Models: SB-V-43-4KHDR
SB-V-55-4KHDR
SB-V-65-4KHDR
Dear SunBrite Customer:

Congratulations on the ownership of your SunBrite all-weather outdoor LCD TV, and welcome to the family of satisfied SunBrite customers. You are in great company, with thousands of homeowners and esteemed commercial facilities such as Yankee Stadium, Fenway Park, Disney World, and Sea World who have trusted us to deliver superior performance, lasting durability and the enjoyment of superb television viewing in the great outdoors.

Our products are designed to withstand the rigors of the outdoor environment and provide our customers with many years of optimum viewing, while delivering excellent picture and sound as well as the ease of use and convenience of conventional indoor TVs.

To ensure safety and long product life, please read the Important Safety Instructions and complete manual carefully before using the TV. If you have any questions about the installation procedures, please contact our qualified SunBrite Customer Support Team at 866.357.8688.

---

**Important Safety Instructions**

**WARNING:**

This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer, and [name of one or more chemicals], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

---

**FCC Compliance Statement**

The 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.

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

**FCC Radiation Exposure Statement:** This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

**Industry Canada Statement**

This Class B digital apparatus complies with Canadian ICES-003 Class B limits for radio interference as set out in the Radio Interference Regulations of the Canadian Department of Communications.

**Note to CATV system installer:** This reminder is provided to call the CATV system installer's attention to Article 820 of the National Electrical Code that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

---

**WARNING:**

This product can expose you to chemicals including [name of one or more chemicals], which is [are] known to the State of California to cause cancer, and [name of one or more chemicals], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
Important Safety Instructions

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However improper use can result in electric shock or fire. In order to prevent potential danger, please observe the following instructions when installing, operating, and cleaning this product. Always follow the manufacturer's instructions when installing or cleaning the remote control, especially the Liquid Crystal Television. Please read the following precautions carefully before using the product.

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. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. 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.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
10. Only use attachments/accessories specified by the manufacturer, or sold with the apparatus.
11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. 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.

Additional Safety Information

13. Power Source—The product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power source in your home, consult your product dealer or local power company. For products intended to operate from batteries, other sources, refer to the operating instructions.
14. Overloading—Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry—Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
16. Damage Requiring Service—Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
   a. When the AC cord or plug is damaged.
   b. If liquid has been spilled, or objects have fallen into the product.
   c. If the product has been exposed to rain or moisture.
   d. If the product does not operate normally by following the operating instructions.
   e. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
17. Do not display a still picture for an extended period of time. The following symptoms may appear when using the product around children: 
   a. Do not display a still picture for a long time as this could cause an afterimage to remain.
   b. To prevent TV or show returns, do not expose this product to dripping or splashing.
   c. Do not insert foreign objects into the product. Inserting objects in the air vents or other openings may result in fire or electric shock.
   d. Use caution when using the product around children.

Procedures when transporting the TV

When moving the TV, be very careful to avoid any obstacles, and try to maintain uniform pressure on the display. Be sure to always carry the TV by two people holding it with two hands.

Caring for the cabinet

Use a soft cloth (cotton, flannel, etc.) and gently wipe the outside of the cabinet. Do not use benzine, thinner, or any other volatile liquid for cleaning. If the cabinet is very soiled, wipe it with a soft cloth (cotton, flannel, etc.) soaked in neutral detergent diluted with water and thoroughly wrung out, and then wipe with a dry soft cloth.

Avoid using cleaning materials, aerosol, and other solvents, as these may deform the cabinet and cause the paint to peel off.

Do not expose the cabinet to rain, moisture, or other liquids.

Do not place the cabinet in contact with rubber or vinyl products for a long period of time. Rubber dust may be removed with a damp cloth. Ask water to a soft cloth before cleaning.

Caring for the front panel

1. Turn off the main power supply and unplug the AC cord from the wall outlet before handling.
2. Gently wipe the surface of the front panel with a soft cloth (cotton, flannel, etc.)
3. Protect the front panel, cotton, do not use a dirty cloth, liquid cleanser, or a material cloth, do not use alcohol.
4. Wiping with a hard cloth or using strong force may scratch the surface of the front panel or cause damage.
5. Use a soft damp cloth to gently wipe the front panel when it is dirty. It may scratch the surface of the front panel if wiped strongly.
6. If the front panel is dirty, you can wipe the front panel with a liquid cleaner, which is commercially available, to clean it.
7. To prevent scratching the frame or screen, please use a soft, lint free cloth for cleaning.

Outdoor Antenna Grounding—If an outdoor antenna is connected to the television equipment, be sure the antenna system is grounded to prevent voltage surges and static charges built up on the antenna system itself. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information regarding proper grounding of the antenna system, including grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, skywire grounding, grounding of lightning arresters, and requirements for the grounding electrode.

Water and Moisture—Do not use this product near water—e.g., near a bathtub, washbowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like. Exposure to water or moisture may cause a short circuit, electric shock, and fire.

Lighting—If an additional protection for this television equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product from lightning or electrical surges. Power Lines—An outside antenna system should be located as high and as far from power lines as possible.

Rear View Mirror Mounting—Do not install the television on a rear view mirror. This may result in a fire, electric shock, and/or personal injury.

To prevent fire or shock hazards, do not place the AC cord under the TV set or other heavy items.

CHILD SAFETY:
PROPER TELEVISION PLACEMENT MATTERS

The Consumer Electronics Industry CARES

Manufacturers, retailers and the entire consumer electronics industry are committed to making home entertainment safe and enjoyable.

As you enjoy your television, please note that all televisions—new and old—must be used with proper care and carelessness to avoid any accidents associated with televisions, including those associated with entertainment centers, bookshelves, shelves, consoles, speakers, chests, stands, etc. may fall over, resulting in property damage, personal injury, or death.

TUNE IN TO SAFETY

ALWAYS follow the manufacturer’s recommendations for the safe installation of your television.

ALWAYS test and familiarize all household members with the correct use of the remote control.

ALWAYS keep all TV accessories out of children’s reach.

NEVER place the television on furniture that can be used as steps, such as a chest of drawers.

NEVER place the television where it cannot be pushed, pulled over, or pulled down.

NEVER place cords and cables connected to the television so that they cannot be tripped over, pulled or grabbed.

WALL OR CEILING MOUNT YOUR TELEVISION

ALWAYS contact your dealer about professional installation if you have any doubts about your ability to safely install your television.

ALWAYS use a mount that has been recommended by the television manufacturer and/or one that is UL listed. Always follow all instructions supplied by the television and mount manufacturers.

ALWAYS make sure that the wall or ceiling where you are mounting the television is appropriate. Some stands are not designed to be mounted to walls and ceilings with steel studs or other locations, such as cement, block, concrete, or masonry. You should use only UL-listed mounts approved by the manufacturer for your TV.

TELEVISIONS CAN BE HEAVY. A Minimum of two people should be used to lift and install television. Injuries can result when inadequate resources are used alone.

MOVING AN OLDER TELEVISION TO A NEW PLACE IN YOUR HOME

Many new television buyers move their older CRT televisions into a secondary room after the purchase of a flat panel television. Special care should be made to this older CRT television:

ALWAYS place your older CRT television in a room that is stable and appropriate for this older CRT television model.

NEVER place your older CRT television on an area where children may be tempted to use the television to climb.

ALWAYS make sure your older CRT television does not hang over the edge of your furniture.

CFL or LED Bulbs

CFL or LED Bulbs are also known as Mercury-Free Rapid Start and Mercury-Free Plug-in ballasts. What makes them different? They’re all energy efficient, but only CFLs use mercury. LED and mercury-free ballasts use a lower wattage so they use less energy. Do they work as well? LED and mercury-free ballasts work just as well as CFLs. Do they last as long? LED and mercury-free ballasts are much more durable than CFLs. Do they cost more? LED and mercury-free ballasts are more expensive than CFLs.

