



## Operator's Manual



Model 4610HD

## Important Safety Instructions

Dear SunBriteTV Customer:

Congratulations on your ownership of the SunBriteTV Model 4610HD. This product is designed as a weatherproof LCD television that can be installed outdoors. To ensure safety and minimize mechanical malfunctions of your product, please read the Important Safety Instructions carefully before using this product.

### IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 6) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 7) 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.
- 8) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where the cord exits from the apparatus.
- 9) Only use attachments/accessories specified by the manufacturer.
- 10) Use only 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.
- 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.

PORTABLE CART WARNING



**WARNING: TV must be plugged into a GFCI receptacle.**

**TV and GFCI RECEPTACLE MUST BE INSTALLED NO LESS THAN 5 FEET FROM ANY BODY OF WATER (SUCH AS POOL OR SPA). Check local building codes for proper installation guidelines.**

**WARNING:** This unit is equipped with a 3-pin grounded plug. The plug will only fit into a grounded power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician. Do not alter this plug, as this will defeat the safety feature.

**WARNING:** The mains plug is used as the disconnect device and shall remain readily operable.

**WARNING:** This product shall be connected to a mains socket outlet with a protective earthing connection.

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**WARNING:** FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

**NOTE TO CATV SYSTEM INSTALLER:** This reminder is provided to call the CATV system installer's attention to Article 820-40 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:** To reduce the risk of fire or electric shock, do not expose the inside of this apparatus to rain or moisture. The inside of this apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**This product utilizes tin-lead solder, and fluorescent lamp containing a small amount of mercury.** Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: [www.eia.org](http://www.eia.org).

# Important Safety Instructions

**Cleaning Instructions:** Use a soft cloth with mild detergent in warm water to clean the SunBriteTV screen. Remove any dirt and salt deposits from the unit, being careful to rinse the cloth frequently to avoid scratching the screen surface. Avoid using harsh chemicals, ammonia, abrasives, or solvents when cleaning any surface on the screen. When the TV is not in use, it is important to keep it covered with the SunBriteTV fitted Outdoor Dust Cover. Use a soft brush or towel to remove snow and ice from the TV. In areas where dust or salt air is prevalent, it is recommended that the fiber filter be cleaned regularly (see instructions on Page 43).


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

**Power Source:** SunBriteTV 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.

**WARNING:** DO NOT IMMERSE TELEVISION IN WATER OR OTHER LIQUID. DO NOT INSTALL TV WITHIN 5 FEET OF BODY OF WATER (SUCH AS SPA OR POOL).




**CAUTION**  
RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.





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

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK), FROM THE TELEVISION OR EXTERNAL POWER PACK, EXCEPT WHERE SPECIFIED IN THE MANUAL. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## FCC Statement

This equipment complies 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:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

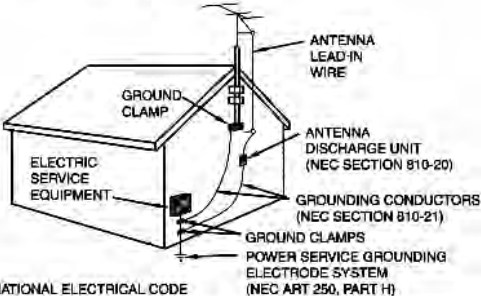
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.



## IMPORTANT SAFETY PRECAUTIONS

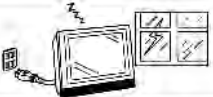
■ If an outside antenna is connected to the television equipment, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE




NEC—NATIONAL ELECTRICAL CODE

■ For added 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 and disconnect the antenna. This will prevent damage to the equipment due to lightning and power-line surges.



■ 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, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.



## Important Safety Instructions

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**Ventilation:** Adequate ventilation must be maintained to ensure reliable and continued operation and to protect the television from overheating. Do not block ventilation slots and openings with objects, or install the television in a place where ventilation may be hindered. **SunBriteTV is not designed for built-in installation.** Do not place the product in an enclosed place such as bookcase or rack.

**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 SunBriteTV near** a motor or transformer where strong magnetism is generated. Images on the television will become distorted and the color irregular.

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

**Do not submerge SunBriteTV in water:** The SunBriteTV 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 SunBriteTV:** SunBriteTV 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 SunBriteTV 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 SunBriteTV. 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.

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## Supplied Accessories

### Unpacking

After unpacking the SunBriteTV television, please make sure that the following items are included in the carton and that they are in good condition. If items are damaged or missing, contact your dealer immediately.

SunBriteTV LCD Television Model 4610HD

Remote Control with Batteries

Operator's Manual

Speaker Module



Model 4610HD



Operator's  
Manual



Water-Resistant  
Wireless Remote  
Control with  
Lithium Batteries



Speaker Module

## TV Installation - Choose a Location for the TV

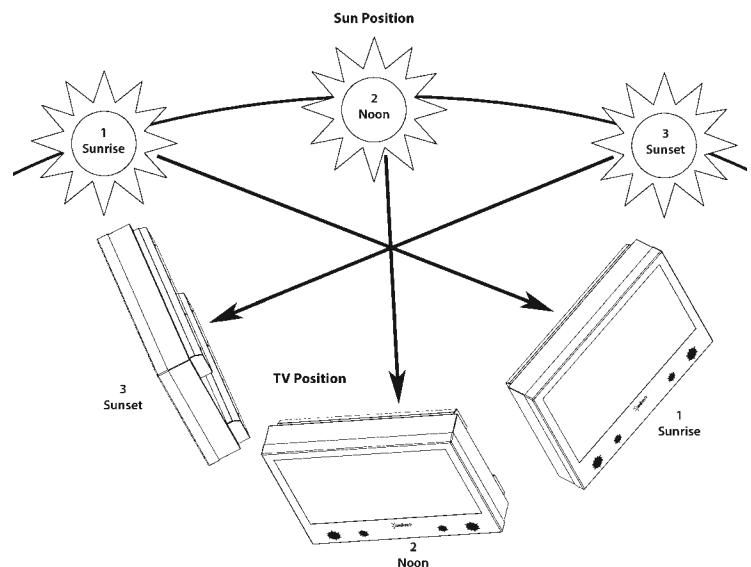
### Choose a Location for the TV

**Important: The TV must be installed at least 5 feet from pool, spa, or other body of water.**

The TV should be installed so the screen is not facing direct sunlight, or can be easily turned away from direct sunlight.

Ideal placement is in an area where the TV is shaded by trees, landscape and/or structures, or under a patio cover or gazebo.

If the sun shines directly on the screen for long periods of time, dark areas may develop on the screen. This is a normal reaction for the LCD panel, and will not cause damage to the screen. Either turn the screen away from the sun, or apply shade to the TV, and the dark areas will quickly disappear.



# TV Installation - Detachable Speaker Module Installation

## Detachable Speaker Module Installation

Tools Needed: Phillips screwdriver

### Note:

- If you mount the TV on the Table Stand, **the Detachable Speaker Module must be installed before you attach the Table Stand.**
- If you mount the TV to a ceiling or wall mount, it is best to install the Detachable Speaker Module after the TV has been mounted.

1. Prepare a flat work surface, free of any debris or items which may scratch the front surface of the TV.

2. Lay the TV face-down on the work surface with the bottom of the unit closest to you

**WARNING: Use at least two people when transporting the TV.**

3. Position the TV so that the bottom edge overhangs the table by about one inch.

4. On the bottom rim of the TV, there are four Pan Head Mounting Screws. Remove the Pan Head Mounting Screws, and set aside.

**Important Note: Always replace mounting screws. Failure to do so will allow water to seep inside your TV. This can cause serious injury and can damage your TV.**

5. Turn the Speaker Module with the speaker grill facing the floor, and align the Speaker Mounting Holes to the TV Mounting Holes. Replace Pan Head Mounting Screws through Speaker Mounting Holes and TV Mounting Holes. (Figure 2).

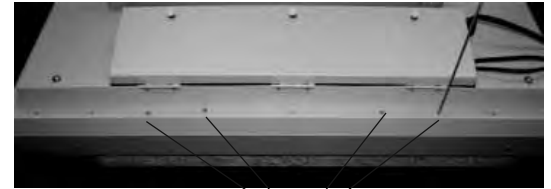
6. Screw *securely* (Figure 3).

