 2-channel stereo.
     - Audio Delay—Fine tunes the audio when it is not in sync with the video.
6. Press [ or ] to adjust the option, or press [ or ] to select a setting.
7. Press [MENU] to return to the previous menu, or press [EXIT] to close the menu.

Adjusting the sound

You can adjust sound settings to improve the sound quality. You also can reset all sound settings to the factory default.

To adjust sound settings:
2. Press [ or ] to highlight SOUND, then press [ or ] or [ENTER]. The SOUND menu opens.
3. Press [ or ] to highlight an option, then press [ENTER] to access the option. You can select:
   - Sound Mode—Selects the sound mode. You can select:
     - Standard—Balances treble and bass. This setting is good for watching standard TV broadcasts.
     - Movie—Enhances treble and bass for a rich sound experience. This setting is good for watching DVDs, Blu-ray Discs, and HDTV.
     - Music—Preserves the original sound. This setting is good for listening to music.
     - Voice—Enhances vocals for TV audio. This setting is good for watching news broadcasts.
     - User—Lets you manually adjust sound settings.
   - Balance—Adjusts the balance between the left and right audio channels.
   - Bass—Adjusts the low sounds.
   - Treble—Adjusts the high sounds.
   - Speaker—Selects where the TV audio is played. You can select On (default setting) to play audio through the TV speakers, or select Off to turn off the TV speakers and play audio through a connected sound system.
   - Digital Audio Out—Sends digital audio to an external audio system. You can select:
     - Dolby Digital—Outputs the original digital audio sound.
     - PCM—Outputs audio in 2-channel stereo.
     - Audio Delay—Fine tunes the audio when it is not in sync with the video.
• Analog TV Sound—(Analog channels only)
  Selects the audio mode. You can select:
  • Mono—Select this option if there is noise
    or static on weak stereo broadcasts.
  • Stereo—Select this option for programs
    broadcast in stereo.
  • SAP—Select this option to listen to a
    secondary audio program, if available.

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>You can also press AUDIO one</td>
</tr>
<tr>
<td>or more times to select the</td>
</tr>
<tr>
<td>audio mode.</td>
</tr>
</tbody>
</table>

• Audio Language—(Digital channels only)
  Selects an alternate audio language, if
  available.

• Headphones/Audio Out—You can use the
  AUDIO OUT jack on the side of your TV to
  connect headphones, an amplifier, a home
  theater system, or a sound bar. When a device
  is connected to the AUDIO OUT jack, the
  TV speakers are muted. This option selects
  where the audio is played. You can select:
  • Headphone—Select this option if you
    connected headphones.
  • Audio Out Fixed—Select this option to
    use the remote control that came with the
    amplifier, home theater system, or sound bar
    you connected to the AUDIO OUT jack to
    control the audio.
  • Audio Out Variable—Select this option to
    use the remote control that came with
    your TV to control the audio from the
    amplifier, home theater system, or sound bar
    you connected to the AUDIO OUT jack.
  This option is only available when a device
  is connected to the AUDIO OUT jack.

• Reset Sound Settings—Reset all audio
  settings to factory defaults.

4 Press ◄ or ► to adjust the option, or press ▲ or
  ◄ to select a setting.

5 Press MENU to return to the previous menu, or
  press EXIT to close the menu.

Selecting the audio out mode

If your TV is on when you connect a device to the
AUDIO OUT jack on the side of your TV, a screen
opens where you select which audio out mode you
want to use.

To select the audio out mode:

1 Connect headphones, an amplifier, a home
  theater system, or a sound bar to the
  AUDIO OUT jack on the side of your TV. The
  following screen opens.

2 Press ◄ or ► to highlight the audio out mode
  you want to use, then press ENTER. You can
  select:
  • Headphone—Select this option if you
    connected headphones.
  • Audio Out Fixed—Select this option to
    use the remote control that came with the
    amplifier, home theater system, or sound bar
    you connected to the AUDIO OUT jack to
    control the audio.
  • Audio Out Variable—Select this option to
    use the remote control that came with your TV
    to control the audio from the amplifier, home
    theater system, or sound bar you connected to
    the AUDIO OUT jack.
Playing TV audio only

You can turn off the picture on your TV and listen to the program audio only.

To play TV audio only:
1. Press MENU. The on-screen menu opens.
2. Press ▼ or ► to highlight CHANNELS, then press ▼ or ENTER. The CHANNELS menu opens.
3. Press ▲ or ▼ to highlight Audio Only, then press ENTER.
4. Press ▲ or ▼ to select On.
5. Press MENU to return to the previous menu, or press EXIT to close the menu.

Notes
- The picture turns off in about five seconds.
- Audio Only works only when the input source is TV and your TV is receiving a broadcast signal.
- To exit audio only mode, press any button. When you exit audio only mode, the Audio Only option is automatically reset to Off.

Changing channel settings

Automatically scanning for channels

When you scan for channels, your TV searches for channels with signals and stores the channel information in the channel list. When you press CH ◀ or CH ▶, your TV goes to the next or previous channel in the channel list.

If the TV signal source changes, for example you change from an outdoor antenna to cable TV (no box), you need to scan for channels.

To automatically scan for channels:
1. Press MENU. The on-screen menu opens.
2. Press ◀ or ► to highlight CHANNELS, then press ▼ or ENTER. The CHANNELS menu opens.
3. Press ▲ or ▼ to highlight Auto Channel Search, then press ENTER. The CHANNELS: AUTO CHANNEL SEARCH screen opens.
4. Press ▲ or ▼ to highlight Antenna, Cable, or Satellite Box, then press ENTER.
   - If you select Antenna, your TV scans for available channels. The scan may take several minutes.

Note
You can press EXIT to stop the auto channel search, but you will need to run the auto channel search again to create a channel list.
If you select **Cable**, a message asks if you have a cable box:

- Select **No**, then press **ENTER** if no cable box is connected. Your TV scans for available channels. The scan may take several minutes.
- Select **Yes**, then press **ENTER** if a cable box is connected. A message asks how you connected the cable box to your TV.
  - Select **HDMI, Component, or AV**, then press **ENTER** if you connected a cable box to your TV using one of these cables. Read the message, then press **ENTER** to close the wizard.
  - Select **Coaxial**, then press **ENTER** if you connected a cable box to your TV using a coaxial cable. Read the message, then press **ENTER** to start the channel scan (VHF channels only).

**Note**
You can press **EXIT** to stop the auto channel search, but you will need to run the auto channel search again to create a channel list.

If you select **Satellite Box**, a message asks how you connected the satellite box to your TV:

- Select **HDMI, Component, or AV**, then press **ENTER** if you connected a satellite box to your TV using one of these cables. Read the message, then press **ENTER** to close the wizard.
- Select **Coaxial**, then press **ENTER** if you connected a satellite box to your TV using a coaxial cable. Read the message, then press **ENTER** to start the channel scan (VHF channels only).

**Note**
You can press **EXIT** to stop the auto channel search, but you will need to run the auto channel search again to create a channel list.
Hiding channels
You can hide channels in the channel list. When you press CH or CH, your TV skips the hidden channels. You can still tune to a hidden channel by pressing the number buttons for the channel.

To hide channels:
1. Press MENU. The on-screen menu opens.
2. Press or to highlight CHANNELS, then press or ENTER. The CHANNELS menu opens.
3. Press or to highlight Channel Skip, then press ENTER. The CHANNELS - CHANNEL SKIP screen opens.
4. Press or to highlight the channel you want to hide, then press ENTER. The check mark disappears.

Notes
- A channel with a check mark is not hidden. A channel with no check mark is hidden.
- If the list has more than one page, press or to scroll through the pages.

5. Press MENU to return to the previous menu, or press EXIT to close the menu.

Setting up a favorite channel list
You can create a favorite channel list so you can quickly browse through your favorite channels by pressing FAVORITE, then selecting a channel from the favorite channel list.

To set up a favorite channel list:
1. Press MENU. The on-screen menu opens.
2. Press or to highlight CHANNELS, then press or ENTER. The CHANNELS menu opens.
3. Press or to highlight Favorites, then press ENTER. The CHANNELS - FAVORITES screen opens.
4. Press or to highlight the channel you want to add to the favorites list, then press ENTER. A check mark appears next to the channel.

Notes
- To remove a channel from the favorites list, highlight the channel, then press ENTER. The check mark disappears and the channel is removed from the list.
- If the list has more than one page, press or to scroll through the pages.