CFLs (Compact Fluorescent Lamp) are also known as Mercury-Free Mercury-Plug in ballasts. What makes them different? They’re all energy efficient, but only CFLs use mercury. LED and mercury-free ballasts use a lower wattage so they use less energy. Do they work as well? LED and mercury-free ballasts work just as well as CFLs. Do they last as long? LED and mercury-free ballasts are much more durable than CFLs. Do they cost more? LED and mercury-free ballasts are more expensive than CFLs.

CFLs (Compact Fluorescent Lamp) are also known as Mercury-Free Mercury-Plug in ballasts. What makes them different? They’re all energy efficient, but only CFLs use mercury. LED and mercury-free ballasts use a lower wattage so they use less energy. Do they work as well? LED and mercury-free ballasts work just as well as CFLs. Do they last as long? LED and mercury-free ballasts are much more durable than CFLs. Do they cost more? LED and mercury-free ballasts are more expensive than CFLs.

CFLs (Compact Fluorescent Lamp) are also known as Mercury-Free Mercury-Plug in ballasts. What makes them different? They’re all energy efficient, but only CFLs use mercury. LED and mercury-free ballasts use a lower wattage so they use less energy. Do they work as well? LED and mercury-free ballasts work just as well as CFLs. Do they last as long? LED and mercury-free ballasts are much more durable than CFLs. Do they cost more? LED and mercury-free ballasts are more expensive than CFLs.
Cleaning Instructions: See “Care of SunBrite” on page 46.

Attachments: Do not use attachments not specifically recommended by the manufacturer. Use of improper attachments can result in accidents.

Power Source: SunBrite must operate on a power source indicated on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company. When using the TV outdoors, you must use a GFI-protected AC outlet with “in-use” waterproof cover.

Installation: Do not place the product on an unstable cart, stand, tripod, table, or anywhere the unit is not permanently installed. Placing the product on an unstable place can cause the product to fall, resulting in potential serious personal injuries, as well as damage to the product.

Precautions when Transporting the TV: Carrying the television requires at least two people.

Ventilation: Adequate ventilation must be maintained to ensure reliable and continued operation and to protect the television from overheating. There must be at least 1.5” of space on all sides. Do not install inside an enclosure, Kisok, etc.

Power cord protection: The power cord must be routed properly to prevent people from stepping on it, or objects from resting on it. Check the cords at the plugs and product.

Power source: This product must operate on a power source specified on the specification label. If you are unsure of the type of power supply used in your home, consult your dealer or local power company.

Do not let metal pieces or objects of any kind fall into the television from ventilation holes. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts.

Do not mount SunBrite near a motor or transformer where strong magnetism is generated. Images on the television will become distorted and the color irregular.

Do not mount SunBrite near heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).

Do not submerge SunBrite in water: The SunBrite will resist water exposure from normal rain, sprinklers, garden hoses, etc.; however, it is not designed to be submerged in water.

Do not pressure-wash SunBrite: SunBrite will resist water exposure from normal rain, sprinklers, garden hoses, etc.; however, it is not designed to withstand pressure washers, high-pressure water jets, or hurricane-type weather.

Do not service SunBrite yourself: Removal of the television screen cover may expose you to high voltage or other dangerous risks. Refer all servicing to a qualified service professional. Warranty will not be honored if you service the unit yourself.

Repair: If any of the following conditions occurs, unplug the power cord, and call a qualified service professional to perform repairs:

- When power cord or plug is damaged.
- When objects have fallen into the product.
- If unit was submerged in water or pressure-washed.
- When product does not operate properly as described in the operating instructions. Do not touch the controls other than as described in the operating instructions. Improper adjustments of controls not described in the instructions can cause damage, which can require extensive repair work by a qualified technician.
- When the product has been dropped or damaged.
- When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.

Replacement parts: In case the product needs replacement parts, make sure that the service person uses replacement parts provided by SunBrite. Use of unauthorized parts can result in fire, electric shock and/or other danger.

Safety checks: Upon completion of service or repair work, ask the service technician to perform safety checks to ensure that the product is in proper operating condition.
## Table of Contents

**CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important Safety Instructions</td>
<td>2</td>
</tr>
<tr>
<td>Part Names</td>
<td>6</td>
</tr>
<tr>
<td>Remote Control Unit</td>
<td>7</td>
</tr>
<tr>
<td>Displaying an External Equipment Image</td>
<td>9</td>
</tr>
<tr>
<td>Watching TV</td>
<td>10</td>
</tr>
<tr>
<td>Initial Installation</td>
<td>10</td>
</tr>
<tr>
<td>Direct Button Operation</td>
<td>12</td>
</tr>
<tr>
<td>Changing Channels</td>
<td>12</td>
</tr>
<tr>
<td>MUTE</td>
<td>13</td>
</tr>
<tr>
<td>Channel Return</td>
<td>14</td>
</tr>
<tr>
<td>AUDIO</td>
<td>15</td>
</tr>
<tr>
<td>Sleep Timer</td>
<td>16</td>
</tr>
<tr>
<td>Sound Mode</td>
<td>17</td>
</tr>
<tr>
<td>Picture Mode</td>
<td>18</td>
</tr>
<tr>
<td>Closed Captions and Digital Closed Captions</td>
<td>19</td>
</tr>
<tr>
<td>ASPECT MODE</td>
<td>21</td>
</tr>
<tr>
<td>For HD programs</td>
<td>21</td>
</tr>
<tr>
<td>On-Screen Display Menu</td>
<td>24</td>
</tr>
<tr>
<td>On-Screen Display Menu Operation</td>
<td>25</td>
</tr>
<tr>
<td>Menu Operation Buttons</td>
<td>26</td>
</tr>
<tr>
<td>Audio</td>
<td>27</td>
</tr>
<tr>
<td>Picture</td>
<td>28</td>
</tr>
<tr>
<td>Advanced Picture</td>
<td>29</td>
</tr>
<tr>
<td>Link</td>
<td>30</td>
</tr>
<tr>
<td>System</td>
<td>31</td>
</tr>
<tr>
<td>System</td>
<td>32</td>
</tr>
<tr>
<td>USB Photo/Music/Video Playback</td>
<td>33</td>
</tr>
<tr>
<td>Preparation</td>
<td>33</td>
</tr>
<tr>
<td>CAUTION:</td>
<td>33</td>
</tr>
<tr>
<td>Selecting the Folders to Play Back</td>
<td>34</td>
</tr>
<tr>
<td>Playing Back Files on a USB Memory Device</td>
<td>36</td>
</tr>
<tr>
<td>Music Mode</td>
<td>38</td>
</tr>
<tr>
<td>Video Mode</td>
<td>39</td>
</tr>
<tr>
<td>Using LINK Operation</td>
<td>40</td>
</tr>
<tr>
<td>Controlling HDMI Equipment Using LINK CEC Operation</td>
<td>40</td>
</tr>
<tr>
<td>Appendix</td>
<td>42</td>
</tr>
<tr>
<td>TV Stand</td>
<td>42</td>
</tr>
<tr>
<td>Optional Speaker Bar</td>
<td>43</td>
</tr>
<tr>
<td>Mounting the TV on the Wall</td>
<td>44</td>
</tr>
<tr>
<td>Caring for the LCD Panel</td>
<td>46</td>
</tr>
<tr>
<td>Troubleshooting</td>
<td>47</td>
</tr>
<tr>
<td>Specifications</td>
<td>49</td>
</tr>
</tbody>
</table>
Part Names

TV
(Front)

(Side)

Remote Control Sensor
Power Indicator

* See page 8 for button operations.

Caution
When using the ethernet port for IP control, connect the cable to the network switch before connecting to the SunBriteTV ethernet port.

SPEAKER BAR OUTPUT.
- See page 43 for optional speaker bar connection.
- ARC See page 41 for details on the Audio Return Channel.
- See page 9 for details on the Input Select function.

Note: The illustrations and on-screen displays in this operation manual are for explanation purposes and may vary slightly from the actual operations.
Remote Control Unit

Note: SunBrite TVs use the Sony TV IR codeset. When programming a universal remote or control system try Sony IR codes if SunBrite TV codes are not listed.