7. Unscrew the three Thumb Screws, and pull the Connect Source Cover open (Figure 4).

8. Take the Speaker Cable from the speaker, making sure that the Speaker Cable Wire is placed over the right side of the Rubber Sealing Gasket (Figure 5), and plug it into the Speaker Connector.

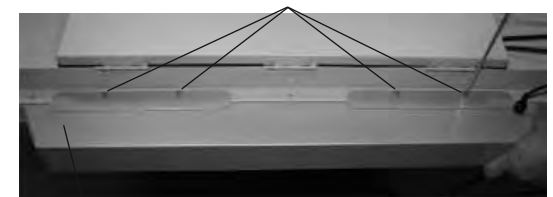
10. When you close the Connect Source Cover, be sure that the Speaker Cable Wire is placed across the outside portion of the Rubber Sealing Gasket. The Speaker Cable Wire should not be placed across the bottom of the Rubber Sealing Gasket (Figure 6).

Figure 1



Pan Head Screws

Figure 2

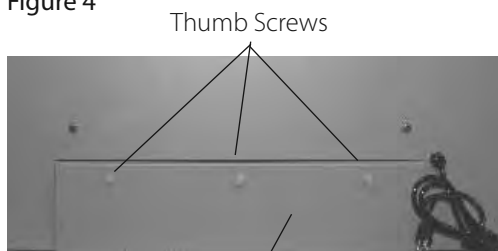


Speaker Module

Figure 3



Figure 4



Connect Source Cover

Figure 5 Speaker Connector



Rubber Sealing Gasket

Speaker Cable

Figure 6



Speaker Cable Wire should not come out of this area

# TV Installation--Optional Table Top Stand Installation

## Table Top Stand Installation

(Note, the Table Top Stand is an optional accessory. To order, contact your Authorized SunBriteTV Dealer or SunBriteTV customer service.)



**WARNING:** To prevent personal injury and/or damage to the TV or personal property, use at least two strong people to install or move the TV.

Tools Needed: Phillips screwdriver

### Notes:

- Do not attach the Table Stand if you plan to install the TV on a wall mount or ceiling mount.
- If you are planning to use the SunBriteTV Model 4600HD Detachable speakers, you must install the speakers before you attach the Table Stand.

For demonstration purposes, this manual is showing how to install the right-half of the Table Stand. Because you will be working from the back of the TV, the Table Stand will appear on the left.

- Prepare a flat work surface, free of any debris or items which may scratch the front surface of the TV.
- Lay the TV face-down on the work surface with the bottom of the unit closest to you

**WARNING: Use at least two people when transporting the TV.**

- Position the TV so that the bottom edge overhangs the table by about two inches.
- The TV is shipped with three Table Stand Mounting Screws on the TV, two on the back of the TV, and one on the bottom (Figure 1). **Note: Never permanently remove the Table Stand Mounting Screws from the TV.**
- The Table Stand has adjacent Mounting Holes, two on the back and one on the bottom (Figure 2).
- Remove the Table Stand Mounting Screws.
- Place the Table Stand on the TV so that the Table Stand Mounting Holes align with the TV Mounting Holes, and replace the Table Stand Mounting Screws to attach the Table Mount to the TV and secure tightly (Figures 3 and 4).
- Replace the Table Stand Mounting Screws to attach

Figure 1



Table Stand Mounting Screws on TV

Figure 2

Table Stand Top Bottom



Table Stand Mounting Holes

Front and back view of installed Table Top Stand



Back view is pictured without Detachable Speaker Module to show greater detail

Figure 3



Figure 4





## TV Installation – Rear Panel Internal Connect Source

### Rear Panel Connections

**WARNING:** Do not connect the power source before making connections.

### Internal Connect Source

The Internal Connect Source allows you to easily connect to the Audio, Video, S-Video, SVGA, HDMI, Audio Out, RF, RS232, and 12 VDC connectors, and the IR emitter window. The Internal Connect Source is inside the Cable Cover located on the back of the unit (Figure 1).

1. Unscrew the three gray Thumb Screws (Figure 1), and pull the cover towards you.
2. Route the cables to the proper inputs, and place the cable cords over the Rubber Sealing Gasket (Figure 2).

Note: There is an Indentation on the Rubber Sealing Gasket (on the bottom portion of the right and left sides). Make sure cable cords are not placed on the Indentation.

3. Close the cover.
4. Press firmly on the cover, and screw the Thumb Screws tightly (Figure 3).

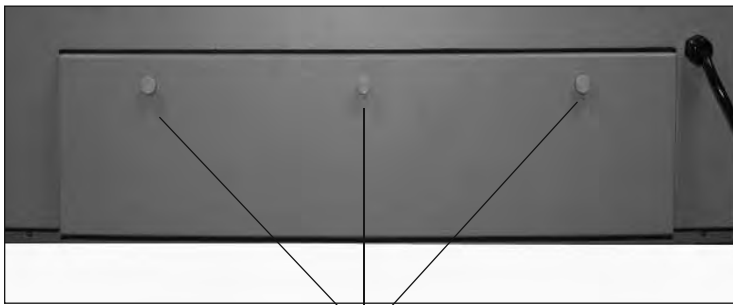


Figure 1

Thumb Screws



Figure 2

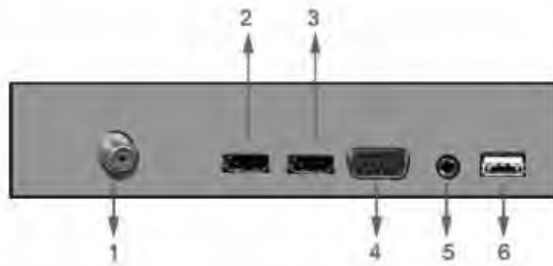
Indentations



Figure 3

# TV Installation – Rear Panel Connections

## Rear View Connections



The following descriptions are for connections from left to right.

**1. ATSC/NTSC** – This connection is for digital or analog cable without the cable box or over-the-airwave antennas. The tuner is a hybrid tuner that tunes to both analog and digital channels. This connection uses coaxial RF cable. For over-the-airwave digital stations please check <http://www.antennaweb.org>. Use the SOURCE button to select TV on your MAIN SOURCE to view this connection.

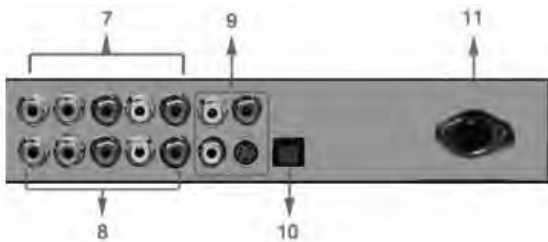
**2. HDMI 1** – Connects to devices that use HDMI cable, such as Blu-ray or HD DVD player or HD cable / satellite set-top box. This connection port receives pure digital audio and high definition signal through one single cable. This port also can accept a HDCP video device for video or PC for monitor display usage. Use the SOURCE button to select HDMI1 on your MAIN SOURCE to view this connection. Please note : when using HDMI, your sound signal must be PCM for the TV to decode digital audio. When using this source for PC display, you must connect the audio cable to VGA Stereo Input for audio.

**3. HDMI 2** – Connects to devices that use HDMI cable, such as Blu-ray or HD DVD player, or HD cable / satellite set-top box. This connection port receives pure digital audio and high definition signal through one single cable. This port also can accept a HDCP video device for video or PC for monitor display usage. Use the SOURCE button to select HDMI2 on your MAIN SOURCE to view this connection. Please note : when using HDMI, your sound signal must be PCM for the TV to decode digital audio. When using this source for PC display, you must connect the audio cable to VGA Stereo Input for audio.

**4. VGA** – This connection port connects to a PC for video using VGA cable. Be sure to connect your audio cable to the VGA Stereo input if you want sound out of VGA video source. Use the SOURCE button to select VGA on your MAIN SOURCE to view this connection.

**5. VGA STEREO INPUT** – This connection port is for people who want to provide audio to the TV when using a PC or a DVI video device. Use a 3.5mm mini-jack audio cable (headphone jack) to provide audio for a HDCP enabled DVI video device or PCs with VGA or DVI connection.

**6. SERVICE** – This port is for factory service only.



The following descriptions are for connections from left to right.