5. Press MENU to return to the previous menu, or press EXIT to close the menu.

Viewing a favorite channel

To view a favorite channel:
1. Press FAVORITE. The favorite channel list opens.
2. Press or to highlight a channel, then press ENTER.
Adding or changing a channel label

If a channel is not already labeled, you can label the channel to make it easier to identify. You can also relabel a channel that is already labeled.

To add or change a channel label:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight CHANNELS, then press ▼ or ENTER. The CHANNELS menu opens.
3. Press ▲ or ▼ to highlight Channel Edit, then press ENTER. The CHANNELS · CHANNEL EDIT screen opens with the channel number field highlighted.
4. Press ▲ or ▼ to select the channel you want to label, then press ▼ to move to the channel label field.
5. Press ▲ or ▼ to select a character, then press ▼ or ▼ to move to the previous or next character position. Repeat this step to enter additional characters. You can enter as many as 11 characters.
6. When you have completed the label, press ENTER.
7. Press EXIT to close the menu.

Checking the digital signal strength

You can check the digital signal strength to determine if you need to adjust your antenna or digital cable input. The higher the signal strength, the less likely you are to experience picture degradation.

To check the digital signal strength:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight CHANNELS, then press ▼ or ENTER. The CHANNELS menu opens.
3. Press ▲ or ▼ to highlight Signal Strength, then press ENTER. The Signal Strength screen opens showing the signal strength meter.
4. Press MENU to return to the previous menu, or press EXIT to close the menu.
Automatically adjusting the aspect ratio

Auto View Mode automatically changes how the picture looks on the screen (aspect ratio) based on the TV program you are viewing.

To automatically adjust the aspect ratio:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight CHANNELS, then press ▼ or ENTER. The CHANNELS menu opens.
3. Press ▲ or ▼ to highlight Auto View Mode, then press ENTER.
4. Press ▲ or ▼ to select On (automatically adjust the aspect ratio) or Off (does not automatically adjust the aspect ratio), then press ENTER.
5. Press MENU to return to the previous menu, or press EXIT to close the menu.

Note: You can also press VIEW MODE to select the aspect ratio.

Setting parental controls

Parental controls let you prevent your children from watching inappropriate material on TV. When set, parental controls read the rating of the program (with some exceptions, such as news and sports) and deny access to programs that exceed the ratings level you select. To watch programs that exceed the selected rating, you must enter a password.

Setting or changing the password

To set or change the password:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Parental Controls, then press ENTER. The Enter password screen opens.
4. Press the number buttons to enter the four-digit password. The default password is 0000. You should change the password to a number you can remember. The SETUP · PARENTAL CONTROLS menu opens.
5. Press ▲ or ▼ to highlight Change Password, then press ENTER. The SETUP · PARENTAL CONTROLS · CHANGE PASSWORD screen opens.
6. Press the number buttons to enter a password, then enter the password again. A message tells you that the password has been changed.
7. Press MENU to return to the previous menu, or press EXIT to close the menu.

Note: If you forget your password, enter 9999.
Locking control buttons

When the button block is turned On, the buttons on the side of your TV are locked, and you can only operate your TV using the remote control.

To lock control buttons:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight SETUP; then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Parental Controls, then press ENTER. The Enter password screen opens.
4. Press the number buttons to enter the four-digit password. The SETUP · PARENTAL CONTROLS menu opens.
5. Press ▲ or ▼ to highlight Button Block, then press ENTER.
6. Press ▲ or ▼ to select On (locks the buttons) or Off (unlocks the buttons).
7. Press MENU to return to the previous menu, or press EXIT to close the menu.

Blocking unrated TV

Some TV programs, such as news and sports shows are not rated. When you set UnRated/Exempt Ratings to Block, TV programs that do not have ratings are blocked. When you try to watch a blocked program, you are prompted to enter the parental controls password.

To block unrated TV:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight SETUP; then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Parental Controls, then press ENTER. The Enter password screen opens.
4. Press the number buttons to enter the four-digit password. The SETUP · PARENTAL CONTROLS menu opens.
5. Press ▲ or ▼ to highlight UnRated/Exempt Ratings, then press ENTER.
6. Press ▲ or ▼ to select Block (to block unrated TV) or View (to unblock unrated TV).
7. Press MENU to return to the previous menu, or press EXIT to close the menu.

www.sharpusa.com
Setting parental control levels
You can set parental controls for the U.S. and Canada.

U.S. rating levels

<table>
<thead>
<tr>
<th>U.S. TV ratings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>Not rated</td>
</tr>
<tr>
<td>TV-Y</td>
<td>All children</td>
</tr>
<tr>
<td>TV-Y7</td>
<td>Suitable for children 7 and older</td>
</tr>
<tr>
<td>TV-G</td>
<td>General audiences</td>
</tr>
<tr>
<td>TV-PG</td>
<td>Parental guidance suggested</td>
</tr>
<tr>
<td>TV-14</td>
<td>Parental guidance strongly suggested</td>
</tr>
<tr>
<td>TV-MA</td>
<td>Mature audiences only</td>
</tr>
</tbody>
</table>

Some of the age-based TV Parental Guidelines ratings also have content-based ratings.

<table>
<thead>
<tr>
<th>U.S. TV content ratings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>All ratings are blocked</td>
</tr>
<tr>
<td>FV</td>
<td>Fantasy violence</td>
</tr>
<tr>
<td>L</td>
<td>Strong language</td>
</tr>
<tr>
<td>S</td>
<td>Sexual situations</td>
</tr>
<tr>
<td>V</td>
<td>Violence</td>
</tr>
<tr>
<td>D</td>
<td>Suggestive dialog</td>
</tr>
</tbody>
</table>

U.S. movie (MPAA) ratings:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Movie not rated</td>
</tr>
<tr>
<td>G</td>
<td>General audiences</td>
</tr>
<tr>
<td>PG</td>
<td>Parental guidance suggested</td>
</tr>
<tr>
<td>PG-13</td>
<td>Suitable for children 13 and older</td>
</tr>
<tr>
<td>R</td>
<td>Parental guidance suggested for children under 17</td>
</tr>
<tr>
<td>NC-17</td>
<td>Not suitable for children under 17</td>
</tr>
<tr>
<td>X</td>
<td>Adults only</td>
</tr>
</tbody>
</table>

Canadian rating levels

<table>
<thead>
<tr>
<th>Canadian English ratings</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Exempt programming</td>
</tr>
<tr>
<td>C</td>
<td>Suitable for all children</td>
</tr>
<tr>
<td>CB+</td>
<td>Suitable for children 8 and older</td>
</tr>
<tr>
<td>G</td>
<td>General audiences</td>
</tr>
<tr>
<td>PG</td>
<td>Parental guidance suggested</td>
</tr>
<tr>
<td>F4+</td>
<td>Suitable for children 14 and older</td>
</tr>
<tr>
<td>18+</td>
<td>Adult only</td>
</tr>
</tbody>
</table>

Canadian French ratings:

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>E</td>
<td>Exempt programming</td>
</tr>
<tr>
<td>G</td>
<td>General audiences</td>
</tr>
<tr>
<td>8ans+</td>
<td>Suitable for children 8 and older</td>
</tr>
<tr>
<td>13ans+</td>
<td>Suitable for children 13 and older</td>
</tr>
<tr>
<td>16ans+</td>
<td>Suitable for children 16 and older</td>
</tr>
<tr>
<td>18ans+</td>
<td>Adult only</td>
</tr>
</tbody>
</table>

To set parental control levels:

1. Press MENU. The on-screen menu opens.
2. Press ◄ or ► to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ◄ to highlight Parental Controls, then press ENTER. The Enter password screen opens.
4. Press the number buttons to enter the four-digit password. The SETUP - PARENTAL CONTROLS menu opens.
5 Press ▲ or ▼ to highlight U.S. V-CHIP, then press ENTER. (To set Canadian ratings, select Canada V-CHIP.)

U.S. V-CHIP

53
Sharp 42" LED TV
www.sharpusa.com

6 Press ▲ or ▼ to highlight:
   - Movie Ratings or TV Ratings for USA ratings.
   - Canadian English or Canadian French for Canadian ratings.

7 Press ▲ or ▼ to select the rating. If a rating has sub-ratings, press ▲ or ▼ to highlight a sub-rating.

**Note**
When you block a rating, that rating and all higher ratings are blocked.

8 Press ENTER to confirm. A lock symbol appears when a rating is blocked.

9 Press MENU to return to the previous menu, or press EXIT to close the menu.

---

**Downloading rating information**

If the program you are viewing has downloadable rating information, you can download the information to use when setting parental controls.