1  POWER ON: Switch the TV power on.
2  POWER OFF: Switch the TV power off.
3  0–9: Set the channel.
4  - (Dash): Set a digital channel.
5  FREEZE: Freeze not supported on Veranda 2 series
6  VOL+/-: Set the volume.
7  ▲▼◄►, ENTER: Select a desired item on the screen.
8  SOUND: Change sound preset modes.
9  PICTURE: Change picture settings preset modes.
10 INFO: Display the channel or source information.
11 CC: Display captions from a closed-caption source.
12 SLEEP: Set the sleep timer.
13 EXIT: Turn off the menu screen.
14 ASPECT: Select the screen aspect.

Note: When using the remote control unit, point it at the TV.
NOTE
When using the remote control unit, point it at the TV.

**Note:** SunBrite TVs use the Sony TV IR codeset. When programming a universal remote or control system try Sony IR codes if SunBrite TV codes are not listed.

15  RETURN: Return to the previous channel.
16  MUTE: Mute the sound.
17  CH+/-: Select the channel.
18  MENU: Display the menu screen.
19  MTS: Selects the MTS/SAP or the audio mode during multichannel audio broadcasts. (Antenna/Cable only)
20  BACK: Return to the previous menu screen.
21  INPUT: Select a TV input source.
22  SHIFT: Press and hold this button then press buttons 0-9 to directly select TV input.

<table>
<thead>
<tr>
<th>Shift-0</th>
<th>TV Tuner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift-1</td>
<td>VIDEO</td>
</tr>
<tr>
<td>Shift-2</td>
<td>N/A</td>
</tr>
<tr>
<td>Shift-3</td>
<td>HDMI 3</td>
</tr>
<tr>
<td>Shift-4</td>
<td>USB</td>
</tr>
<tr>
<td>Shift-5</td>
<td>Component</td>
</tr>
<tr>
<td>Shift-6</td>
<td>N/A</td>
</tr>
<tr>
<td>Shift-7</td>
<td>N/A</td>
</tr>
<tr>
<td>Shift-8</td>
<td>HDMI 1</td>
</tr>
<tr>
<td>Shift-9</td>
<td>HDMI 2</td>
</tr>
<tr>
<td>Shift-ON</td>
<td>Power Toggle</td>
</tr>
</tbody>
</table>
Displaying an External Equipment Image

To view external source images, select the input source by pressing INPUT on the remote control unit or on the TV.

1. Press INPUT.
   The INPUT list screen displays.
2. Press / to select the input source.
   An image from the selected source automatically displays.

You can also select the input source by pressing INPUT. Each time INPUT is pressed, the input source toggles.

TV > HDMI1 > HDMI2 > HDMI3 > MMP(USB) > PC > VIDEO > COMPONENT > TV

Note: Video and Component will only display when a source signal is applied to the input.
Watching TV

INITIAL INSTALLATION

Perform the following steps before you press POWER on the remote control unit.

1. Insert the batteries into the remote control unit.
2. Connect the antenna cable to the TV.
3. Plug in the AC cord to the AC outlet.

Select Antenna or Cable

1. Press ▲▼ to select and then press ENTER.

2. Select Start if you will be using Antenna or Cable input, otherwise select Skip.
Watching TV

INITIAL INSTALLATION (CONTINUED)

3. The tuner will scan for available channels and store them into memory. This process can take from 3-10 minutes.

4. When the scan process is complete, select exit setup.
Direct Button Operation

CHANGING CHANNELS
You can change channels in several ways.

Method 1
Using CH +/- on the remote control unit or on the TV.

Method 2
Using remote control buttons 0-9, - (Dash).

Examples:
To select a 1 or 2-digit channel number (e. g., Channel 5):
Press 5 ➔ ENTER
To select a 3-digit channel number (e. g., Channel 115):
Press 1 ➔ 1 ➔ 5 ➔ ENTER
To select a 4-digit channel number (e. g., Channel 22.1):
Press 2 ➔ 2 ➔ - (Dash) ➔ 1 ➔ ENTER

Method 3
Selecting the program from the Channel list.
1. Press INPUT on the remote control unit.
   The INPUT list displays.
2. Press ▲/▼ to select AIR or CABLE.
   The Channel list displays.
3. Press ▲/▼ to select the desired channel, and then press ENTER.

Note:
• When selecting a 1-digit channel number, it is not necessary to press 0 before the number.
• When you enter 0-9 only, channel selection will be made if there is no operation within a few seconds.
• If you push “0” by itself, nothing will happen.
• Complete the above steps within a few seconds.
• When you enter 0-9 and - (Dash), channel selection will be made if there is no operation within a few seconds.

CHANGING VOLUME
You can change the volume by pressing VOL+/-. on the TV or on the remote control unit.
To increase the volume, press VOL +.
To decrease the volume, press VOL -.
Direct Button Operation

**MUTE**
Mutes the current sound output.
Press MUTE.
� will be displayed on the screen, and the sound is silenced.
Direct Button Operation

CHANNEL RETURN

- Press R (Ch Return) to switch to the previously tuned channel.
- Press R (Ch Return) again to switch back to the currently tuned channel.
- Note: R (Ch Return) will not work if no channel has been changed after the TV is turned on
Direct Button Operation

AUDIO

MTS/SAP stereo mode

The TV has a feature that allows reception of sound other than the main audio for the program. This feature is called Multi-channel Television Sound (MTS). The TV with MTS can receive mono sound, stereo sound and Secondary Audio Programs (SAP). The SAP feature allows a TV station to broadcast other information, which could be audio in another language or something completely different like weather information.

You can enjoy Hi-Fi stereo sound or SAP broadcasts where available.

- **Stereo broadcasts**: View programs like live sporting events, shows and concerts in dynamic stereo sound.
- **SAP broadcasts**: Receive TV broadcasts in either MAIN or SAP sound.
- **MAIN sound**: The normal program soundtrack (either in mono or stereo).
- **SAP sound**: Listen to a second language, supplementary commentary or other information. (SAP is mono sound.)

If stereo sound is difficult to hear:

- Obtain a clearer sound by manually switching to fixed mono-sound mode.

You can change MTS as shown below to match the television broadcast signal.

Press AUDIO to toggle between audio modes.

**Examples: when receiving MTS and SAP**

<table>
<thead>
<tr>
<th>Mode</th>
<th>ST(SAP) → SAP(ST) → MONO</th>
<th>STEREO ↔ MONO</th>
<th>MAIN ↔ SAP</th>
<th>MONO mode:</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEREO mode:</td>
<td></td>
<td></td>
<td></td>
<td>MONO</td>
</tr>
<tr>
<td>STEREO + SAP mode:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAIN + SAP mode:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MONO mode:</td>
<td></td>
<td></td>
<td></td>
<td>MONO</td>
</tr>
</tbody>
</table>

Digital broadcasting audio mode

The types of audio transmitted in a digital broadcast include SURROUND as well as MONO and STEREO. In addition, it is possible for multiple audio tracks to accompany a single video track.

Press ENTER to toggle between audio modes.

**Example: when receiving Digital broadcasting**

STEREO (Audio1) → STEREO (Audio2)

SURROUND (Audio3) ↔

**Note**: MTS only operates while in TV mode
**SLEEP TIMER**

Allows you to set a time when the TV automatically switches to standby.

Press **SLEEP**.

- The remaining time displays when the sleep timer has been set.
- Each time you press **SLEEP**, the remaining time switches as shown below.
- Highlight the desired selection and press enter.
Direct Button Operation

**SOUND MODE**

Sound MODE gives you several audio setting options to choose from to best match the surrounding environment of the TV, which can vary due to factors like listening environment, type of program watched or the type of device connected.

Press **SOUND**. Sound menu OSD displays.

- Press Sound again or use the up and down arrow keys to highlight the desired selection
- Press enter to select the desired sound mode
On-Screen Display Menu

PICTURE MODE

Picture mode gives you several viewing options to choose from to best match the surrounding environment of the TV, which can vary due to factors like ambient light, type of program watched or the type of device connected.