**7. COMPONENT 1 (upper)** – These connection ports are for DVD players, or satellite / cable set-top boxes that use component cables. From left to right, connect green, blue, and red for video, and then connect white for left channel audio, red for right channel audio. Use the SOURCE button to select YPbPr1 to view this connection.

**8. COMPONENT 2 (lower)** – These connection ports are for DVD players, or satellite / cable set-top boxes that use component cables. From left to right, connect green, blue, and red for video, and then connect white for left channel audio, red for right channel audio. Use the SOURCE button to select YPbPr2 to view this connection.

**9. AV 1 (CVBS or S-Video)** – Connects to devices that use composite or s-video cables such as VCR or camcorder or video game consoles. Please connect the video portion with either the yellow connector or the S-Video connector. Do NOT connect both video connectors. Use the SOURCE button to select AV1 (CVBS) on your MAIN SOURCE if you are using the yellow plug for video, use the SOURCE button to select AV1 (S-Video) on your MAIN SOURCE if you are using the S-Video connector to view this connection.

**10. SPDIF Out (optional)** – This connection port is used for sending out audio signals to other audio devices such as stereo/surround sound receivers. The black square (SPDIF OUT) connector sends out either bit-stream or PCM digital sound signal to a home theater receiver with digital input.

**11. SPEAKER MODULE CONNECTOR:** *This port is for the SunBriteTV Model 4610HD Detachable Speaker Module only.*

### Please Note:

- This TV features a power saving function which will turn off the TV automatically after 15 minutes of idling on a connection with no signal. This feature is present on all connection.

**12. IR Emitter Window** - The Internal Infrared (IR) Control Window allows the TV to be controlled from a remote system using IR commands.

**13. RS232** - The RS232 connection allows the TV to be controlled from a remote system using RS232 commands. (See Appendix A of this manual for a list of RS232 control commands and Appendix B for a Control Cable Pinout Diagram.)

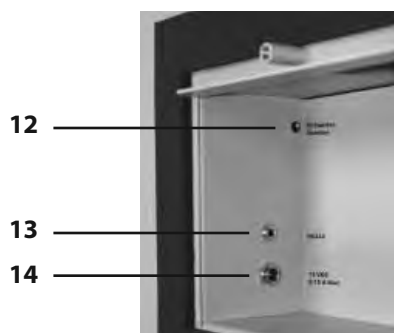
**14. 12 VDC** - This port is for the SunBriteTV FM Radio (Item SB-FM 461) connector only.

### Emitter Window:

Figure 15 shows an Emitter\* installed. One end of the Emitter is to be mounted in front of the IR Emitter Window. The other end is to be connected to an appropriate control block\*.

\* Neither the emitter or control block are supplied by SunBriteTV. See instructions that come with your IR Emitter and control block to determine how to make the connection.

**Important note:** SunBriteTV recommends using a high-output IR Emitter, such as Xantech 282M.



12

13

14

IR Emitter placed over the IR Window



Cable end that will be attached to an external control block is routed over the Rubber Sealing Gasket of the Internal Connect Source. See proper Internal Connect Source instructions on Page 9.











Figure 15




# TV Installation – Rear Panel Connections

## Connection Descriptions:

Port Quality & Name	Port Picture	Cable Used & Resolution	Devices that use this Port
<b>Best</b> HDMI 1, 2, 3 (Digital HD Capable)		HDMI 1080p, 1080i, 720p, 480p, 480i	Blu-ray DVD Player, HD-DVD Player, HD Cable or HD Satellite Set-top Box, HDCP devices, PC
<b>Best/Fair</b> ATSC/NTSC (Digital HD Capable)		Coaxial RF 1080i, 720p, 480p, 480i	Antenna or Digital Cable with out the cable box
<b>Best</b> VGA (HD Capable)		VGA 1920x1080 or lower	PC or MAC with VGA connection
<b>Better</b> COMPONENT 1 & 2 (HD Capable)		YPBPR 1080p, 1080i, 720p, 480p, 480i	DVD Player, Video Game Console, High Definition Cable or Satellite Set-top Box
<b>Good</b> AV 1, 2 (Non-HD)		S-Video 480i only	Non High Definition Cable or Satellite Set-top Box, S-Video VCR
<b>Fair</b> AV 1 & 2 (Non-HD)		Composite 480i only	Non High Definition Cable or Satellite Set-top Box, VCR, Old Game Console, Camcorder

## Cable Descriptions:







Cable Name	Cable Picture
HDMI	
Coaxial RF	
VGA	
YPBPR	 Blue Green Red
S-Video	
Composite	 Yellow
3.5 mm Mini-jack	 Green
RCA Audio	 White Red
AC Power	
Optical SPDIF	

Port Quality, Type & Name	Port Picture	Cable Used & Resolution	Devices that use this Port
<b>Good</b> VGA STEREO INPUT (Audio)		3.5mm mini-jack	HDCP devices, PC, MAC
<b>Best</b> SPDIF OUT (Digital Audio)		Optical SPDIF	Receiver with Digital Surround Sound Decoding
Not Available		Service Port	This port is for Sceptre technicians only.

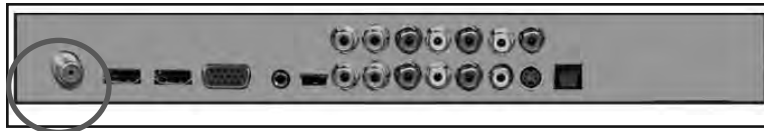
# TV Installation – Rear Panel Connections

## Switching Sources for Ports:

Model 4610HD offers several options when connecting your devices to the TV. The chart below will help you understand which source you switch to for each of the ports.

Port Picture	Cable Used	Source Name to Switch to
	HDMI or HDMI-DVI	HDMI 1 or HDMI 2
	COAXIAL RF	TV (CABLE / AIR)
	VGA	VGA
	YPBPR	YPBPR 1 or YPBPR 2
	S-VIDEO	AV 1 (S-VIDEO) or AV 2 (S-VIDEO)
	COMPOSITE	AV 1 (CBVS) or AV 2 (CVBS)

## CONNECTING TO AN ANTENNA



### Connecting to Digital Cable without Cable Box or Antenna



1. Make sure the power to the TV is turned off.
2. Connect the Coaxial RF cable from your antenna or digital cable to the ATSC/NTSC port off the back of your the TV.
3. Turn on the TV.
4. Select TV (Air) for antenna or TV (Cable) for digital cable from either your remote control's source button or source button on the right side of the TV.
5. Use the On-Screen Display to scan for channels.

### Connecting to Cable or Antenna



1. Make sure the power of the TV is turned off.
2. Connect the Coaxial RF cable from your antenna or cable to the ATSC/NTSC port off the back of your TV.
3. Turn on the TV.
4. Select TV (Air) for antenna or TV (Cable) for cable from either your remote control's source button or source button on the right side of the TV.
5. Use the On Screen Display to scan for channels.

*Note: Some VCRs must be turned on before output will have a signal to the TV.*

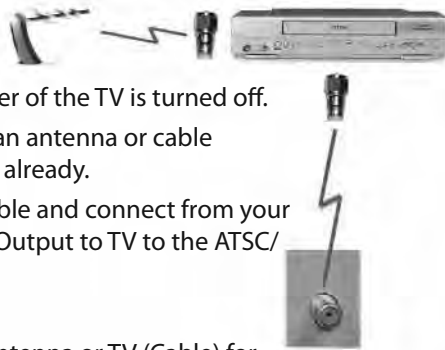
Please Note :

1. Not all broadcasts are in High Definition (HD). Please refer to your local broadcasting stations for more information.
2. The TV's tuner is designed for HDTV therefore requires a stronger signal than normal TVs. If you cannot achieve that signal level with your antenna or cable, your 4610HD might lose picture or sound.
3. This TV will turn off automatically if there's no signal present for more than 15 minutes.

## TV Installation – Rear Panel Connections

### CONNECTING TO AN ANTENNA--(Continued)

#### Connecting to Cable or Antenna through VCR



1. Make sure the power of the TV is turned off.
2. Make sure there is an antenna or cable connection to the VCR already.
3. Use a Coaxial RF cable and connect from your VCR's Antenna Out or Output to TV to the ATSC/NTSC port of your TV.
4. Turn on the TV.
5. Select TV (Air) for antenna or TV (Cable) for digital cable from either your remote control's source button or source button on the TV.
6. Use the On-Screen Display to scan for channels.