**Note**
If the program you are viewing does not have V-Chip rating information, Open V-CHIP is grayed on the SETUP · PARENTAL CONTROLS menu and cannot be selected.

To download rating information:

1 Press MENU. The on-screen menu opens.

2 Press ▲ or ▼ to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.

3 Press ▲ or ▼ to highlight Parental Controls, then press ENTER. The Enter password screen opens.

4 Press the number buttons to enter the four-digit password. The SETUP · PARENTAL CONTROLS menu opens.

---

**Note**
When you block a rating, that rating and all higher ratings are blocked.

**Note**
If the program you are viewing does not have V-Chip rating information, Open V-CHIP is grayed on the SETUP · PARENTAL CONTROLS menu and cannot be selected.
5 Press ▲ or ▼ to highlight Open V-CHIP, then press ENTER. The SETUP · PARENTAL CONTROLS · OPEN V-CHIP screen opens. The screen that you see may vary depending on the broadcaster.

6 Press ▲ ▼ ◄ or ► to select the program and content types you want to block, then press ENTER. The SETUP · PARENTAL CONTROLS menu opens.

7 To reset the V-Chip information to the factory default, press ▲ or ▼ to highlight Reset Downloadable Data, then press ENTER. A box opens.

8 Press ▲ or ▼ to highlight OK or Cancel, then press ENTER.

9 Press MENU to return to the previous menu, or press EXIT to close the menu.

Using closed captioning

Closed captioning displays a text version of the TV program audio or displays information provided by the broadcaster.

Turning closed captioning on or off

To turn closed captioning on or off:
1 Press MENU. The on-screen menu opens.
2 Press ◄ or ► to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3 Press ▲ or ▼ to highlight Closed Caption, then press ENTER. The SETUP · CLOSED CAPTION menu opens.
4 Press ▲ or ▼ to highlight CC Settings, then press ENTER. A menu opens.
5 Press ▲ or ▼ to select Off (turns off closed captioning), On Always (turns on closed captioning), or On When Mute (turns on closed captioning when the sound is muted).
6 Press MENU to return to the previous menu, or press EXIT to close the menu.

Note
You can also press CC to turn closed captioning on or off.
Selecting the analog closed captioning mode

Analog channels usually have one or more closed captioning modes. The CC1 mode usually displays a text version of the TV program audio in a small banner. The other CC modes display information provided by the broadcaster. The Text modes display information in a box that covers half of the screen.

To select the analog closed captioning mode:
1. Press **MENU**. The on-screen menu opens.
2. Press **W** or **X** to highlight **SETUP**, then press **T** or **ENTER**. The **SETUP** menu opens.
3. Press **S** or **T** to highlight **Closed Caption**, then press **ENTER**. The **SETUP · CLOSED CAPTION** menu opens.
4. Press **S** or **T** to highlight **Analog CC Type**, then press **ENTER**. A menu opens.
5. Press **S** or **T** to select an analog caption setting. You can select:
   - CC1 through CC4—Closed captioning appears in a small banner across the bottom of the screen. CC1 is usually the “printed” version of the audio. CC2 through CC4 display content provided by the broadcaster.
   - Text1 through Text4—Closed captioning covers half or all of the screen. Text1 through Text4 display content provided by the broadcaster.
6. Press **MENU** to return to the previous menu, or press **EXIT** to close the menu.

Selecting the digital closed captioning mode

Digital channels usually have one or more closed captioning modes. The Service1 and CC1 modes usually display a text version of the TV program audio in a small banner. The other Service and CC modes display information provided by the broadcaster. Services1 mode displays a text version of the audio in the same language as the audio.

To select the digital closed captioning mode:
1. Press **MENU**. The on-screen menu opens.
2. Press **W** or **X** to highlight **SETUP**, then press **T** or **ENTER**. The **SETUP** menu opens.
3. Press **S** or **T** to highlight **Closed Caption**, then press **ENTER**. The **SETUP · CLOSED CAPTION** menu opens.
4. Press **S** or **T** to highlight **Digital CC Type**, then press **ENTER**. A menu opens.
5. Press **S** or **T** to select a digital caption setting. You can select:
   - Service1 through Service6—Service1 is usually the “printed” version of the audio. Service2 through Service6 display content provided by the broadcaster. You can change the way digital closed captioning is displayed on the screen. For more information, see “Customizing digital closed captioning settings” on page 56.
   - CC1 through CC4—Closed captioning appears in a small banner across the bottom of the screen. CC1 is usually the “printed” version of the audio. CC2 through CC4 display content provided by the broadcaster.
6. Press **MENU** to return to the previous menu, or press **EXIT** to close the menu.

www.sharpusa.com 55
Customizing digital closed captioning settings

To customize digital closed captioning styles:

1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight SETUP, then press ◄ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Closed Caption, then press ENTER. The SETUP · CLOSED CAPTION menu opens.
4. Press ▲ or ▼ to highlight Digital CC Style, then press ENTER. The SETUP · CLOSED CAPTION · DIGITAL CC Style menu opens with Caption Style highlighted.
5. Press ENTER, then press ▲ or ▼ to select Custom.
6. Press ▲ or ▼ to highlight an option, then press ENTER. You can select:
   - Digital CC Size — Selects the font size.
   - Digital CC Font — Selects the font style.
   - Digital CC Color — Selects the color for the words.
   - Digital CC Opacity — Selects the opacity level for the words.
   - Digital CC Background Color — Selects the color for the background.
   - Digital CC Background Opacity — Selects the opacity level for the background.
   - Digital CC Edge Effect — Selects the style of the letter edges.
   - Digital CC Edge Color — Selects the color of the letter edges.
7. Press ▲ or ▼ to select a setting, then press ENTER.
8. Press MENU to return to the previous menu, or press EXIT to close the menu.
Adjusting time settings

When you set up your TV for the first time, the clock was set up. If the power is disconnected or you move your TV to a different time zone, you need to reset the clock to the correct time.

Setting the clock

To set the clock:
1. Press MENU. The on-screen menu opens.
2. Press ▲ or ▼ to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Time Setup, then press ENTER. The SETUP · TIME SETUP menu opens.
4. Press ▲ or ▼ to highlight Date/Time, then press ENTER. The SETUP · TIME SETUP · DATE/TIME menu opens.
5. Press ▲ or ▼ to highlight Mode, then press ENTER. A menu opens.
6. Press ▲ or ▼ to highlight Manual (to set the options manually) or Auto (the options are automatically set by the TV signal source), then press ENTER.
7. Press ▲ or ▼ to highlight Time Zone, then press ENTER.
8. Press ▲ or ▼ to select your time zone, then press ENTER. You can select Eastern, Central, Mountain, Pacific, Alaska, Hawaii, Atlantic, or Newfoundland.
9. If your viewing area observes Daylight Saving Time, press ▲ or ▼ to highlight Daylight Saving, then press ENTER.
10. Press ▲ or ▼ to select On or Off, then press ENTER to close the menu.
11. If you selected Manual for Mode:
   • Press ▲ or ▼ to highlight Year, Month, or Day, then press ▲ or ▼ to access the setting, then press ENTER.
   • Press ▲ or ▼ to highlight Time, then press ▲ or ▼ to access the setting. Press ▲ or ▼ to select the hour, minute, or AM/PM field, then press ▲ or ▼ to adjust the setting. When you are finished, press ENTER.
12. Press MENU to return to the previous menu, or press EXIT to close the menu.

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Setting the sleep timer
You can specify the amount of time before your TV automatically turns off.

To set the sleep timer:
1. Press MENU. The on-screen menu opens.
2. Press ◄ or ► to highlight SETUP, then press ◄ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Time Setup, then press ENTER. The SETUP · TIME SETUP menu opens.
4. Press ▲ or ▼ to highlight Sleep Timer, then press ENTER. A menu opens.
5. Press ▲ or ▼ to select the amount of time before your TV turns off automatically. You can select Off, 5 minutes, 10 minutes, 15 minutes, 30 minutes, 60 minutes, 90 minutes, 120 minutes, 180 minutes, or 240 minutes.
6. Press MENU to return to the previous menu, or press EXIT to close the menu.

Note
You can also press SLEEP to set the sleep timer.

Adjusting menu settings

Selecting the menu language
Your TV can display the on-screen menu in English, French, or Spanish. When you set your TV up for the first time, the language was selected. You can change the menu language to a different language.