Press **Picture** button. Current picture mode displays.

**Standard:** For a highly defined image in a normal lighting.

**Movie:** For a movie.

**Vivid:** For a clear-cut image emphasizing high contrast, useful for sports viewing.

**Game:** Gaming.

**User:** Custom user profile settings.

**PC:** For PC.
CLOSED CAPTIONS AND DIGITAL CLOSED CAPTIONS

Your TV is equipped with an internal Closed Caption decoder. It allows you to view conversations, narration and sound effects as subtitles on your TV. Closed Captions are available on some TV programs and on some VHS home video tapes at the discretion of the program provider.

Digital Closed Caption service is a new caption service available only on digital TV programs (also at the discretion of the service provider). It is a more flexible system than the original Closed Caption system, because it allows for a variety of caption sizes and font styles. When the Digital Closed Caption service is in use, it will be indicated by the appearance of a 3-letter abbreviation that also indicates the language of the Digital Closed Captions: ENG (English), SPA (Spanish), FRA (French) or other language codes.

Not all programs and VHS videotapes offer closed captions. Please look for the symbol to ensure that captions will be shown.

In the Closed Caption system, there can be more than one caption service provided. Each is identified by its own number. The “CC1” and “CC2” services display subtitles of TV programs superimposed over the program’s picture.

In the Closed Caption system, the “Text1” or “Text2” services display text that is unrelated to the program being viewed (e.g., weather or news). These services are also superimposed over the program currently being viewed.

1. Press CC.
   - This will present the Closed Caption information display.
2. Press CC while the Closed Caption information is still on the screen.
   - Press repeatedly until you select the desired closed caption service.

   - Depending on the number of caption services in the signal being received, you will see information such as 1/2 or 1/4 displayed.

   1/2 means "the first of two services".

Example:

If a program has three services (Digital CC(ENG), CC1 and Text1), the closed caption display will toggle in this sequence:

```
1/3 ENG  2/3 CC1  3/3 Text1  Off
```
CLOSED CAPTIONS AND DIGITAL CLOSED CAPTIONS (CONTINUE)

Examples:
In a case where there are two closed caption services provided (for instance, Digital CC(ENG) and CC1), and Digital CC(ENG) is displayed as your current selection, if Digital CC(ENG) is not broadcast for the next program, the other closed caption service, CC1, will be displayed in parentheses.

A closed caption service appears in parentheses because the service you selected is not available and a different service is displayed on your screen. 1/1(CC1) is displayed instead of 1/2/ENG.

Note:
- When the program contains no closed caption, -- displays in the closed caption information.
- If the language code, e.g. ENG, is not found on Digital TV programs, -- will be shown.
- Four kinds of closed caption service (CC1, CC2, Text1, Text2) are potentially available, but a broadcast may contain none or only some of these services at the discretion of the program provider.
- When a web page is displayed, Closed Captions are not available.
- You can have the same settings by choosing Change CC on the menu items.
## Direct Button Operation

### ASPECT MODE

You can select the screen size.

1. Press ASPECT.
   - The Aspect Mode menu displays.
   - The menu lists the Aspect Mode options selectable for the type of video signal currently being received.

2. Press ASPECT or GKProjA_a/GKProjA_b while the View Mode menu is displayed to select a desired item on the menu.
   - You can sequentially select an Aspect Mode that has its own aspect ratio.

### FOR HD PROGRAMS

<table>
<thead>
<tr>
<th>Stretch</th>
<th>Full Screen (Dot By Dot)</th>
<th>S. Stretch (Smart Stretch)</th>
<th>Zoom</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Stretch" /></td>
<td><img src="image" alt="Full Screen" /></td>
<td><img src="image" alt="S. Stretch" /></td>
<td><img src="image" alt="Zoom" /></td>
</tr>
</tbody>
</table>

Suitable for viewing wide-screen 1.78:1 aspect ratio program, stretch mode will still show very thin black bands at the top and bottom of the screen.

“Dot by Dot” when the number of pixels on the screen and the resolution of the signal are the same. “Full Screen” when the number of pixels on the screen and the resolution of the signal are different. In either case, the image fully fills the screen.

Suitable for stretching 4:3 programs to fill the screen.

Suitable for viewing wide-screen 2.35:1 aspect-ratio programs in full screen.

**Note:** When using Dot by Dot or Full Screen, it is possible to see noise or bars around different outer portions of the screen. Please change view mode to correct this.
**Direct Button Operation**

**ASPECT MODE (CONTINUED)**

For 4:3 programs

Example: Screen size images

<table>
<thead>
<tr>
<th>Side Bar</th>
<th>S. Stretch (Smart Sketch)</th>
<th>Zoom</th>
<th>Stretch</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Image" /></td>
<td><img src="image2" alt="Image" /></td>
<td><img src="image3" alt="Image" /></td>
<td><img src="image4" alt="Image" /></td>
</tr>
<tr>
<td>Suitable for viewing conventional 4:3 programs in their normal format.</td>
<td>Suitable for stretching 4:3 programs to fill the screen.</td>
<td>Suitable for viewing wide-screen 2.35:1 anamorphic DVDs in full screen.</td>
<td>This mode is useful for 1.78:1 DVDs. When viewing 1.85:1 DVDs, stretch mode will still show very thin black bands at the top and bottom of the screen.</td>
</tr>
</tbody>
</table>

For USB-Video and images

Example: Screen size images

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>Auto</th>
<th>Original</th>
<th>Stretch</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5" alt="Image" /></td>
<td><img src="image6" alt="Image" /></td>
<td><img src="image7" alt="Image" /></td>
<td><img src="image8" alt="Image" /></td>
</tr>
<tr>
<td>Keeps the original aspect ratio in a full screen display.</td>
<td>Displays an image by an original size.</td>
<td>An image fully fills the screen.</td>
<td></td>
</tr>
</tbody>
</table>
ASPECT MODE (CONTINUE)

For PC
Example: Screen Size Images

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>Auto</th>
<th>Zoom</th>
<th>Stretch</th>
<th>Full Screen (Dot by Dot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Keeps the original aspect ratio in a full screen display.</td>
<td>For viewing widescreen programs. The top and bottom of the image is cropped.</td>
<td>An image fully fills the screen.</td>
<td>Detects the resolution of the signal and displays an image with the same number of pixels on the screen.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Input Signal</th>
<th>Stretch</th>
<th>Full Screen (Dot by Dot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:9</td>
<td>An image fully fills the screen.</td>
<td>Detects the resolution of the signal and displays an image with the same number of pixels on the screen.</td>
</tr>
</tbody>
</table>

Note: Connect the PC before making adjustments. See the Setup Guide.
Selectable screen size may vary with input signal type
On-Screen Display Menu

Introduction

1. User Menu Option Title
   - This indicates the item currently selected.
   - Press ENTER to go to the adjustment screen for this item.

2. Highlighted Menu Option
   - This indicates the currently selected item.

3. Item displayed in white
   - This indicates that the item can be selected.

4. Item displayed in gray
   - This indicates that the item cannot be selected.
   - There are various reasons why the items cannot be selected, but the main reasons are as follows:
     - Nothing is connected to the selected input terminal.
     - The function is not compatible with the current input signal.
     - When this conflicts with other functions, you must change the settings for the other functions.

About Menu Items

- Some menu items may not be displayed depending on the selected input source.

Note:

- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.
- The order of explanations for each menu item in the following pages is not necessarily in accordance with the alignment of the items on the screen.
1. Press MENU to display the MENU screen.
2. Press ▲▼ to select the desired menu.
   Press ▲▼ to select a specific adjustment item, and then press ENTER.
   • Additional related adjustment items may be displayed. Press ▲▼ to select the desired item.
3. Press MENU to Exit
MENU OPERATION BUTTONS

Using the Remote Control
Use the following buttons on the remote control to operate the menu.

MENU: Press to open or close the menu screen.