Please Note :

1. Some VCRs must be turned On before its output will have a signal to the TV. Please consult your VCR manual for further reference.
2. Not all broadcasts are in High Definition (HD). Please refer to your local broadcasting stations for more information.
3. The MODEL 4610HD's tuner is designed for HDTV therefore requires a stronger signal than normal TVs. If you cannot achieve that signal level with your antenna or cable, the TV might lose picture or sound.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

### CONNECTING TO A DVD PLAYER



1. Make sure the power of the TV and your DVD player is turned off.
2. Connect a HDMI cable to the HDMI port of your DVD player and the other end to the HDMI port off the back of your TV.
3. Turn on the TV and your DVD player.
4. Use the remote control's source button or the source button on the TV to switch to HDMI.

Please Note :

Refer to the DVD player's manual to make sure the DVD player is configured to output correctly to the TV.

Please Note :

1. Refer to the DVD player's manual to make sure the DVD player is configured to output correctly to the TV.
2. This TV does not decode Bit stream digital audio, so make sure the DVD is setup for PCM digital audio through HDMI.
3. If HDMI 1 is occupied, use HDMI 2 as your connection port.



1. Make sure the power of TV and your DVD player is turned off.
2. With a Component Cable, connect the green connector to the DVD player and Component 1's green connector port on the TV.
3. Connect the blue color connector to your DVD player and Component 1's blue connector port on the TV.
4. Connect the red color connector to both your DVD player and Component 1's red connector port on the TV.
5. With an RCA Audio Cable, connect the white color connector to both your DVD player and Component 1's white connector port on the TV.
6. Connect the red color connector to both your DVD player and Component 1's red connector port on the TV.
7. Turn on the TV and your DVD player.
8. Use the remote control's source button or the source button on the TV to switch to YPbPr1.

Please Note :

1. If Component 1 is already occupied, please use Component 2 as your connection port and switch to source YPbPr2.
2. Refer to the DVD player's manual to make sure the DVD player is configured to output correctly to the TV.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

## TV Installation – Rear Panel Connections

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### CONNECTING TO A DVD PLAYER (Continued)



1. Make sure the power of the TV and your DVD player is turned off.
2. Obtain an S-Video Cable. Connect the S-Video connector to both your DVD player and Composite's S-Video connector port off the back of your MODEL 4610HD.
3. Obtain a RCA Audio Cable. Connect the white color connector to both your DVD player and Composite's white connector port off the back of your MODEL 4610HD.
4. Connect the red color connector to both your DVD player and Composite's red connector port off the back of your TV.
5. Turn on the TV and your DVD player.
6. Use the remote control's source button or the source button on the right side of the TV to switch to AV1 (S-Video).

Please note:

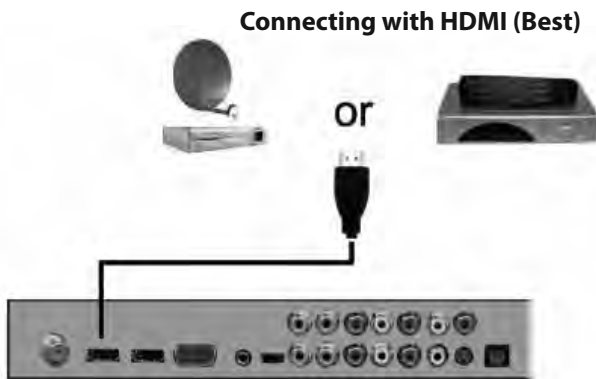
1. If AV 1 is already occupied, use AV2, as your connection port, and switch source to AV 2 (S-Video)
2. Reference the DVD player's manual to make sure the DVD player is configured to output correctly to the TV.
3. This TV will turn off automatically if there's no signal present for more than 15 minutes.



1. Make sure the power of the TV and your DVD player is turned off.
2. Obtain a Yellow Video Cable. Connect the Yellow Video connector to both your DVD player and Composite's Yellow Video connector port off the back of your TV.
3. Obtain a RCA Audio Cable. Connect the white color connector to both your DVD player and Composite's white connector port off the back of your TV.
4. Connect the red color connector to both your DVD player and Composite's red connector port off the back of your TV.
5. Turn on the TV and your DVD player.
6. Use the remote control's source button or the source button on the right side of the TV to switch to AV1 (CVBS).

## TV Installation – Rear Panel Connections

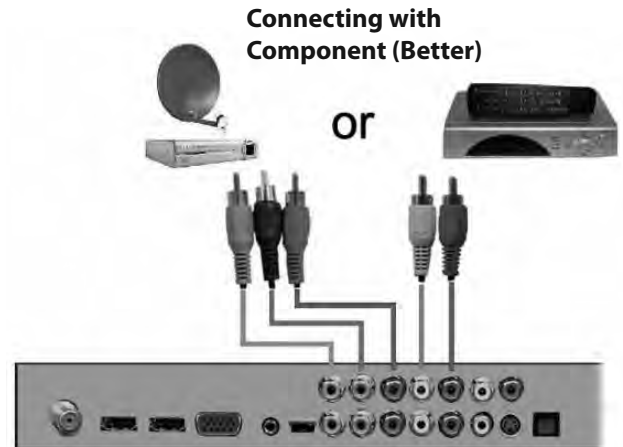
### CONNECTING TO A SATELLITE OR CABLE SET-TOP BOX



1. Make sure the power of the TV and your set-top box is turned off.
2. Connect a HDMI cable to the HDMI output of your set-top box and the other end to the HDMI port off the back of your TV.
3. Turn on the TV and your set-top box.
4. Use the remote control's source button or the source button on the right side of the TV to switch to HDMI 1.

#### Please Note :

1. Refer to the set-top box's manual, to make sure the set-top box is configured to output correctly to the TV.
2. If HDMI 1 is already occupied, use HDMI 1 as your connection port and switch source to HDMI 2.
3. SunBriteTV's MODEL 4610HD supports SONY's universal remote code. Please look up SONY's codes in your universal remote's hand book.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.



1. Make sure the power of TV and your set-top box is turned off.
2. Obtain a Component Cable. Connect the green color connector to both your set-top box and Component 1's green connector port off the back of your TV.
3. Connect the blue color connector to both your set-top box and Component 1's blue connector port off the back of your TV.
4. Connect the red color connector to both your set-top box and Component 1's red connector port off the back of your TV.
5. Obtain a RCA Audio Cable. Connect the white color connector to both your set-top box and Component 1's white connector port off the back of your TV to the right side of your green, blue, red component connection.
6. Connect the red color connector to both your set-top box and Component 1's red connector port off the back of your TV to the right side of your green, blue, red component connection.
7. Turn on the TV and your set-top box.
8. Use the remote control's source button or the source button on the TV to switch to YPbPr1.

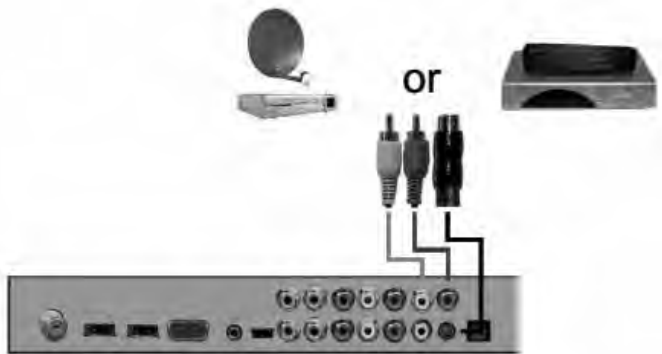
#### Please Note :

1. If Component 1 is already occupied, please use Component 2 as your connection port and switch to source YPbPr2.
2. Please refer to the set-top box's manual to make sure the set-top box is configured to output correctly to the TV.
3. SunBriteTV's MODEL 4610HD supports SONY's universal remote code. Please look up SONY's codes in your universal remote's hand book.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