To select the menu language:
1. Press MENU. The on-screen menu opens.
2. Press ◄ or ► to highlight SETUP, then press ◄ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Language, then press ENTER. A menu opens.
4. Press ▲ or ▼ to select a language, then press ENTER. You can select English, Français, or Español.
5. Press MENU to return to the previous menu, or press EXIT to close the menu.

Turning Input Sensor on or off
When the Input Sensor feature is turned on, your TV automatically detects which video jacks have devices connected to them. Your TV uses this information to determine what options you can select on the INPUT SOURCE list when you press INPUT.

To turn Input Sensor on or off:
1. Press MENU. The on-screen menu opens.
2. Press ◄ or ► to highlight SETUP, then press ◄ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight Auto Input Sensing, then press ENTER. A menu opens.
4. Press ▲ or ▼ to select On (turns on the input sensor) or Off (turns off the input sensor).
5. Press MENU to return to the previous menu, or press EXIT to close the menu.
Labeling an input source
You can add a label to an input source to make it easier to identify in the INPUT SOURCE list.

To label an input source:
1 Press MENU. The on-screen menu opens.
2 Press 4 or 6 to highlight SETUP, then press 7 or ENTER. The SETUP menu opens.
3 Press 4 or 6 to highlight Input Labels, then press ENTER. The SETUP · INPUT LABELS screen opens with the input source field highlighted.
4 Press 4 or 6 to select the input source you want to label, then press 7 to move to the label field.
5 Press 4 or 6 to select a character, then press 4 or 6 to move to the previous or next character position. Repeat this step to enter additional characters.
6 When you have completed the label, press ENTER to save your label and return to the previous menu. The next time you press INPUT, your label appears in the INPUT SOURCE list.
7 Press EXIT to close the menu.

Using CEC Control
CEC Control lets you control HDMI CEC-compatible devices connected to the HDMI jacks on your TV using the remote control that came with your TV. To use CEC Control, you must set the CEC Control setting on the SETUP · CEC menu to On.

Turning CEC Control on or off
To turn CEC Control on or off:
1 Press MENU. The on-screen menu opens.
2 Press 4 or 6 to highlight SETUP, then press 7 or ENTER. The SETUP menu opens.
3 Press 4 or 6 to highlight CEC, then press ENTER. The SETUP · CEC menu opens.
4 Press 4 or 6 to highlight CEC Control, then press ENTER.
5 Press 4 or 6 to highlight On or Off, then press ENTER.
6 Press MENU to return to the previous menu, or press EXIT to close the menu.

Notes
- HDMI cables must be used to connect HDMI CEC-compatible devices to your TV.
- The connected device’s HDMI CEC feature must be turned on.
- If you connect an HDMI device that is not HDMI CEC-compatible, all of the CEC features do not work.
- Depending on the connected HDMI device, the CEC feature may not work.
Turning Device Auto Power Off on or off

When CEC Control is set to On, Device Auto Power Off automatically turns off HDMI CEC devices when you turn off your TV.

To turn Device Auto Power Off on or off:

1. Press MENU. The on-screen menu opens.
2. Press ◀ or ▶ to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ◀ or ▶ to highlight CEC, then press ENTER. The SETUP - CEC menu opens.
4. Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
5. On the SETUP - CEC menu, press ◀ or ▶ to highlight Device Auto Power Off, then press ENTER.
6. Press ◀ or ▶ to highlight On (turns off the connected devices when you turn off your TV) or Off (does not turn off the connected devices when you turn off your TV), then press ENTER.
7. Press MENU to return to the previous menu, or press EXIT to close the menu.

Turning TV Auto Power On on or off

TV Auto Power On automatically turns on your TV when an HDMI CEC device is turned on, if the device has this feature.

To turn TV Auto Power On on or off:

1. Press MENU. The on-screen menu opens.
2. Press ◀ or ▶ to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ◀ or ▶ to highlight CEC, then press ENTER. The SETUP - CEC menu opens.
4. Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
5. On the SETUP - CEC menu, press ◀ or ▶ to highlight TV Auto Power On, then press ENTER.
6. Press ◀ or ▶ to highlight On (turns on your TV when you turn on the connected device) or Off (does not turn on your TV when you turn on the connected device), then press ENTER.
7. Press MENU to return to the previous menu, or press EXIT to close the menu.
Turning Audio Return Channel on or off

When CEC Control is turned on and you have connected an audio receiver to your TV, turning on Audio Return Channel lets you use your TV’s remote control to control the volume on the audio receiver.

To turn Audio Return Channel on or off:

1. Press MENU. The on-screen menu opens.
2. Press ‹ or › to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press S or T to highlight CEC, then press ENTER. The SETUP · CEC menu opens.
4. Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
5. On the SETUP · CEC menu, press ▲ or ▼ to highlight Audio Return Channel, then press ENTER.
6. Press ▲ or ▼ to highlight On (your TV’s remote control controls the connected audio receiver’s volume) or Off (your TV’s remote control does not control the connected audio receiver’s volume), then press ENTER.
7. Press MENU to return to the previous menu, or press EXIT to close the menu.

Displaying a list of CEC-compatible devices

You can display a list of HDMI CEC devices that are connected to your TV.

To display a list of CEC-compatible devices:

1. Press MENU. The on-screen menu opens.
2. Press ‹ or › to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.
3. Press ▲ or ▼ to highlight CEC, then press ENTER. The SETUP · CEC menu opens.
4. Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
5. On the SETUP · CEC menu, press ▲ or ▼ to highlight CEC Device Lists, then press ENTER. A list of the HDMI CEC-compatible devices you have connected appears.
6. Press MENU to return to the previous menu, or press EXIT to close the menu.
Waking CEC-compatible devices
When a connected CEC-compatible device is in turned off (standby mode), Connect wakes (turns on) the device.

To wake CEC-compatible devices:
1 Press INPUT, press ▲ or ▼ to highlight the CEC-compatible device you want to wake, then press ENTER.
2 Press MENU. The on-screen menu opens.
3 Press ◄ or ► to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.

4 Press ▲ or ▼ to highlight CEC, then press ENTER. The SETUP - CEC menu opens.

5 Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
6 On the SETUP - CEC menu, press ▲ or ▼ to highlight Connect, then press ENTER to wake the HDMI CEC-compatible device connected to the HDMI input you selected.
7 Press MENU to return to the previous menu, or press EXIT to close the menu.

Opening a CEC-compatible device’s root menu
You can open a CEC-compatible device’s root menu, then use your TV’s remote control to control the device, if the device has this feature.

To open a CEC-compatible device’s root menu:
1 Press INPUT, press ▲ or ▼ to highlight the CEC-compatible device you want to control, then press ENTER.
2 Press MENU. The on-screen menu opens.
3 Press ◄ or ► to highlight SETUP, then press ▼ or ENTER. The SETUP menu opens.

4 Press ▲ or ▼ to highlight CEC, then press ENTER. The SETUP - CEC menu opens.

5 Make sure that the CEC Control option is turned on. See “Turning CEC Control on or off” on page 59.
6 On the SETUP - CEC menu, press ▲ or ▼ to highlight Root Menu, then press ENTER. The device’s root menu opens, and you can use your TV’s remote control to control the device.
7 Press MENU to return to the previous menu, or press EXIT to close the menu.
Using an MHL-enabled device or Roku Streaming Stick

You can connect your MHL-enabled device, such as a cell phone or Roku Streaming Stick™, and view your device's screen on your TV.

Using an MHL-enabled device

To use an MHL-enabled device:

1. Connect an MHL-enabled device to your TV. For connection instructions, see “Connecting an MHL-enabled device” on page 23. A message tells you the device is connected.
2. Press ENTER to access your MHL-enabled device. Your device's menu opens.

To switch to an MHL-device that is already connected:

1. Press INPUT, then press ▲ or ▼ to select HDMI 2 (MHL/ACC).
   OR
   Press MENU, then press ▲ or ▼ to highlight MHL/ACC.
2. Press ENTER to access your MHL-enabled device. Your device's menu opens.

3. Use ▲ ▼ ◀ ▶ and ENTER to navigate on your device.

Note
Your device's menu will vary depending on the device and the apps you have loaded on the device.

Note
The buttons you use to navigate on your device may vary depending on the device.
Using a Roku Streaming Stick

To use a Roku Streaming Stick:

1. Connect a Roku Streaming Stick™ to your TV. For connection instructions, see “Connecting an MHL-enabled device” on page 23. A message tells you the stick is connected.