 MainPage/Previous/Top : Press to select a desired item on the screen or adjust a selected item.

ENTER: Press to go to the next step or complete the setting.

BACK: Press to return to the previous step.

Using the Control Panel Of The TV
You can also operate the menu with the control panel of the TV.

Button operations on the control panel correspond to the ones on the remote control as shown below.

MENU: MENU on the remote control.

INPUT: ENTER on the remote control.

CH +/- : Cursor ▲▼ on the remote control.

VOL +/-: Cursor ◄► on the remote control.
**Audio**

- **Note:** For operating the on-screen display menu. See pages 24-26.

**Sound Mode**
Enter to select various sound mode presets
Movie/Music/Sport/User

**Speakers**
Turn the TV internal speakers on or off

**Analog Audio Out**
Set the output of the 3.5mm Analog Audio output. Fixed/Variable

**Digital Audio Out**
Set the output mode of the TosLink digital audio (Off/Dolby Digital/PCM)

**Balance**
Set the balance to the Left and Right speaker, default is 0 left and right equal output.

**Lip Sync**
Set this to adjust the audio delay related to video
  - **Note:** Bass and Treble adjustments available in User Audio preset only.

**Bass**
Adjust the low end audio frequency output (-12/+12) default 0

**Treble**
Adjust the high end audio frequency output (-12/+12) default 0
PICTURE

Note: For operating the on-screen display menu. See pages 24-26.

Picture Mode
Select Picture Mode Preset Settings (Standard/Movie/Vivid/Game/User/PC)

Aspect
Select the aspect mode used when displaying various content (Normal/Wide/Zoom/Stretch)

Color Temperature
Select the color temperature of the white areas in the video content (Natural/Warm/Computer/Cool)

Backlight
Set the backlight brightness (0-20)

Advanced Picture
Select this option to adjust various picture quality settings
On-Screen Display Menu

ADVANCED PICTURE

Note: For operating the on-screen display menu. See pages 24-26.

Contrast
Adjust the picture contrast

Brightness
Adjust the picture brightness

Color
Adjust the color saturation of the picture

Tint
Adjust the tint of the picture

Sharpness
Adjust the sharpness of the picture, useful when source is high resolution PC or graphics

Motion Enhancer
Adjust the sharpness of the picture displaying high motion video content

Color Enhancement
Adjust the enhancement of overall picture color

Dynamic Contrast
Contrast is adjusted automatically based on content (Off/Low/Medium/High)

Noise Reduction
Feature to remove digital artifacts contained in some video content (Off/Low/Medium/High)

Local Dimming
Backlight is dimmed in zones based on content (Off/Low/Medium/High)

Low Latency
Select On to reduce video delay when gaming.

Gamma Adjustment
Adjust the correction to the light and dark areas of the picture (Default 2.2) (Range from 1.8 to 2.4)

Film Mode
When film content is detected, picture will be optimized. For best picture, set to Auto
On-Screen Display Menu

**LINK**

*Note:* For operating the on-screen display menu. See pages 24-26.

**Ethernet**

Select to change the ethernet network type from DHCP(Dynamic) or Static

**CEC Settings**

Select to change Link CEC Control settings

**HDMI (Mode)**

Select 2.0 for EDID 2.0 full 4k, Select 1.4 for legacy EDID 1.4 4k/30 support

Available only when HDMI input is selected

**TV Mode**

Select to change the tuner mode type (Antenna/Cable)

**Auto Channel Scan**

Select to scan and learn channels from the cable or antenna signal input.

**Analog MTS**

Select the default multichannel television sound used during a cable or antenna broadcast, Stereo, SAP or Mono. (default Stereo)
**SYSTEM**

**Note:** For operating the on-screen display menu. See pages 24-26.

**Sleep Timer**
Set the time for auto turn off of the TV (30/60/90/120/180 minutes)
Same function as remote sleep button.

**Parental Controls**
Available only when TV(Tuner) input is selected.
Default password is 0000
Select parental controls on TV channels based on the contents rating.

**Closed Caption**
Available only when TV(Tuner) input is selected.
Select options for displaying closed caption text on the content.

**Quick Start**
Enable allows the TV to start faster when the power on button is pressed.
TV will use more power in this mode.
Must be enabled to fully enable IP control.

**User Manual**
Select this option to display the manual you are currently reading.

**System Information**
Displays detailed TV information, see page 4-21 for more details

**Reset All Settings**
Restore all TV settings to factory default
On-Screen Display Menu

**SYSTEM**

*Note:* For operating the on-screen display menu. See pages 24-26.

**Model Name**
SunBriteTV model number of your outdoor TV

**Revision**
Current firmware version

**Input Source**
Current source input selected

**Video Timing**
TBD

**Content Frequency**
Input source frame rate, 60(hz) is typical

**Network Type**
Ethernet - wired network connection to the rear RJ45 jack

**IP Address**
IPV4 network address assigned to the TV

**Gateway**
IPV4 network address of the local network gateway

**Prefix Length**
Number of bits in the subnet (24=255.255.255.0)

**Pref. DNS**
Preferred network name server

**Alt. DNS**
Alternate network name server

**RJ45 MAC**
Hardware address of the TV network adapter
PREPARATION
You can connect the TV to a USB memory device to view pictures, listen to music, and watch videos.

Note:
• Depending on the USB memory device, the TV may not be able to recognize the recorded data.
• It may take time to read the recorded data if the USB memory device contains many files or folders.
• Use only alphanumeric characters for naming files.
• File names over 80 characters (may vary depending on character set) may not be displayed.

Connecting a USB Memory Device/USB Hard Drive
Insert the USB memory device with recorded photos, music or videos into the USB terminal on the TV.

• When connecting a USB hard drive, be sure to use a hard drive with an AC adapter.
• Do not remove a USB memory device or memory card from the TV while transferring files, using the slide show function, or switching screens, or before you exit "USB" from the INPUT list.
• Do not insert and remove a USB memory device/USB hard drive to and from the TV repeatedly.
• When using a card reader, be sure to insert a USB memory device first.

CAUTION:
• Do not use a USB extension cable when connecting a USB memory device to the USB terminal on the TV.
• Using a USB extension cable with the USB memory device may prevent the TV from performing correctly.
USB Photo/Music/Video Playback

SELECTING THE FOLDERS TO PLAY BACK

- To play back data on a USB memory device, insert the USB memory device on the TV.
- Use the following procedure to switch back to USB mode after switching from USB mode to another mode.

1. Select **MMP(USB)** from INPUT list screen.
2. Press ▲▼ to select Video, Music or Photo, and then press ENTER.
3. Press ▲▼ ▼ to select the desired folder, and then press ENTER.

### USB Device Compatibility

<table>
<thead>
<tr>
<th>USB device</th>
<th>USB Memory, USB card reader (Mass Storage class), USB hard drive</th>
</tr>
</thead>
<tbody>
<tr>
<td>File system</td>
<td>FAT/FAT32/NTFS (USB hard drive only)</td>
</tr>
<tr>
<td>Photo file format</td>
<td>JPEG (.jpg) (DCF2.0 compliant)</td>
</tr>
<tr>
<td>Music file format</td>
<td>MP3 (.mp3)</td>
</tr>
<tr>
<td></td>
<td>Bitrate: 32k, 40k, 48k, 56k, 64k, 80k, 96k, 112k, 128k, 160k, 192k, 224k, 256k, 320kbps</td>
</tr>
<tr>
<td></td>
<td>Sampling frequency: 32k, 44.1k, 48kHz</td>
</tr>
</tbody>
</table>
### SELECTING THE FOLDERS TO PLAY BACK