# TV Installation – Rear Panel Connections

## CONNECTING TO A SATELLITE OR CABLE SET-TOP BOX (Continued)

### Connecting with S-Video (Fair)

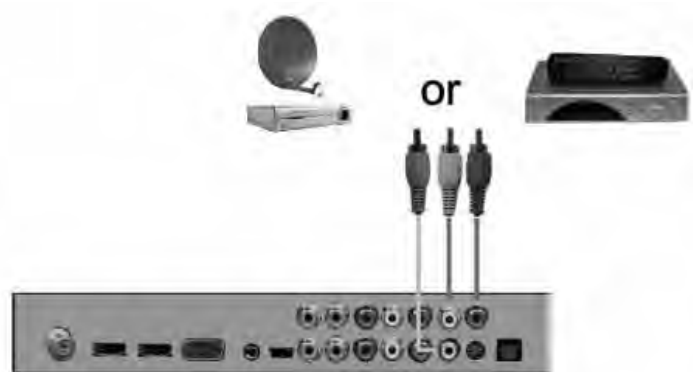


1. Make sure the power of the TV and your DVD player is turned off.
2. Obtain an S-Video Cable. Connect the S-Video connector to both your DVD player and Composite's S-Video connector port off the back of your MODEL 4610HD.
3. Obtain a RCA Audio Cable. Connect the white color connector to both your DVD player and Composite's white connector port off the back of your MODEL 4610HD.
4. Connect the red color connector to both your DVD player and Composite's red connector port off the back of your TV.
5. Turn on the TV and your DVD player.
6. Use the remote control's source button or the source button on the right side of the TV to switch to AV1 (S-Video).

Please Note :

1. If AV 1 is already occupied, use AV 2 as your connection port and switch source to AV 2 (S-Video).
2. Refer to the set-top box's manual to make sure the set-top box is configured to output correctly to the TV.
3. SunBriteTV's MODEL 4610HD supports SONY's universal remote code. Please look up SONY's codes in your universal remote's hand book.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

### Connecting with Composite (Fair)



1. Make sure the power of the TV and your DVD player is turned off.
2. Obtain a Yellow Video Cable. Connect the Yellow Video connector to both your DVD player and Composite's Yellow Video connector port off the back of your TV.
3. Obtain a RCA Audio Cable. Connect the white color connector to both your DVD player and Composite's white connector port off the back of your TV.
4. Connect the red color connector to both your DVD player and Composite's red connector port off the back of your TV.
5. Turn on the TV and your DVD player.
6. Use the remote control's source button or the source button on the right side of the TV to switch to AV1 (CVBS).

Please Note :

1. If AV 1 is already occupied, use AV 2 as your connection port and switch source to AV 2 (S-Video).
2. Refer to the set-top box's manual to make sure the set-top box is configured to output correctly to the TV.
3. SunBriteTV's MODEL 4610HD supports SONY's universal remote code. Please look up SONY's codes in your universal remote's hand book.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.



## TV Installation – Rear Panel Connections

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### CONNECTING TO AN EXTERNAL SURROUND SOUND RECEIVER

#### Connecting with Coaxial SPDIF Digital (Best)



1. Make sure the power of the TV and your receiver is turned off.
2. Obtain a Coaxial SPDIF cable, connect it to your receiver's coaxial SPDIF digital input and the Coaxial SPDIF connection on the LINE OUT port off the back of the TV.
3. Turn on the TV and your receiver.

Please Note :

1. If you want pure digital stream for your receiver to decode, you must also configure the TV's OSD Sound->Digital Audio Out function. Make sure the option is on Bit Stream.
2. If your receiver is making static noises when receiving Bit Stream, you must use the PCM option instead.
3. Refer to the receiver's manual to make sure the receiver is configured to receive signals correctly from the TV

### CONNECTING TO A PC

#### Connecting with DVI Digital



1. Make sure the power of the TV and your receiver is turned off.
2. Obtain a HDMI to DVI conversion cable; connect the DVI side of the conversion cable to the DVI output of your PC, and the HDMI side of the conversion cable to the HDMI port off the back of TV.
3. Obtain a 3.5 mm Mini-jack, connect to the audio out of your PC and the other end to the VGA Stereo Input Port.
4. Turn on the power to the TV and the PC.
5. From the remote control's source button, or the Source button from the TV's panel, switch to HDMI.

Please Note :

1. For the best picture, set your PC resolution to 920 x 1080 at 60 Hz. Refer to the PC or graphic card manual for further instructions on how to set your resolution and refresh rate.
2. Refer to your PC manual for video output requirements of the video card.
3. The TV will turn off automatically if there's no signal present for more than 15 minutes.
4. If HDMI 1 is already occupied, use HDMI 2 as your connection port, and switch source to HDMI 2

## TV Installation – Rear Panel Connections

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### CONNECTING TO A PC (Continued)

#### Connecting with RCA Audio Analog (Good)

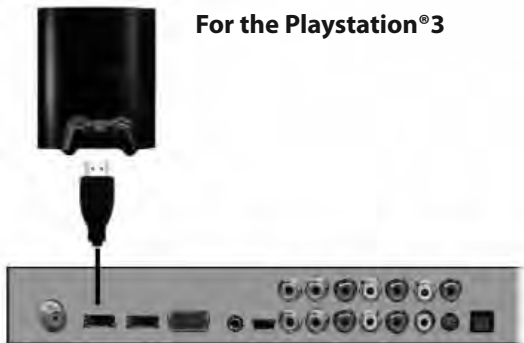


1. Make sure the power of the TV and your PC is turned off.
2. Obtain a 15-pin D-Sub VGA cable, connect to the VGA output of your PC and the other end to the VGA port off the back of your TV.
3. Obtain a 3.5 mm Mini-jack, connect to the audio out of your PC and the other end to the VGA Stereo Input port.
4. Turn on the power of the TV and your PC.
5. Use the remote control's source button or the source button the TV to switch to VGA.

Please Note :

1. For the best results, please set your PC resolution to 1920 x 1080 at 60 Hz. Refer to the PC or graphic card's manual for further instructions on how to set your resolution and refresh rate.
2. Refer to your PC manual for video output requirements of the video card.
3. The VGA port of the TV features a power saving mode which will automatically turn off the TV if there is no signal provided for more than 15 minutes.

### CONNECTING TO GAME CONSOLES



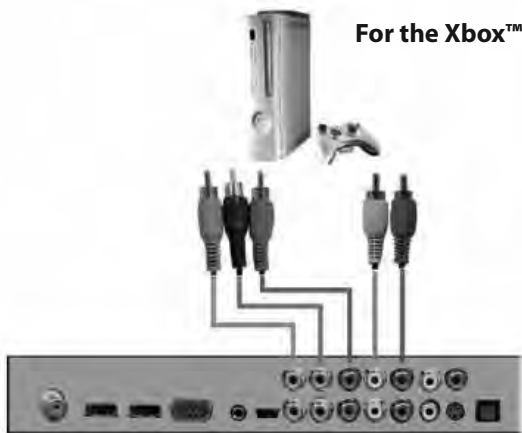
1. Make sure the power of the TV and your Playstation 3 is turned off.
2. Connect an HDMI cable to the HDMI output of your Playstation 3 and the other end to the HDMI port on the back of the TV.
3. Turn on the TV and Playstation 3.
4. Use the remote control source button or the source button on the power panel of the TV to switch to HDMI.

Please Note :

1. Refer to the Playstation 3's manual to make sure the PS3 is configured to output correctly to the TV. PS3 by default outputs to composite only. With newer firmware, PS3's HDMI should also output a signal. Please call PS3's tech support for further troubleshooting.
2. This TV does not decode Bit stream digital audio, therefore you'll need to make sure your DVD is set up for PCM digital audio through HDMI.
3. If HDMI 1 is already occupied, please use HDMI 2 as your connection port and switch source to HDMI 2.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

## TV Installation – Rear Panel Connections

### CONNECTING TO GAME CONSOLES (Continued)



1. Make sure the power of the TV and your Xbox 360 is turned off.
2. Obtain the Xbox 360 Component Cable. Connect the green color connector to Component 1's green connector port on the back of the TV.
3. Connect the blue color connector to Component 1's blue connector port on the back of the TV.
4. Connect the red color connector to the Component 1 red connector port on the back of the TV.
5. Connect the white color connector to the Component 1 white connector port on the back of TV.
6. Connect the red color connector to the Component 1 red connector port on the back of the TV
7. Connect the gray head to the Xbox 360 and make sure the switch on the head is switched to HD.
8. Turn on the TV.
9. Use the remote control source button or the source button on the TV panel to switch to YPbPr1.