2. Press ENTER to access your Roku Streaming Stick™. Your stick’s menu opens.

   **Note**
   Your Roku Streaming Stick’s menu will vary depending on the content you have loaded on the device.

3. Use ▲ ▼ ◀▶ and ENTER to navigate on your Roku Streaming Stick™.

To switch to a Roku Streaming Stick that is already connected:

1. Press INPUT, then press ▲ or ▼ to select HDMI 2 (Roku).

   ![Roku Streaming Stick menu](Image)

   OR

   Press MENU, then press ◀ or ▶ to highlight Streaming.

2. Press ENTER to access your Roku Streaming Stick™. Your stick’s menu opens.

   **Note**
   Your Roku Streaming Stick’s menu will vary depending on the content you have loaded on the device.

3. Use ▲ ▼ ◀▶ and ENTER to navigate on your Roku Streaming Stick™.
Using a USB flash drive

You can connect a USB flash drive to your TV to view compatible JPEG pictures.

**Notes:**
- Never remove the USB flash drive or turn off your TV while viewing JPEG pictures.
- The JPEG picture viewer only supports JPEG format images (with ".jpg" file extensions) and not all JPEG files are compatible with your TV.

Switching to USB mode

To switch to USB mode:

1. Make sure that you have connected the USB flash drive to the USB port on your TV.
2. If your TV is turned on when you connect the USB flash drive, press \( \text{\textup{S}} \) or \( \text{\textup{T}} \) to highlight \textit{Yes} in the message that appears, then press ENTER. The \textit{PHOTOS} menu opens.

OR

If you connected the USB flash drive, then changed to a different video input source, press \text{\textup{INPUT}} to open the \textit{INPUT SOURCE} list, press \( \text{\textup{S}} \) or \( \text{\textup{T}} \) to highlight \textit{USB (Photos)}, then press \text{\textup{ENTER}}. The \textit{PHOTOS} menu opens.

**Notes:**
- To exit USB mode, press \text{\textup{INPUT}} to open the \textit{INPUT SOURCE} list, then select another input source.

Browsing photos

To browse photos:

1. Switch to USB mode. See “Switching to USB mode” on page 65. The \textit{PHOTOS} menu opens.

2. Press \( \text{\textup{A}} \) or \( \text{\textup{V}} \) to highlight \textit{Browse Photos}, then press ENTER. The screen displays folder names and photo files stored on the USB flash drive in a thumbnail index with the first photo or folder highlighted. A control bar appears at the bottom of the screen.

**Notes:**
- Photos are shown in the order they appear on the USB flash drive. They may not be listed in file name order.

3. To navigate the thumbnail index screen, press:
   - \( \text{\textup{A}} \), \( \text{\textup{D}} \), \( \text{\textup{L}} \), or \( \text{\textup{R}} \) to browse through the files and folders.
   - ENTER to view a highlighted photo full-screen or open a highlighted folder.
   - MENU to open the \textit{PHOTOS} menu.
   - FAVORITE to add or remove a photo from the favorite photo list. A heart appears on a photo that has been added to the favorite photo list. When a photo is displayed full-screen, a control bar appears at the bottom of the photo. The file name, picture resolution, size, and date are displayed on the bottom of the control bar. If you do not press a button within 10 seconds, the control bar closes. Press \text{\textup{INFO}} to open the control bar again.

4. To navigate on the photo screen, press:
   - \( \text{\textup{A}} \) to go to the previous photo.
   - \( \text{\textup{D}} \) to go to the next photo.
   - ENTER to rotate the photo clockwise.
   - VIEW MODE one or more times to enlarge the image by \( \times 2 \) or \( \times 4 \) or to select Fill (to fill the screen). You can press \( \text{\textup{A}} \), \( \text{\textup{V}} \), \( \text{\textup{L}} \), or \( \text{\textup{R}} \) to pan the photo.
   - EXIT to return to the thumbnail index.
   - MENU to return to the \textit{PHOTOS} menu.
Viewing favorite photos

After you create your favorite photo list, you can browse among your favorite photos quickly.

To view favorite photos:
1 Switch to USB mode. See “Switching to USB mode” on page 65. The PHOTOS menu opens.

2 Press ▲ or ◀ to highlight Favorite Photos, then press ENTER. A thumbnail index of your favorite photos opens with a control bar at the bottom of the screen. A heart appears on a favorite photo.

Note: Photos are shown in the order they appear on the USB flash drive. They may not be listed in file name order.

You select photos and navigate on the photo screen in the same way you do when you are browsing through photos. For more information, see “Browsing photos” on page 65.

Viewing photos in a slideshow

You can view your photos in a slideshow.

To view photos in a slideshow:
1 Switch to USB mode. See “Switching to USB mode” on page 65. The PHOTOS menu opens.

2 If the photos you want to view are in a folder on the USB flash drive, select the folder. For information about selecting a folder, see “Browsing photos” on page 65 or “Viewing favorite photos” on page 66.

3 Press MENU. The PHOTOS menu opens again.

4 Press ▲ or ◀ to highlight View Slideshow, then press ENTER. A slideshow starts with the first photo in the current folder.

5 To control the slideshow, press:
   - ENTER to pause or start the slideshow.
   - EXIT to exit the slideshow and go to the PHOTOS menu.
   - MENU to go to the PHOTOS menu.

Note: Photos are shown in the order they appear on the USB flash drive. They may not be listed in file name order.
Customizing slideshow settings

You can customize the slideshow settings, including Slideshow Repeat, Slideshow Shuffle, Slideshow Interval, and Slideshow Effect.

To customize slideshow settings:
1. Switch to USB mode. See “Switching to USB mode” on page 65. The PHOTOS menu opens.

2. Press ▲ or ▼ to highlight Photo Settings, then press ENTER. The PHOTOS › PHOTOS SETTINGS menu opens.

3. Press ▲ or ▼ to highlight an option, then press ENTER. You can select:
   - Slideshow Repeat — Repeats the slideshow when it reaches the end. You can select On or Off.
   - Slideshow Shuffle — Displays the slideshow photos in random order. You can select On or Off.
   - Slideshow Interval — Sets the amount of time a photo is displayed before the slideshow moves to the next photo. You can select 4 sec, 6 sec, or 8 sec.
   - Slideshow Effect — Selects the way photos transition when moving to the next file in the slideshow. You can select:
     - None — No transition effect.
     - Fade to Black — Fades the screen to black between photos.
     - Vertical Wipe — Wipes the screen from top to bottom between photos.
     - Horizontal Wipe — Wipes the screen from left to right between photos.
     - Random — Randomly selects a transition effect.

4. Press ▲ or ▼ to select a setting, then press ENTER.

5. Press EXIT to close the menu.

---

Maintaining

- Do not use your TV in areas that are too hot or too cold, because the cabinet may warp or the screen may malfunction. Your TV works best in temperatures that are comfortable to you.
- Storage temperatures are 32° to 122°F (0° to 50°C).
- Working temperatures are 41° to 104°F (5° to 40°C).
- Do not place your TV in direct sunlight or near a heat source.

Cleaning the TV cabinet

Clean the cabinet with a soft, lint-free cloth. If the cabinet is especially dirty, moisten a soft, lint-free cloth in a weak detergent solution, squeeze the excess moisture from the cloth, then wipe the cabinet with the cloth. Use a clean cloth to dry the cabinet.

Cleaning the TV screen

Clean the screen with a soft, lint-free cloth.
Troubleshooting

Warning
Do not try to repair your TV yourself. Contact authorized service personnel.

Restoring settings to the defaults
When you restore default settings, all the settings you have customized (including parental controls) are reset.

To restore settings to the defaults:
1. Press \textit{MENU}. The on-screen menu opens.
2. Press $\downarrow$ or $\uparrow$ to highlight \textit{SETUP}, then press $\downarrow$ or \textit{ENTER}. The \textit{SETUP} menu opens.
3. Press $\downarrow$ or $\uparrow$ to highlight \textit{Reset All}, then press \textit{ENTER}. The \textit{SETUP · RESET ALL} menu opens.
4. Press $\downarrow$ or $\uparrow$ to highlight \textit{Reset All}, then press \textit{ENTER}. A message asks if you want to reset all TV settings to the default settings.
5. Press $\downarrow$ or $\uparrow$ to select \textit{OK} (to reset) or \textit{Cancel} (to not reset), then press \textit{ENTER}. If you select \textit{OK}, the \textit{EZ SETUP} wizard opens.
6. Go through the \textit{EZ SETUP} wizard. For more information, see "Turning on your TV for the first time" on page 37.