<table>
<thead>
<tr>
<th>Video File Format</th>
<th>File Extension</th>
<th>Container</th>
<th>Video</th>
<th>Video</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.avi</td>
<td>AVI</td>
<td>MPEG-1 MPEG-4 SP/ ASP(XviD) MPEG-4 AVC (H.264) Motion JPEG</td>
<td>MPEG-Audio LPCM MS-ADPCM AC3</td>
</tr>
<tr>
<td></td>
<td>.mkv</td>
<td>MKV</td>
<td>MPEG-1 MPEG-2 MPEG-4 SP/ ASP(XviD) MPEG-4 AVC (H.264)</td>
<td>MPEG-Audio LPCM MS-ADPCM AC3</td>
</tr>
<tr>
<td></td>
<td>.asf .wmv</td>
<td>ASF WMV</td>
<td>MPEG-4 SP/ASP(XviD) WMV 7/8/9</td>
<td>LPCM WMA</td>
</tr>
<tr>
<td></td>
<td>.mp4</td>
<td>MP4</td>
<td>MPEG-4 SP/ ASP(XviD) MPEG-4 AVC (H.264) Motion JPEG</td>
<td>MPEG-Audio LPCM MS-ADPCM AC3</td>
</tr>
<tr>
<td></td>
<td>.mpg .mpeg</td>
<td>MPG</td>
<td>MPEG-1 MPEG-2</td>
<td>MPEG-Audio LPCM MS-ADPCM AC3</td>
</tr>
</tbody>
</table>

**Note:**
- Progressive format jpeg files are not supported.
- USB 1.1 devices may not be played properly.
- Operation using USB hubs is not guaranteed.
- Some video file formats may not be played depending on the file.
- Some images may not be displayed in the appropriate aspect ratio depending on the file format.

### File Format Compatibility

<table>
<thead>
<tr>
<th></th>
<th>Photo File Format</th>
<th>Music File Format</th>
<th>Video File Format</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JPEG</td>
<td>LPCM, MP3</td>
<td>AVI, MKV, ASF, MP4, WMV, MPG</td>
</tr>
</tbody>
</table>

**Note:**
- Progressive format jpeg files are not supported.
- Some video file formats may not be played depending on the file or the server.
- WMV, ASF, MP4, MOV and AVI are not Home Network contents.
PLAYING BACK FILES ON A USB MEMORY DEVICE

Note:
- The screen images in this section are for the USB mode.

Photo Mode

Viewing Thumbnails

Buttons for Thumbnail Operations

<table>
<thead>
<tr>
<th>Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>◀/▶/⇄/←</td>
<td>Select a desired item.</td>
</tr>
<tr>
<td>◄</td>
<td>Setup options for photo viewing; file sort and slideshow interval time</td>
</tr>
<tr>
<td>ENTER</td>
<td>When selecting a folder icon: Enter this directory.</td>
</tr>
<tr>
<td></td>
<td>When selecting a photo thumbnail: Start the slide show.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to the previous process.</td>
</tr>
</tbody>
</table>
PLAYING BACK FILES ON A USB MEMORY DEVICE (CONTINUE)

Slide Show
The photos displayed on the thumbnail selection screen are displayed as a slide show.

Buttons for slide show operation

<table>
<thead>
<tr>
<th>Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BACK</td>
<td>Return to the thumbnail selection screen</td>
</tr>
<tr>
<td>Left Arrow</td>
<td>Previous file</td>
</tr>
<tr>
<td>Down Arrow</td>
<td>Displaying/hiding operation guidance.</td>
</tr>
<tr>
<td>Right Arrow</td>
<td>Next file</td>
</tr>
</tbody>
</table>

Note:
- Rotating photos only applies to the temporarily selected item and this setting is not saved.
PLAYING BACK FILES ON A USB MEMORY DEVICE (CONTINUE)

MUSIC MODE

Buttons for Music Mode

<table>
<thead>
<tr>
<th>Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>←/↑/→/↓</td>
<td>Select a desired item.</td>
</tr>
<tr>
<td>ENTER</td>
<td>When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: Start the slide show.</td>
</tr>
<tr>
<td>BACK</td>
<td>Return to the previous process.</td>
</tr>
</tbody>
</table>
PLAYING BACK FILES ON A USB MEMORY DEVICE (CONTINUE)

VIDEO MODE

Buttons for File Selecting Operations

<table>
<thead>
<tr>
<th>Buttons</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a desired item.</td>
<td><img src="Image" alt="Image of remote control showing buttons for file selection" /></td>
</tr>
<tr>
<td>ENTER</td>
<td>When selecting a folder icon: Enter this directory. When selecting a photo thumbnail: When selecting a video file: Play the video.</td>
</tr>
<tr>
<td>BACK</td>
<td>End playback and return to the previous process.</td>
</tr>
</tbody>
</table>
CONTROLLING HDMI EQUIPMENT USING LINK CEC OPERATION

What’s LINK Operation?

- Using the HDMI CEC (Consumer Electronics Control) protocol, with LINK Operation you can interactively operate compatible system equipment (Blu-ray disc equipment, AV amplifier, DVD).
- To access this function: System Operation > Initial Setup > Input Settings > Link Setup > Link Operation.

Note:

- For connecting the TV to LINK-compatible equipment, use commercially available cables.
- Point the remote control toward the TV, not to connected HDMI equipment.
- Video noise may occur depending on the type of HDMI cable used. Make sure to use an HDMI-certified cable.
- Up to 3 pieces of HDMI recording equipment and one AV amplifier can be connected using this system.
- These operations affect the HDMI equipment selected as the current input source. If the equipment does not operate, turn on the equipment and select the appropriate input source using INPUT.
- The LINK feature may not operate properly when an HDMI splitter or AV selector unit is used. These devices may cause interruptions to the image and/or sound.

Connected LINK-compatible devices can be operated without changing the settings of the remote control unit.

Control the Link-Compatible Audio System

Set the volume of LINK-compatible audio system.

Note:

- The steps in "LINK Setup" on page 41 need to be completed beforehand.
- Refer to this operation manual and the operation manual of the LINK device to be used with this TV.
CONTROLLING HDMI EQUIPMENT USING LINK CEC OPERATION (CONTINUE)

LINK Setup
Make the settings to use LINK Operation. Set the settings with "Menu" > "Link" > "CEC Settings".

CEC Function
Select CEC Function to disable the LINK function even when a LINK-compatible HDMI device is connected to the TV. This function prevents the device from turning on or off unexpectedly due to a CEC command from the source device.

System Audio Control(ARC)
This function allows you to listen to the TV audio via audio equipment without using an optical fiber cable, which conventionally is required.

Requirements for using an ARC-compatible AV amplifier:
- ARC-compatible AV amplifier connected to the ARC-compatible HDMI terminal. (HDMI 2) (Refer to the operation manual of the ARC-compatible equipment for details.)
- Use of an ARC-compatible cable.

Note:
- If the TV audio cannot be output from the AV amplifier even after making the necessary settings, connect the TV to the AV amplifier with an optical fiber cable and select "Off".

Auto Power On
If this is enabled and the source device has CEC enabled the TV will automatically turn on and plays back the content from the HDMI source.

Auto Power Off
If this is enabled and the source device has CEC enabled the TV will automatically turn on and plays back the content from the HDMI source.
Appendix

TV STAND

- Before detaching (or attaching) the stand, make sure to turn off the TV and unplug the AC cord.

1. Unfasten the four screws used to secure the stand in place.
   Example:

2. Attach the stand to the TV.
   If necessary secure the stand to the table surface before attaching to the TV.
   Secure the stand to the TV using all 4 screws as shown.
   Note:
   - Be sure to always carry the TV by two people holding it with two hands.
OPTIONAL SPEAKER BAR

The optional speaker bar and required adapter cable is not included in the purchase of a SunBrite TV. These accessories are available at SunBriteTV.com, local dealer or reseller. Before detaching (or attaching) the speaker, make sure to turn off the TV and unplug the AC cord.

1. Mount the speaker bar to the bottom of the Veranda Outdoor TV.

2. Attach the 4 conductor Din adapter to the speaker bar connector and then plug the 3.5mm plug inside the cable bay into the speaker bar output.
MOUNTING THE TV ON THE WALL

Standard dimensions for wall mount kits are shown below. Visit www.SunBriteTV.com for information on all available mounts.