Please Note :

1. Make sure not to confuse the red connector for video with the red connector for audio, they are on separate rows on the Xbox 360's connector.
2. If component 1 is already occupied, use Component 2 as your connection port and switch to source YPbPr2.
3. Refer to the Xbox 360 manual to make sure the Xbox 360 is configured to output correctly to the TV.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.



1. Make sure the power of the TV and your Wii is turned off.
2. Obtain a yellow video cable. Connect the yellow video connector to both your Wii and the AV 1 yellow video connector port on the TV.
3. Obtain a RCA Audio Cable. Connect the white color connector to both the Wii and the AV 1 white video connector port on the TV.
4. Connect the red color connector to both your Wii and the AV 1 red video connector port on the TV.
5. Turn on the TV and the Wii.
6. Use the remote control source button or the source button on the TV panel to switch source to AV 1 (CVBS).

Please Note :

1. If AV 1 is already occupied, use AV 2 as your connection port and switch source to AV 2 (CVBS).
3. Refer to the Wii manual to make sure the Wii is configured to output correctly to the TV.
4. This TV will turn off automatically if there's no signal present for more than 15 minutes.

## TV Installation--Rear Panel Connections

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### Connecting the Power Cord

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**WARNING:**

TV AND GFCI RECEPTACLE MUST BE INSTALLED AT LEAST 5 FEET AWAY FROM STANDING WATER , SUCH AS (BUT NOT LIMITED TO) A POOL OR SPA.

Connect the power cord after you have made connections to your video equipment.



Connect the power cord to a GFCI-protected AC outlet with "in-use" waterproof cover.

*Warning: TV must be installed at least 5 feet away from standing water, such as (but not limited to) a pool or spa.*

### Side Panel

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<b>Power</b>	Turns TV on/off.
<b>Menu</b>	Displays the On-Screen Display (OSD) menu. In OSD menu, press key to return to pre-phase.
<b>Vol+ /Vol-</b>	Adjusts volume. In OSD menu, both keys are used to navigate within menu. Vol+ is used to select the highlighted options.
<b>CH+/CH-</b>	Adjusts channels. In OSD menu, both keys are used to navigate within the menu.
<b>Source</b>	Press to change the input sources.

### Front Panel

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IR Sensor

# Remote Control Guide

## Top Section

**POWER** – This button turns the TV on or off. **Because of the size of the panel, the TV will take 10 – 12 seconds to power on.**

**FREEZE** – This button freezes the video. Press the button again to unfreeze the screen.

**SLEEP** – This button enables the sleep function where the TV turns itself off after the designated time.

**CC** – This button turns on the closed captioning system of the television. Please Note : CC only works under the sources TV, AV1, and AV2.

**ADD / DEL** – This button adds or deletes the current channel from the channel list. When you use **CH+** or **CH-**, the deleted channel will be skipped over.

**MTS** – This button switches between the main audio and the (SAP) second audio programming.

**SRS** – This button enables the SRS surround sound making the TV speakers audio sound like they are surrounding you.

**DNR** – This button enables the digital noise reduction on the TV, making the picture look smoother.

**CH Lock** – This button locks the current channel you are on, so that kids cannot view the locked channel unless unlocked by a password. You'll also need to input a password when locking the channel.

**0-9** – These buttons allow you to access the channels directly. When accessing a digital channel you would use these buttons in junction with the ( - ) button to switch channels.

( - ) – This button allows you to access digital channels directly when used in junction with the number buttons **0-9**.

**R** – This button allows you to jump between your current channel and the last channel you were on.



## Mid Section



**PICTURE** – This button selects different optimized picture settings for the TV.

**SOUND** – This button selects different optimized sound settings for the TV.

**VOL(+/-)** – These two buttons increase or decrease the volume of the TV.

**CH(+/-)** – These two buttons change the TV channel up or down.

**MUTE** – This button stops the TV from producing any sound.

**ASPECT** – This button changes the TV between different display modes.

**GUIDE** – This button turns on the electronic program guide that is received from over the airwave antenna.

**MENU** – This button turns on the on screen display menu (OSD).

**▲▼◀▶** – These buttons allow you to navigate inside the OSD menu. They also function as **CH+/-** for digital channels in the tuner.

**↵** – This button allows you to select functions inside the OSD menu and also acts as the **ENTER** button for changing channels.

**SOURCE** – This button switches the input sources. Once pressed use the **▲▼◀▶** and **↵** key to select the source you want to switch to.

**EXIT** – This button allows you to quit from the OSD menu.

## Bottom Section

**AUDIO** – This button switches the audio of the TV in between your picture in picture or picture on picture windows.

**VIDEO** – This button switches the video from the picture in picture window to the main screen, vice versa.

**SIZE** – This button changes the size of the picture in picture window.

**POS** – This button changes the position of the picture in picture window.

**ON/OFF** – This button turns on and off the picture in picture window and the picture on picture window.

**SOURCE** – This button changes the input source of the picture in picture window and the picture on picture window.

**▼▲** – These button changes the channel up or down from your favorites channel list.

**ADD / DEL** – This button adds or deletes the current channel from the favorites channel list.

**LED ON / OFF** – This button turns the backlight for the number pad on or off.

**INFO** – This button shows you your current channel information, display input, and resolution.



## Remote Control Guide



This remote control follows Sony's TV remote codes with discrete on/off and input select.  
Direct TV code is 10,000

### About the Water-Resistant Remote Control

The SunBriteTV™ All-Weather Outdoor Remote Control Model SB-RC461-WR is a water-resistant remote control that runs on two long-life lithium batteries. "Water-resistant" means that this remote control can be in water for short periods of time without damaging the internal workings of the unit. It can be left in the rain, and even dropped in water, as long as it is retrieved quickly. The remote control should not be left floating in water.

If the remote control is used properly, it will give you many years of service. The functionality of the remote control and the long-life lithium batteries are under warranty for one year.

If the remote control malfunctions or stops working within the one-year warranty period, SunBriteTV will repair or replace the remote control at SunBriteTV's option.

Do not attempt to replace the batteries yourself because the battery cover is sealed for water resistance. If the battery cover is removed, the warranty will become void.

If you have a warranty claim, contact the SunBriteTV Customer Support Team for further instructions.

## On-Screen Display Controls

### Via Remote Control

In order to adjust most of the options inside the On Screen Display (OSD), the picture below shows all the buttons used on the remote control.



- ▲ – This button functions as up direction in the OSD.
- ▼ – This button functions as down direction in the OSD.
- ◀ – This button functions as left direction in the OSD.
- ▶ – This button functions as right direction in the OSD.
- ↵ – This button changes the channel in conjunction with the number pad and also functions as enter for selecting options in the OSD.
- MENU** – This button opens the OSD and also exits the OSD by going to the previous level of the OSD.
- EXIT** – This button exits the OSD entirely.

### Via the TV's Side Panel Buttons

In order to provide more than one type of OSD control buttons, the side panel's buttons have also been made functional for adjusting the OSD.



- MENU** – This button opens the OSD.
- CH(▲)** – This button changes the channel to a higher number and also functions as up direction in the OSD.
- CH(▼)** – This button changes the channel to a lower number and also functions as down direction in the OSD.
- VOL(+)** – This button decreases the volume and functions as left direction in the OSD.
- VOL(-)** – This button decreases the volume and functions as right direction in the OSD.

## On-Screen Display Menu



**CHANNEL** – This main option has functions for the ATSC/NTSC port, such as scanning channels, editing channels, checking signal strength...etc.

**PICTURE** – This main option has functions for changing the picture settings for all ports, such as tint, contrast, sharpness, and dynamic noise reduction.

**SOUND** – This main option has functions for changing sound settings for all ports, such as digital audio out, treble, bass...etc.