Viewing system information
You may need to view system information during troubleshooting.

To view system information:
1. Press \textit{MENU}. The on-screen menu opens.
2. Press $\downarrow$ or $\uparrow$ to highlight \textit{SETUP}, then press $\downarrow$ or \textit{ENTER}. The \textit{SETUP} menu opens.
3. Press $\downarrow$ or $\uparrow$ to highlight \textit{System Information}, then press \textit{ENTER}. Information about the TV software version is displayed.
4. Press \textit{MENU} to return to the previous menu, or press \textit{EXIT} to close the menu.

Warning
Do not try to repair your TV yourself. Contact authorized service personnel.
## Video and audio

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture does not fill the screen. There are black bars around the picture.</td>
<td>• Change the aspect ratio. An increasing amount of digital TV and movies are presented in wide screen (16:9). See the View Mode option in “Adjusting the TV picture” on page 42.</td>
</tr>
<tr>
<td>No picture (screen is not lit) and no sound.</td>
<td>• Press ( \text{TV} ) on the TV or the remote control. • Make sure that the Audio Only option is set to Off. See “Playing TV audio only” on page 46. • Make sure that the video cables are connected securely to your TV. • Adjust the contrast and brightness. See “Adjusting the TV picture” on page 42. • Make sure that the power cord is plugged in. • Make sure that the correct video input source is selected. See “Selecting the video input source” on page 39. • Try another channel. The station may be experiencing problems. • Make sure that the incoming signal is compatible. • Make sure that the antenna or cable TV is connected correctly and securely. See “Connecting a cable or satellite box” on page 13 or “Connecting an antenna or cable TV (no box)” on page 18. • Check the closed caption settings. Some TEXT modes can block the screen.</td>
</tr>
<tr>
<td>Dark, poor, or no picture (screen is lit), but sound is good.</td>
<td>• Try another channel. The station may be experiencing problems. • Make sure that the antenna or cable TV is connected correctly and securely. See “Connecting a cable or satellite box” on page 13 or “Connecting an antenna or cable TV (no box)” on page 18. • Adjust the brightness. See “Adjusting the TV picture” on page 42. • Make sure that the correct picture mode is selected. See “Adjusting the TV picture” on page 42. • If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see “Checking the digital signal strength” on page 49. • If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier. • Make sure that the video cables are connected securely to your TV. • The video cable(s) you are using may be bad. Try a new set. • Try another channel. The station may be experiencing problems.</td>
</tr>
<tr>
<td>No color, dark picture, or color is not correct.</td>
<td>• Try another channel. The station may be experiencing problems. • Adjust the color settings. See “Adjusting the TV picture” on page 42. • Make sure that the video cables are connected correctly and securely. See “Connecting a cable or satellite box” on page 13 or “Connecting an antenna or cable TV (no box)” on page 18. • If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see “Checking the digital signal strength” on page 49. • If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier.</td>
</tr>
</tbody>
</table>
### Problem | Solution
---|---
Only snow (noise) appears on the screen. | - Try another channel. The station may be experiencing problems.
- Make sure that the antenna or cable TV is connected correctly and securely. See “Connecting a cable or satellite box” on page 13 or “Connecting an antenna or cable TV (no box)” on page 18.
- If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see “Checking the digital signal strength” on page 49.
- If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier.

Picture quality is good on some channels and poor on others. Sound is good. | - The problem may be caused by a poor or weak signal from the broadcaster or cable TV provider.
- If you connect to cable or satellite TV without a set-top box and experience poor picture quality, you may need to install a set-top box to improve signal reception and picture quality. Contact your cable or satellite TV provider about upgrading to a set-top box.

Dotted lines or stripes appear on the screen. | - Make sure that the antenna or cable TV is connected correctly and securely. See “Connecting a cable or satellite box” on page 13 or “Connecting an antenna or cable TV (no box)” on page 18.
- If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see “Checking the digital signal strength” on page 49.
- If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier.
- Make sure that the video cables are connected securely to your TV.
- The video cable(s) you are using may be bad. Try a new set.
- Other devices (for example, a surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. After you have determined which device is causing interference, move it further from the TV to eliminate the interference.

Double images. | - Use a highly directional outdoor antenna, cable TV, or satellite TV.

The picture has a few bright or dark spots. | - A few bright or dark spots on an LCD screen is normal. It does not affect the operation of your TV.
### Sharp 42" LED TV

**Remote control**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
</table>
| Remote control does not work. | • Make sure that the power cord is correctly connected to your TV and a power outlet.  
• Make sure that there are no obstructions between the remote control and the remote control sensor on the front of the TV.  
• Point the remote control directly at the remote control sensor on your TV. For the location of the remote control sensor, see "Front" on page 8.  
• The supplied batteries are wrapped tightly in clear plastic. Make sure that you have removed this plastic from the batteries.  
• Make sure that the batteries are installed correctly. See "Installing remote control batteries" on page 36.  
• Replace dead batteries with new batteries. See "Installing remote control batteries" on page 36. |

**General**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
</table>
| No power. | • Make sure that the power cord is correctly connected to your TV and a power outlet.  
• Unplug the power cord, wait 60 seconds, then plug the cord back in and turn on your TV.  
• Other devices (for example, a surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. After you have determined which device is causing interference, move it further from the TV to eliminate the interference. |

---

**Problem**

<table>
<thead>
<tr>
<th>Solution</th>
</tr>
</thead>
</table>
| • Increase the volume.  
• Make sure that the sound is not muted.  
• Make sure that you do not have headphones connected. When headphones are connected, no sound comes from the TV speakers.  
• Make sure that the correct audio mode is selected.  
• Make sure that the audio cables are connected correctly and securely to your TV.  
• Make sure that the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 13 or "Connecting an antenna or cable TV (no box)" on page 18.  
• If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see "Checking the digital signal strength" on page 49.  
• The audio cable(s) you are using may be bad. Try a new set.  
• Make sure that the room is not too bright. Light reflecting off the screen can make the picture difficult to see.  
• If an S-VHS camera or a camcorder is connected while another connected device is turned on, the picture may be poor. Turn off one or more devices.  
• Adjust the contrast, color, and brightness settings. See "Adjusting the TV picture" on page 42.  
• Other devices (for example, a surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. After you have determined which device is causing interference, move it further from the TV to eliminate the interference. |

---

**Problem**

<table>
<thead>
<tr>
<th>Solution</th>
</tr>
</thead>
</table>
| • Do not display a still image, such as a logo, game, or computer image, for an extended period of time. This can cause a permanent after-image to be burned into the screen. This type of damage is not covered by your warranty.  
• Adjust the audio balance. See "Adjusting sound settings" on page 44.  
• Make sure that the audio cables are connected correctly and securely to your TV.  
• Make sure that the correct audio mode is selected.  
• Make sure that the audio cables are connected correctly and securely to your TV.  
• The supplied batteries are wrapped tightly in clear plastic. Make sure that you have removed this plastic from the batteries.  
• Make sure that the batteries are installed correctly. See "Installing remote control batteries" on page 36.  
• Replace dead batteries with new batteries. See "Installing remote control batteries" on page 36.  
• Make sure that the power cord is correctly connected to your TV and a power outlet.  
• Make sure that there are no obstructions between the remote control and the remote control sensor on the front of the TV.  
• Point the remote control directly at the remote control sensor on your TV. For the location of the remote control sensor, see "Front" on page 8.  
• The supplied batteries are wrapped tightly in clear plastic. Make sure that you have removed this plastic from the batteries.  
• Make sure that the batteries are installed correctly. See "Installing remote control batteries" on page 36.  
• Replace dead batteries with new batteries. See "Installing remote control batteries" on page 36.  
• Make sure that the power cord is correctly connected to your TV and a power outlet.  
• Unplug the power cord, wait 60 seconds, then plug the cord back in and turn on your TV.  
• Other devices (for example, a surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. After you have determined which device is causing interference, move it further from the TV to eliminate the interference. |
### Problem | Solution
---|---
**“No signal” error message is displayed.**  
- Press **INPUT** and make sure that you have selected the correct input for the device or service you are trying to use.  
- If you are using a cable or satellite box, use the remote that came with that box to change channels.  
- Make sure that you have the correct input selected to view channels from the cable or satellite box.  
- Press **INPUT** and make sure that you have selected the correct input for the device or service you are trying to use.  
- If you are using a cable or satellite box, use the remote that came with that box to change channels.  
- Make sure that you have the correct input selected to view channels from the cable or satellite box.**  
- Make sure that you have the correct input selected to view channels from the cable or satellite box.**