- The mounting means should be strong enough to bear the weight of the display.
- The wall mounting bracket should have UL or related approval.
## Appendix

### Wallmount Dimensions

<table>
<thead>
<tr>
<th>Wallmount Dimensions (A x B)</th>
<th>SB-V-43-4KHDR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>200mm x 200mm</td>
</tr>
<tr>
<td></td>
<td>SB-V-55-4KHDR</td>
</tr>
<tr>
<td></td>
<td>SB-V-65-4KHDR</td>
</tr>
<tr>
<td></td>
<td>400mm x 400mm</td>
</tr>
</tbody>
</table>

### Wallmount Screws

| Wallmount Screws | M6                                         |

### Troubleshooting

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cautions regarding use in high and low temperature environments</td>
<td>When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.</td>
</tr>
<tr>
<td></td>
<td>Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the front panel to malfunction.</td>
</tr>
<tr>
<td></td>
<td>Storage temperature: -4°F to +140°F (-20°C to +60°C)</td>
</tr>
</tbody>
</table>
CARING FOR THE LCD PANEL:

1. To clean the LCD Panel, turn the TV off and gently wipe the surface of the display panel with a water damp microfiber, cotton or flannel cloth. (Do not use tissues, rags, sponges or paper towels which may damage the screen or leave behind lint).

2. If the LCD panel is very dirty, mix equal parts of isopropyl alcohol and distilled water in a clean spray bottle, and spray the mixture onto a microfiber, cotton or flannel cloth (do not spray the solution directly on the panel) and gently wipe the panel clean.

3. Keep the TV covered with the optional SunBriteTV Outdoor Dust Cover when not in use.
   - The fitted dust cover is designed to protect the LCD panel from harmful UV rays from direct sunlight, and keeps wind-blown objects from scratching the surface of the panel.
   - To order a Dust Cover, contact your Authorized SunBrite dealer, SunBrite Customer Care at 866.357.8688, or visit www.sunbritetv.com.
## TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| No power | • Check if you pressed POWER on the remote control unit.  
• Is the AC cord disconnected?  
• Has the power been turned on? |
| Unit cannot be operated. | External influences such as lightning, static electricity, may cause improper operation. In this case, operate the unit after first turning off the power of the TV or unplugging the AC cord and replugging it in after 1 or 2 minutes. |
| Remote control unit does not operate. | • Is the equipment to be operated by the remote control unit set correctly? Press TV to set the remote control unit to the setting for operating the TV.  
• Are batteries inserted with polarity (+, -) aligned?  
• Are batteries worn out? (Replace with new batteries.)  
• Are you using it under strong or fluorescent lighting?  
• Is a fluorescent light illuminated near the remote control sensor? |
| Picture is cut off/with sidebar screen. | Are screen mode adjustments such as picture size made correctly? Pages 21 to 23. |
| Strange color, light color, or color misalignment | • Adjust the picture tone Pages 28-29.  
• Is the room too bright? The picture may look dark in a room that is too bright. |
| Power is suddenly turned off. | • Is the sleep timer set? Pages 16  
• Check the power control settings. Page 31 |
| No picture | • Is connection to other components correct?  
• Is the correct input selected? Page 9  
• If the PC image is not displayed, check the following: When connecting a laptop PC to the TV, check that display output mode of the PC is set to external monitor. |
| Picture quality of HD programs is poor. | • To enjoy HD images from external equipment, you are required to set up HDMI connection or component connection.  
• If the program content is not of HD quality, HD images cannot be displayed. Check that the program you are viewing provides HD images.  
• The HD cable/satellite set-top box may need to be configured to output HD images via cable/satellite.  
• The cable/satellite broadcast may not be in full 1080 HD or 4K |
| The TV sometimes makes a cracking sound. | This is not a malfunction. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the TV's performance. |
## Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| No sound         | • Is connection to other components correct?  
|                  | • Is the volume too low?  
|                  | • Is "Variable" selected in "Output Select"?  
|                  | • Have you pressed MUTE on the remote control unit?  
|                  | • Check the audio output of the connected external equipment. Is the volume too low or muted?  
|                  | • When external equipment is connected via an HDMI cable, you may need to configure the audio to be output through the HDMI cable.  
|                  | • When audio is not output from external equipment connected to the HDMI 2 terminal, check the Digital Audio Out setting.  
|                  | • When connecting a PC via an HDMI-certified cable, check the following:  
|                  | • Is the audio output of the PC configured correctly?  
|                  | • Check the audio output settings and output audio format in Sound Properties on the PC.  
|                  | • The audio formats compatible with this TV are PCM and Dolby Digital. With other formats, audio cannot be output.  

### Cautions Regarding Use In High And Low Temperature Environments

- When the unit is used in a low temperature space, the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
- Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the front panel to malfunction.
- Storage temperature: -4°F to +140°F (-20°C to +60°C)

## TROUBLESHOOTING - ERROR MESSAGE

<table>
<thead>
<tr>
<th>The Example of an Error Message Displayed on a Screen</th>
<th>Error Code</th>
<th>Possible Solution</th>
</tr>
</thead>
</table>
| An incompatible audio signal has been received. Check the output device settings. | —          | This message is displayed when an audio format other than PCM, DTS or Dolby Digital is input.  
|                                                      |            | • Set the audio output format of connected external HDMI equipment to PCM or Dolby Digital.  
|                                                      |            | • Refer to the operation manual of the external equipment for setting details. |
# Specifications

**SunBriteTV Model SB-V-43-4KHDR**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LCD Screen</strong></td>
<td>43-inch diagonal Color Active Matrix TFT LED LCD</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>3840 x 2160 UHD 4k HDR</td>
</tr>
<tr>
<td><strong>Aspect Ratio</strong></td>
<td>16:9</td>
</tr>
<tr>
<td><strong>Blacklight Brightness</strong></td>
<td>- Surface Luminance, white</td>
</tr>
<tr>
<td></td>
<td>400 nits (cd/m²)</td>
</tr>
<tr>
<td><strong>Contrast Ratio</strong></td>
<td>4000:1</td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td>60hz</td>
</tr>
<tr>
<td><strong>H/V Viewing Angle</strong></td>
<td>178° by 178°</td>
</tr>
<tr>
<td><strong>Response Time</strong></td>
<td>8 milliseconds</td>
</tr>
<tr>
<td><strong>TV formats</strong></td>
<td>2160p*, 1080p, 1080i, 720p, 720i, 480p, 480i*</td>
</tr>
<tr>
<td><strong>Input Connectors:</strong></td>
<td>* using HDMI only</td>
</tr>
<tr>
<td>RF</td>
<td>Antenna/CATV (NTSC/ATSC/QAM) x1</td>
</tr>
<tr>
<td>HDMI</td>
<td>HDMI Input x3 (Supports HDMI 1.4, HDMI 2.0, HDCP 1.4 &amp; HDCP 2.2) (ARC on HDMI2)</td>
</tr>
<tr>
<td>Video Composite</td>
<td>Composite Video x1, L/R Audio Inputs x1</td>
</tr>
<tr>
<td>Video Component</td>
<td>YPbPr plus Stereo Audio x1</td>
</tr>
<tr>
<td>RGB</td>
<td>VGA DB15hd (up to 1920 x 1080)</td>
</tr>
<tr>
<td><strong>Control Set</strong></td>
<td>Discrete IR Control, Concealed rear IR receiver, IP Control</td>
</tr>
<tr>
<td><strong>Audio Out</strong></td>
<td>Tos-Link Optical audio (Fixed)</td>
</tr>
<tr>
<td></td>
<td>Analog 3.5mm (variable)</td>
</tr>
<tr>
<td><strong>Speakers</strong></td>
<td>20 Watt downfiring internal speakers or optional speaker bar (not included)</td>
</tr>
<tr>
<td><strong>Exterior</strong></td>
<td>Powder-coated aluminum</td>
</tr>
<tr>
<td><strong>Colors</strong></td>
<td>Black only</td>
</tr>
<tr>
<td><strong>Input Power</strong></td>
<td>100-240 VAC, 50-60 Hz 2.8A Max (75 watts/.7a@120v)</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>24° to 104° F. (0° to 40° C.)</td>
</tr>
<tr>
<td><strong>Non-op. Temp.</strong></td>
<td>-24° to 140° F. (-31° to 60° C.)</td>
</tr>
<tr>
<td><strong>Accessories Included</strong></td>
<td>Weatherproof remote control with battery</td>
</tr>
<tr>
<td><strong>TV Dimensions</strong></td>
<td>39&quot; W x 23&quot; H x 3.4&quot; D</td>
</tr>
<tr>
<td></td>
<td>991mm W x 584mm H x 86mm D</td>
</tr>
<tr>
<td><strong>TV Weight</strong></td>
<td>30 lbs.(13.6 kgs)</td>
</tr>
<tr>
<td><strong>Shipping Weight</strong></td>
<td>40 lbs. (18.14 kgs)</td>
</tr>
<tr>
<td><strong>Residential Warranty</strong></td>
<td>1 year</td>
</tr>
<tr>
<td><strong>Commercial Warranty</strong></td>
<td>1 year</td>
</tr>
<tr>
<td><strong>Vesa Mount Pattern</strong></td>
<td>200mm x 200mm</td>
</tr>
</tbody>
</table>