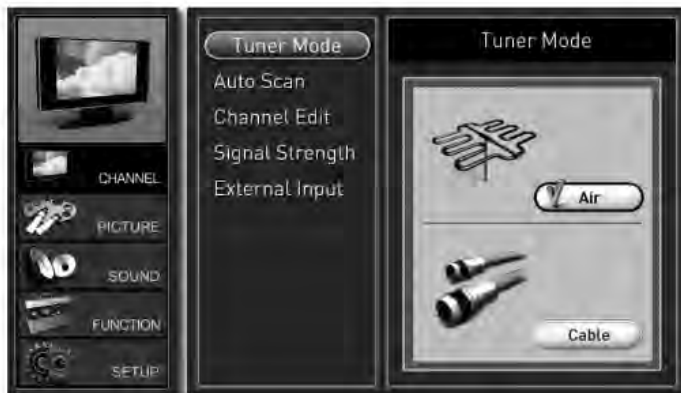
**FUNCTION** – This main option has functions for only composite and ATSC/NTSC port. Some of the functions are closed captioning and channel blocking for parents.

**SETUP** – This main option has functions for all ports, such as power on / off time, sleep, menu language, menu opacity, emergency alert for emergency broadcasting system.

## Channel Menu

This option chooses various antenna and cable functions. Extra functions include signal strength for digital signals and changing input via External Input function.

**TUNER MODE** – This function allows users to choose what connection the TV is accepting.



1. Press MENU to open the OSD and highlight CHANNEL.
2. Press  $\leftarrow$  or  $\rightarrow$  to move to the functions and highlight TUNER MODE.
3. Once in TUNER MODE, press  $\rightarrow$  again to select either AIR or CABLE.
4. Use  $\uparrow$  or  $\downarrow$  to select which connection you have then press  $\leftarrow$  to finalize the selection.

Please Note :

- If you are choosing cable, the default scanning mode is AUTO. Unless you know what cable system your cable company uses, please leave the tuner mode at AUTO.

**AUTO SCAN** – This function scans all the channels available from the ATSC/NTSC port.



1. Press MENU to open the OSD and highlight CHANNEL.
2. Press  $\leftarrow$  or  $\rightarrow$  to move to the functions and highlight TUNER MODE.
3. Once in TUNER MODE, press  $\downarrow$  to select AUTO SCAN.
4. Press  $\leftarrow$  twice to enter and begin scanning for channels.

Please Note :

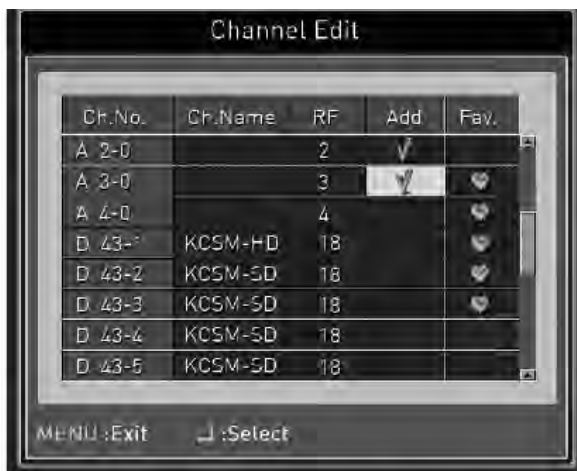
- Not all broadcasts are in High Definition (HD). Please refer to your local broadcasting stations for more information.

## Adjusting On-Screen Displays – Channel Menu

**CHANNEL EDIT** – This function allows users to add, delete, or add to favorites, the TV's scanned in channels.



1. Press **MENU** to open the OSD and highlight **CHANNEL**.
2. Press **↓** or **▶** to move to the functions and highlight **TUNER MODE**.
3. Once in **TUNER MODE**, press **▼** repeatedly to select **CHANNEL EDIT**.
4. Press **↓** twice to enter start editing the scanned in channels.



5. You will be able to edit the channels by either deleting the channel or adding the channel to the favorites list.
  - a. You can delete the channel by removing the ✓ from the ADD column.
    - i. Match the channel you want to remove with the **▲▼◀▶** buttons in the ADD column then press **↓**. If you do this, you will not be able to browse that channel until you go back into channel edit and add the ✓ back.
    - ii. Press the **MENU** button to save and exit.
  - b. You can add the channel to your favorite list by adding a ♥ in the FAV. column.
    - i. Match the channel you want to add to favorites with the **▲▼◀▶** buttons in the FAV. column then press **↓**. If you do this, the channel will be part of the sequential cycling list of the FAVORITE button on the remote control, until you go back into channel edit and remove the ♥.
    - ii. Press the **MENU** button to save and exit.

**SIGNAL STRENGTH** – This function allows users to view their digital channel's signal strength.



1. Press **MENU** to open the OSD and highlight **CHANNEL**.
2. Press **↓** or **▶** to move to the functions and highlight **TUNER MODE**.
3. Once in **TUNER MODE**, press **▼** repeatedly to select **SIGNAL STRENGTH**.

Please Note :

- This function is only available if you are on a digital channel. This function will not work under analog channels.
- When using this function, the OSD menu will not auto exit.

**EXTERNAL INPUT** – This function allows users to change the current source to another.



1. Press **MENU** to open the OSD and highlight **CHANNEL**.
2. Press **↓** or **▶** to move to the functions and highlight **TUNER MODE**.
3. Once in **TUNER MODE**, press **▼** repeatedly to select **EXTERNAL INPUT**.
4. Press **↓** to select the function and use **◀** or **▶** to change the source of your choice and press **↓** to finalize your selection.



# Adjusting On-Screen Displays – Picture Menu

## Picture Menu

This option allows users to adjust the TV's picture sharpness, color, tint, and other various functions.

**PICTURE MODE** – This function allows you to select the various picture modes of the TV from custom, standard, mild, to vivid.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ⏪ or ⏩ to select PICTURE MODE function.
4. Use ▲ or ▼ to select which picture mode you want.
5. Press ⏩ to confirm your selection.

Please Note :

- CUSTOM allows you to adjust all the settings to your personal preference.
- STANDARD is for watching regular TV.
- MILD is for watching movies.
- VIVID is for watching sports and HDTV programming.
- RECALL is not a picture mode but a function to restore any changes under CUSTOM picture mode back to its original factory settings.

**BACKLIGHT CONTROL** – This function adjusts the LCD lamp's current. The current affects the brilliance of the picture.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select BACKLIGHT CONTROL function and press ⏩.
4. Use ◀ or ▶ to adjust the backlight level.

Please Note :

- The backlight level does not affect the brightness or the contrast of the picture. It just affects the brilliance of the picture.
- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.

**BRIGHTNESS** – This function adjusts the black level in a picture.



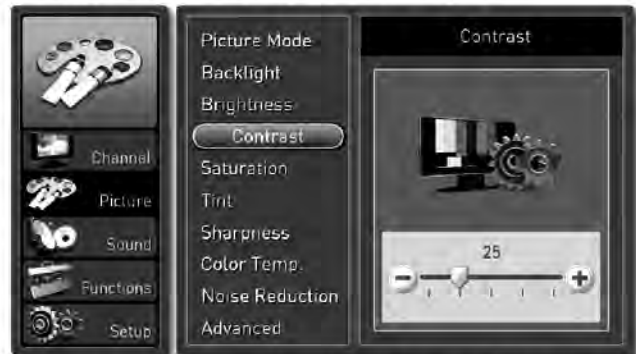
1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ to select BRIGHTNESS function and press ⏩.
4. Use ◀ or ▶ to adjust the brightness level.



Please Note :

- This function can be reset back to default via the RECALL subfunction under PICTURE MODE.
- If the brightness is too high, the picture will look washed out, if the brightness is too low the picture will not have much detail in dark spots of the picture.

**CONTRAST** – This function adjusts the white levels in a picture.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select CONTRAST function and press ⏩.
4. Use ◀ or ▶ to adjust the contrast level.

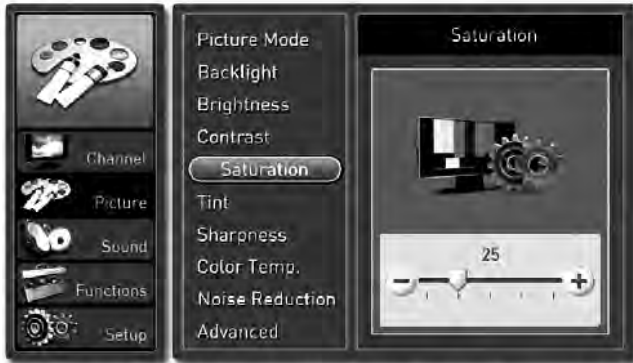


Please Note :

- This function can be reset back to default via the RECALL subfunction under PICTURE MODE.
- If the contrast is too high, the picture will not have any details in bright parts of the picture. If the contrast is too low, the picture will look washed out.