**After Auto Channel Search, there are no channels.**  
- Reception can vary by channel depending on the broadcast power level of a given station. Contact your cable or satellite TV provider.  
- Make sure that the antenna or cable/satellite TV is connected securely to your TV.  
- Try replacing the cable between the antenna/cable or cable/satellite box and your TV.**

**One or more channels do not display.**  
- Make sure that the channels are not blocked. See “Setting parental control levels” on page 52.  
- Make sure that the channels are not hidden. The channel may have been deleted from the channel list. You can tune to the channel by pressing the number buttons or you can add the channel back to the channel list. See “Hiding channels” on page 48.  
- If you are using a cable or satellite box, use the remote that came with that box to change channels.  
- Make sure that you have the correct input selected to view channels from the cable or satellite box.  
- If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see “Checking the digital signal strength” on page 49.**

**Password is lost.**  
- Enter 9999 to access parental controls, then set a new password. See “Setting or changing the password” on page 50.**

**Some settings cannot be accessed.**  
- If a setting is grayed, the setting is not available in the current video input mode.**

**TV cabinet creaks.**  
- When the TV is in use, the temperature rises naturally and may cause the cabinet to expand or contract which can cause a creaking noise. This is not a malfunction.**

### Problem | Solution
---|---
**Control buttons do not work.**  
- Make sure that the **Button Block** option is set to **Off**. See “Locking control buttons” on page 51.  
- Unplug the power cord, wait a few seconds, then plug the cord back in and turn on your TV.**

**TV keeps turning off.**  
- Make sure that the sleep timer is not turned on. See “Setting the sleep timer” on page 58.**

**A retail banner is displayed.**  
- You selected “Store” mode when you ran the EZ SETUP wizard. Reset your TV to the factory defaults, then select Home on the What is your viewing environment screen. See “Restoring settings to the defaults” on page 68.**

### MHL-enabled device or Roku Streaming Stick

**The mobile device does not charge when connected to the HDMI 2/MHL jack.**  
- Make sure that the MHL cable is connected securely to your TV and the device.  
- Make sure that you are using an MHL cable. An MHL cable may be difficult to identify. It may look like a micro USB-to-HDMI cable because the cable connectors are the same, but the cable itself is thinner. The cable also may not be labeled MHL.**

**My TV is not displaying the video or playing the audio from the connected mobile device.**  
- Make sure that the MHL cable is connected securely to your TV and the device.  
- Make sure that you are using an MHL cable. An MHL cable may be difficult to identify. It may look like a micro USB-to-HDMI cable because the cable connectors are the same, but the cable itself is thinner. The cable also may not be labeled MHL.  
- Try adjusting the picture settings on your TV.  
- Some apps may not work on your TV, depending on how the app developer programmed the app.**
<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
</table>
| My TV is playing the audio from a connected device but is not displaying the video. | • Make sure that the MHL cable is connected securely to your TV and the device.  
• Make sure that you are using an MHL cable. An MHL cable may be difficult to identify. It may look like a micro USB-to-HDMI cable because the cable connectors are the same, but the cable itself is thinner. The cable also may not be labeled MHL.  
• Try adjusting the picture settings on your TV.  
• Some apps may not work on your TV, depending on how the app developer programmed the app. |

<table>
<thead>
<tr>
<th>CEC-compatible device</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem</strong></td>
</tr>
</tbody>
</table>
| My TV is not displaying the video from the connected CEC device. | • Make sure that the HDMI cable is connected securely to your TV and the device.  
• Make sure that the device is connected to your TV with an HDMI cable.  
• Make sure that the device is a CEC-compatible device. See the documentation that came with the device for more information.  
• Make sure that the correct video input source is selected. See "Selecting the video input source" on page 39.  
• Make sure that the CEC Control feature is turned on. See "Turning CEC Control on or off" on page 59.  
• Try adjusting the TV picture. See "Adjusting the TV picture" on page 42.  
• If the device is not a Sharp device, it may not be compatible with your TV. |
| My TV is not playing the audio from the connected CEC device. | • Make sure that the HDMI cable is connected securely to your TV and the device.  
• Make sure that the device is connected to your TV with an HDMI cable.  
• Make sure that the device is a CEC-compatible device. See the documentation that came with the device.  
• Make sure that the TV volume is turned up and not muted.  
• Try adjusting the TV sound. See "Adjusting sound settings" on page 44.  
• Make sure that the TV speakers are turned on and not muted. See "Adjusting sound settings" on page 44.  
• Make sure that the CEC control feature is turned on. See "Turning CEC Control on or off" on page 59.  
• If you have connected an HDMI CEC audio receiver, adjust the volume on the receiver. When your TV detects an audio receiver, the TV speakers turn off and sound plays through receiver speakers only. |
<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
</table>
| My TV's remote control does not control the device.                    | • Make sure that there are no obstructions between the remote control and the remote control sensors on your TV and the device.  
  • If the device is not a Sharp device, all the buttons may not work.  
  • Make sure that the CEC Control feature is turned on. See “Turning CEC Control on or off” on page 59.  
  • If you are trying to control the volume on an HDMI CEC audio receiver using your TV remote control, make sure that the Audio Return Channel option on the CEC menu is set to On. See “Turning Audio Return Channel on or off” on page 61.  
  • The device may not support this feature. See the documentation that came with the device for more information. |
| The device does not show up in the CEC Device list.                    | • Make sure that the device is turned on.  
  • Make sure that the HDMI cable is connected securely to your TV and the device.  
  • Make sure that the device is connected to your TV with an HDMI cable.  
  • Make sure that the CEC Control feature is turned on. See “Turning CEC Control on or off” on page 59.  
  • Make sure that the device is a CEC-compatible device. See the documentation that came with the device.  
  • If the device is not a Sharp device, it may not be compatible with your TV. |
| My device does not turn off when I turn off my TV.                     | • Make sure that the CEC Control feature is turned on. See “Turning CEC Control on or off” on page 59.  
  • Make sure that Device Auto Power Off is set to On on the CEC menu. See “Turning Device Auto Power Off on or off” on page 60.  
  • The device may not support this feature. See the documentation that came with the device for more information. |
| My TV does not turn on when I turn on my device.                       | • Make sure that the CE Control feature is turned on. See “Turning CEC Control on or off” on page 59.  
  • Make sure that TV Auto Power On is set to On on the CEC menu. See “Turning TV Auto Power On on or off” on page 60.  
  • The device may not support this feature. See the documentation that came with the device for more information. |
| The Audio Return Channel setting on the CEC menu keeps turning back on after it is turned off. | • When Audio Return Channel is set to Off and CEC Control is set to On and you adjust the volume on the audio receiver, Audio Return Channel is automatically set to On. To prevent this from happening, turn off the CEC Control feature. See “Turning CEC Control on or off” on page 59. |
| I cannot select the Root Menu option on the CEC menu.                  | • The device may not support this feature. See the documentation that came with the device for more information. |

**Note**

If the problem is not solved by using these troubleshooting instructions, turn off your TV, then turn it on again.
Specifications
Specifications are subject to change without notice.

Dimensions and weight

<table>
<thead>
<tr>
<th>Without stand</th>
<th>With stand</th>
</tr>
</thead>
<tbody>
<tr>
<td>38.1 × 23.1 × 2.5 in. (96.8 × 58.7 × 6.4 cm)</td>
<td>38.1 × 24.8 × 9.3 in. (96.8 × 62.3 × 23.5 cm)</td>
</tr>
<tr>
<td>25.1 lb. (11.5 kg)</td>
<td>25.9 lb. (11.8 kg)</td>
</tr>
</tbody>
</table>

Screen

Screen size measured diagonally: 42 in.