*Specifications are subject to change.*
### Specifications

**SunBriteTV Model SB-V-55-4KHDR**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LCD Screen</strong></td>
<td>55-inch diagonal Color Active Matrix TFT LED LCD</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>3840 x 2160 UHD 4k HDR</td>
</tr>
<tr>
<td><strong>Aspect Ratio</strong></td>
<td>16:9</td>
</tr>
<tr>
<td><strong>Blacklight Brightness</strong></td>
<td>- Surface Luminance, white 400 nits (cd/m²)</td>
</tr>
<tr>
<td><strong>Contrast Ratio</strong></td>
<td>4000:1</td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td>60Hz</td>
</tr>
<tr>
<td><strong>H/V Viewing Angle</strong></td>
<td>178° by 178°</td>
</tr>
<tr>
<td><strong>Response Time</strong></td>
<td>8 milliseconds</td>
</tr>
<tr>
<td><strong>TV formats</strong></td>
<td>2160p*, 1080p, 1080i, 720p, 720i, 480p, 480i</td>
</tr>
<tr>
<td></td>
<td>* using HDMI only</td>
</tr>
<tr>
<td><strong>Input Connectors:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>RF</strong></td>
<td>Antenna/CATV (NTSC/ATSC/QAM) x1</td>
</tr>
<tr>
<td><strong>HDMI</strong></td>
<td>HDMI Input x3 (Supports HDMI 1.4, HDMI 2.0, HDCP 1.4 &amp; HDCP 2.2) (ARC on HDMI2)</td>
</tr>
<tr>
<td><strong>Video Composite</strong></td>
<td>Composite Video x1, L/R Audio Inputs x1</td>
</tr>
<tr>
<td><strong>Video Component</strong></td>
<td>YPbPr plus Stereo Audio x1</td>
</tr>
<tr>
<td><strong>RGB</strong></td>
<td>VGA DB15hd (up to 1920 x 1080)</td>
</tr>
<tr>
<td><strong>Control Set</strong></td>
<td>Discrete IR Control, Concealed rear IR receiver, IP Control</td>
</tr>
<tr>
<td><strong>Audio Out</strong></td>
<td>Tos-Link Optical audio (Fixed)</td>
</tr>
<tr>
<td></td>
<td>Analog 3.5mm (variable)</td>
</tr>
<tr>
<td><strong>Speakers</strong></td>
<td>20 Watt downfiring internal speakers or optional speaker bar (not included)</td>
</tr>
<tr>
<td><strong>Exterior</strong></td>
<td>Powder-coated aluminum</td>
</tr>
<tr>
<td><strong>Colors</strong></td>
<td>Black only</td>
</tr>
<tr>
<td><strong>Input Power</strong></td>
<td>100-240 VAC, 50-60 Hz 2.8A Max (125 watts/1.0a@120v)</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>24° to 104° F. (0° to 40° C.)</td>
</tr>
<tr>
<td><strong>Non-op. Temp.</strong></td>
<td>-24° to 140° F. (-31° to 60° C.)</td>
</tr>
<tr>
<td><strong>Accessories Included</strong></td>
<td>Weatherproof remote control with battery</td>
</tr>
<tr>
<td><strong>TV Dimensions</strong></td>
<td>49.4&quot; W x 28.6&quot; H x 3.4&quot; D</td>
</tr>
<tr>
<td></td>
<td>1254mm W x 726mm H x 86mm D</td>
</tr>
<tr>
<td><strong>TV Weight</strong></td>
<td>47 lbs. (21.3 kgs)</td>
</tr>
<tr>
<td><strong>Shipping Weight</strong></td>
<td>63 lbs. (28.5 kgs)</td>
</tr>
<tr>
<td><strong>Residential Warranty</strong></td>
<td>1 year</td>
</tr>
<tr>
<td><strong>Commercial Warranty</strong></td>
<td>1 year</td>
</tr>
<tr>
<td><strong>Vesa Mount Pattern</strong></td>
<td>400mm x 400mm</td>
</tr>
</tbody>
</table>

Specifications are subject to change.
# Specifications

## SunBriteTV Model SB-V-65-4KHDR

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LCD Screen</strong></td>
<td>65-inch diagonal Color Active Matrix TFT LED LCD</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>3840 x 2160 UHD 4k HDR</td>
</tr>
<tr>
<td><strong>Aspect Ratio</strong></td>
<td>16:9</td>
</tr>
<tr>
<td><strong>Blacklight Brightness</strong></td>
<td>- Surface Luminance, white 400 nits (cd/m2)</td>
</tr>
<tr>
<td><strong>Contrast Ratio</strong></td>
<td>4000:1</td>
</tr>
<tr>
<td><strong>Frame Rate</strong></td>
<td>60hz</td>
</tr>
<tr>
<td><strong>H/V Viewing Angle</strong></td>
<td>178° by 178°</td>
</tr>
<tr>
<td><strong>Response Time</strong></td>
<td>8 milliseconds</td>
</tr>
<tr>
<td><strong>TV formats</strong></td>
<td>2160p*, 1080p, 1080i, 720p, 720i, 480p, 480i * using HDMI only</td>
</tr>
</tbody>
</table>

### Input Connectors:
- RF: Antenna/CATV (NTSC/ATSC/QAM) x1
- HDMI: HDMI Input x3 (Supports HDMI 1.4, HDMI 2.0, HDCP 1.4 & HDCP 2.2) (ARC on HDMI2)
- Video Composite: Composite Video x1, L/R Audio Inputs x1
- Video Component: YPbPr plus Stereo Audio x1
- RGB: VGA DB15hd (up to 1920 x 1080)

### Control Set
- Discrete IR Control, Concealed rear IR receiver, IP Control

### Audio Out
- Tos-Link Optical audio (Fixed)
- Analog 3.5mm (variable)

### Speakers
- 20 Watt downfiring internal speakers or optional speaker bar (not included)

### Exterior
- Powder-coated aluminum

### Colors
- Black only

### Input Power
- 100-240 VAC, 50-60 Hz 2.8A Max (205 watts/1.8a@120v)

### Operating Temp.
- 24° to 104° F. (0° to 40° C.)

### Non-op. Temp.
- -24° to 140° F. (-31° to 60° C.)

### Accessories Included
- Weatherproof remote control with battery

### TV Dimensions
- 58” W x 33.6” H x 3.5” D
- 1473mm W x 838mm H x 89mm D

### TV Weight
- 69 lbs. (31.3 kgs)

### Shipping Weight
- 90 lbs. (40.8 kgs)

### Residential Warranty
- 1 year

### Commercial Warranty
- 1 year

### Vesa Mount Pattern
- 400mm x 400mm

---

Specifications are subject to change.