Display type: LED

Screen refresh rate: 120Hz

Display resolution: 1080p

Panel resolution: 1920 (H) × 1080 (V)

Aspect ratio: 16:9

Contrast ratio (typical): 3000:1

Dynamic contrast ratio (list value): 2,000,000:1

TV Brightness (minimum): 220 nits

Comb filter: 3d y/c digital

Response time: 6.5 ms

Horizontal viewing angle: 178°

Vertical viewing angle: 178°

HDMI suggested resolutions: 1080p, 1080i, 720p, 480p, 480i

Component video suggested resolutions: 1080i, 720p, 480p, 480i

Display resolutions

<table>
<thead>
<tr>
<th>HDMI suggested resolutions</th>
<th>Component video suggested resolutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1080p, 1080i, 720p, 480p, 480i</td>
<td>1080i, 720p, 480p, 480i</td>
</tr>
</tbody>
</table>

Tuner

Analog: NTSC

Digital: ATSC, D-VHS, Clear QAM

Inputs

HDMI: 3 (side)

Component video: 1 (back)

Composite video: 1 (back)

Shared audio (component and composite): Yes

S-Video: No

PC/VGA: 1 (back)

3.5mm PC audio input: 1 (back)

DVI: 1 (side)

USB: 1 (side)

Antenna/Cable: 1 (side)

Note

The length of the wall-mount screws vary depending on the wall-mount bracket you purchased. See the instructions that came with the wall-mount bracket for screw lengths.

Outputs

<table>
<thead>
<tr>
<th>Video</th>
<th>Analog audio/Headphone</th>
<th>Digital audio</th>
<th>WiFi</th>
<th>Ethernet</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1 (side)</td>
<td>1 (optical (back))</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

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Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

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Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Audio

DTS Tuning Package: DTS Sound

Speakers: Number 2

Watts per channel: 10W

Power

Power consumption: On: 84W

Standby: <1W

Power input: AC 120 V, 60Hz

Miscellaneous

OSD languages: English, French, Spanish

MHL-enabled: Yes (HDMI 2/MHL jack)

ENERGY STAR qualified: Yes

Internet connectable: No

Antenna/Cable: 1 (back)

Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)

Ethernet: No

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Video: No

Analog audio/Headphone: 1 (side)

Digital audio: 1 (optical) (back)
Programming universal remote controls

You can operate your Sharp TV with a new or existing universal remote control.

To program a universal remote control:
1 See the table in “Common universal remote control codes” for common codes. If you have problems programming your remote or need a different remote control code, see the remote control manufacturer’s website for the latest remote control code information.
2 Follow your universal remote control’s instructions to enter the TV code you found in Step 1.

For additional help and information:
• Visit the remote control manufacturer’s website
• Call technical support for the universal remote control or cable/satellite company of the remote/set-top box you are trying to program.

Common universal remote control codes

The following is a list of the most common remote control codes. Check the remote control manufacturer’s website or check with your cable or satellite TV provider for the remote control code.

**UNIVERSAL REMOTE TV CODES**

<table>
<thead>
<tr>
<th>CABLE BOX, SATELLITE BOX, OR OTHER SET-TOP BOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cablevision:</td>
</tr>
<tr>
<td>004, 014, 019, 022, 028, 081, 127, 236, 251, 496</td>
</tr>
<tr>
<td>Charter:</td>
</tr>
<tr>
<td>004, 014, 016, 019, 022, 023, 024, 025, 026, 027, 028, 029, 081, 093, 127, 175, 143, 251, 236, 393, 395, 409, 496, 0039, 0093, 0165, 0386, 0491, 0688, 0889, 0851, 1917, 10093, 10165, 10386, 10688, 10851, 10818, 11602, 10818, 12360</td>
</tr>
<tr>
<td>Comcast:</td>
</tr>
<tr>
<td>0093, 0165, 10032, 10036, 10093, 10153, 10165, 10386, 10398, 10491, 10851, 10854, 11089, 11407, 11602</td>
</tr>
<tr>
<td>Cox:</td>
</tr>
<tr>
<td>002, 008, 049, 050, 051, 052, 070, 071, 072, 073, 098, 102, 107, 139, 166, 167, 179, 0039, 0093, 0153, 0157, 0165, 0202, 0281, 0386, 0398, 0491, 0630, 0688, 0689, 0818, 0851, 1004, 1006, 1010, 1022, 1025, 1079, 1093, 1094, 1095, 1100, 1137, 1139</td>
</tr>
</tbody>
</table>

**UNIVERSAL REMOTE CONTROLS**

| One for All                           |
| 0039, 0093, 0157, 0165, 0386, 0688, 0899, 0818, 10093, 10818, 20048, 20848 |
| Phillips:                             |
| 0002, 0111, 0202, 0224, 0226, 0502, 0509, 0603, 0813, 0907, 0913, 2550 |
| RCA:                                 |
| 005, 008, 018, 020, 067, 077, 083, 089, 097, 10093, 10818, 12360 |
| Sony:                                |
| 00093, 00650, 00653, 00818, 01193, 01393, 01650 |

**Tips**

• The brand name is often visible on the front of the universal remote control, and the model number is often visible on the back.
• If your universal remote control isn’t listed on the chart, refer to your universal remote control’s instructions and try codes for the brands Orion, Emerson, Memorex, Sansui, Sylvania, or Zenith. You may need to try several codes before finding a match.
Legal notices

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

Warning

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

Cables

Connections to this device must be made with shielded cables with metallic RF/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Canadian Notice

CAN ICES-3 (B)/NMB-3(B)
Standard Television Receiving Apparatus – Appareil de réception télévision ordinaire, NORMES CANADIENNES BETS-7 / NTMR-7

IC Statement

This device complies with Industry Canada licence-exempt RSS standards.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

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MHL™ (Mobile High-Definition Link)

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Energy Star

Your Sharp TV is ENERGY STAR® qualified in the “Standard” mode. It meets strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and Department of Energy. ENERGY STAR is a joint program of these government agencies, designed to promote energy efficient products and practices. Changes to certain features, settings, and functionalities of this TV (i.e. Picture, Sound) can increase or change the power consumption. Depending upon such changed settings, the power consumption may exceed the limits required for the ENERGY STAR qualification in the “Standard” mode.

www.sharpusa.com 77
One-year limited warranty - Sharp Televisions

Definitions:
Best Buy ("Warrantor") warrants to you, the original purchaser of this new Sharp-branded television ("Product"), that the Product shall be free of defects in the original manufacture of the material or workmanship for a period of one (1) year from the date of your purchase of the Product ("Warranty Period"). For this warranty to apply, your Product must be purchased in the United States from a Best Buy retail location or www.bestbuy.com.

How long does the coverage last?
The Warranty Period lasts for 1 year (365 days) from the date you purchased the Product. Your purchase date is printed on the receipt you received with the Product.

What does this warranty cover?
During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Warrantor repair center or store personnel, Warrantor will (at its sole option): (1) repair the Product with new or rebuilt parts, or (2) replace the Product at no charge. In the event replacement is required, and no parts are available, your product will be replaced with a similar model of equal value. The replacement Product remains under warranty for the balance of the Warranty Period. If replacement is not available, you may return the Product for a refund of the purchase price. For Products purchased in Canada, please refer to the warranty information in the English language located on page 78.

How to obtain warranty service?
If you purchased the Product at a Best Buy Retail store location or www.bestbuy.com and your television Product has a screen size of less than 42 inches, please take your original receipt and the Product to a Best Buy Retail store. If you call, you must tell the repair service operator the serial number of your Product. If you purchased the Product at a store other than a Best Buy Retail store, please consult your store's warranty policy.

Where is the warranty valid?
This warranty is valid only in the United States at Best Buy Retail locations or www.bestbuy.com. Warrantor will not be held liable for the Product while in the possession of Best Buy or while in transit to or from Best Buy. This warranty applies only to you, the original purchaser of the Product. You must retain the original receipt as evidence of purchase to prove the Warranty Period. Warrantor is not responsible for warranty service if the serial number is altered, defaced, or missing.

What does the warranty not cover?
This warranty does not cover:
• Customer instruction/education
• Installation
• Set up adjustments
• Cosmetic damage
• Damage due to acts of God, such as power surges
• Accidents
• Mice, unintentional or intentional
• Abuse, unintentional or intentional
• Negligence
• Commercial purposes/use, including but not limited to use in a place of business or in communal areas of a multiple dwelling condominium or apartment complex, or otherwise used in a place of other than a private home
• Modification of any part of the Product, including the antenna
• Damage due to incorrect operation or maintenance
• Connection to an incorrect voltage or power supply
• Defects, static or other problems with over-the-air reception of the television broadcast signals.
• Attempted repair by any person not authorized by Warrantor to service the Product
• Products sold "as is" or "with all faults"
• Consumables, including but not limited to batteries (i.e. AA, AAA, C, etc.)
• Products where the factory applied serial number has been altered or removed
• Loss or Theft of this product or any part of the product
• Problems with delay in motion or action of video images while playing first-person style video games.

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Product support (855) 544-2030

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