## Adjusting On-Screen Displays – Picture Menu

**SATURATION** – This function adjusts how strong your picture's colors are going to be.



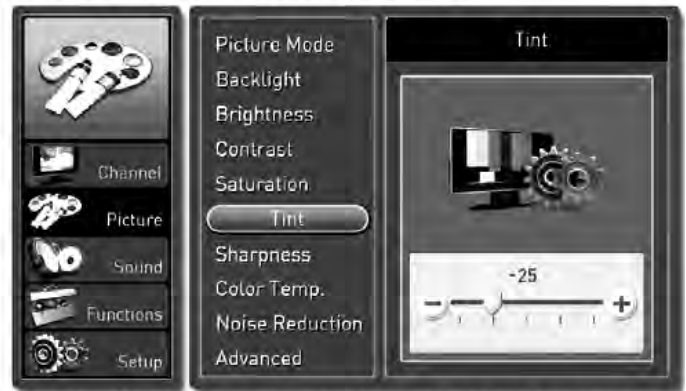
1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select SATURATION function and press ⏪.
4. Use ⏪ or ⏩ to adjust the saturation level.



Please Note :

- This function can be reset back to default via the RECALL subfunction under PICTURE MODE.

**TINT** – This function adjusts your picture's overall color with everything looking green on one end and everything looking red on the other.



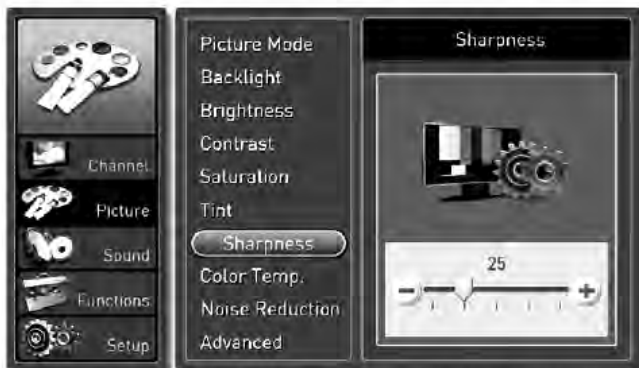
1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select TINT function and press ⏪.
4. Use ⏪ or ⏩ to adjust the tint level.



Please Note :

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.

**SHARPNESS** – This function adjusts how sharp objects in your pictures are.



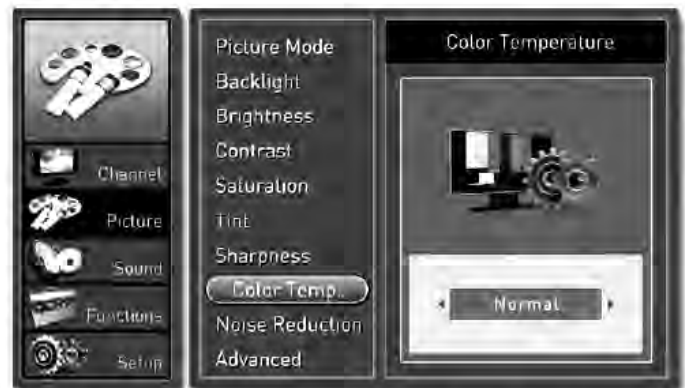
1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select SHARPNESS function and press ⏪.
4. Use ⏪ or ⏩ to adjust the sharpness level.



Please Note :

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.
- If the sharpness is adjusted too high, the picture will look overly pixilated. If the sharpness is adjusted too low, the picture will look blurry.

**COLOR TEMP.** – This function adjusts the white color's overall balance of white colors in a picture. The function changes the white color's overall balance in large increments.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select COLOR TEMP. function and press ⏪.
4. Use ⏪ or ⏩ to adjust the color temperature level.
5. Press ⏪ to finalize your selection.

Please Note :

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.
- COOL – This option will produce a picture with overall bluish color.
- NORMAL – This option will produce a picture with normal white color.
- WARM – This option will produce a picture with overall reddish color.

## Adjusting On-Screen Displays – Picture Menu

**NOISE REDUCTION** – This function reduces the amount of pixilation on the TV so the video will look smooth and natural. This function has 2 subfunctions, digital noise reduction and temporal noise reduction.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select NOISE REDUCTION function and press ⏪.
4. Use ⏪ or ⏩ to turn the DNR (digital noise reduction) on or off.
  - Digital Noise Reduction blends adjacent pixels together so that pictures do not look blocky, but because of the blurring the picture would lose some detail.
5. Press ▼ then use ⏪ or ⏩ to turn TNR (temporal noise reduction) on or off.
  - Temporal Noise Reduction blends adjacent pixels together so that pictures do not look blocky, this type of filter is best for action pictures such as sporting events or action movies.
6. Press ⏪ to finalize your selection.

Please Note :

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.

**Advanced** – This function offers advanced options that enhance the TV's performance and clarity.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏪ or ⏩ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select ADVANCED and press ⏪.
4. Use ▲, ▼, ⏪ or ⏩ to modify each option.

- Adaptive Contrast – This type of contrast enhances dark colors in bright pictures and enhances bright colors in dark pictures therefore making details in both bright and dark pictures more vivid and detailed.



- Flesh Tone Adjustment – This subfunction strengthens the human flesh colors in a picture.



- Blue Stretch – This subfunction strengthens the blue colors in a picture.



- RGB – This subfunction adjusts the white color's overall balance of white colors in a picture. Each color, red, green, and blue will fine tune the overall white color's balance in small increments.



1. Press ⏪ to finalize your selection.

Please Note :

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.

# Adjusting On-Screen Displays – Sound Menu

## Sound Menu

**NOISE REDUCTION** – This function reduces the amount of pixilation on the TV so the video will look smooth and natural. This function has 2 subfunctions, digital noise reduction and temporal noise reduction.



1. Press MENU to open the OSD and highlight PICTURE by pressing the ▼ button.
2. Press ⏴ or ⏵ to move to the functions and highlight PICTURE MODE.
3. Press ▼ repeatedly to select NOISE REDUCTION function and press ⏴.
4. Use ⏴ or ⏵ to turn the DNR (digital noise reduction) on or off.
  - Digital Noise Reduction blends adjacent pixels together so that pictures do not look blocky, but because of the blurring the picture would lose some detail.
5. Press ▼ then use ⏴ or ⏵ to turn TNR (temporal noise reduction) on or off.
  - Temporal Noise Reduction blends adjacent pixels together so that pictures do not look blocky, this type of filter is best for action pictures such as sporting events or action movies.
6. Press ⏴ to finalize your selection.

**Please Note :**

- This function can be reset back to the default via the RECALL subfunction under PICTURE MODE.

**TREBLE** – This function adjusts the level of high pitch sound in a TV.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ⏴ or ⏵ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select TREBLE.
4. Press ⏴ or ⏵ to select the function.
5. Use ⏴ or ⏵ to adjust the level.

**Please Note :**

- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.

**BASS** – This function adjusts the level of low pitch sound in a TV.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ⏴ or ⏵ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select BASS.
4. Press ⏴ or ⏵ to select the function.
5. Use ⏴ or ⏵ to adjust the level.

**Please Note :**

- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.

**BALANCE** – This function adjusts the balance of sound from left to right.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ⏴ or ⏵ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select BALANCE.
4. Press ⏴ or ⏵ to select the function.
5. Use ⏴ or ⏵ to adjust the level.

**Please Note :**

- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.



## Adjusting On-Screen Displays – Sound Menu

**AVL (Auto Volume Level)** – This function will enable an automatic balancing of sound when certain channels suddenly become over bearing.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ◀ or ▶ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select AVL.
4. Press ◀ or ▶ to select the function.
5. Use ◀ or ▶ to enable or disable the auto volume level.

Please Note :

- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.
- This function will only function if TruSurround XT is turned off.

**TruSurround XT** – This function will enable a virtual surround sound field that presents an expansive three dimensional sound field making the listener feel like there are "phantom" speakers that appear to extend all around the listener.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ◀ or ▶ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select SRS.
4. Press ◀ or ▶ to select the function.
5. Use ◀ or ▶ to on or off SRS.

Please Note :

- SRS surround sound depends on the room you are in. If there are too many objects between the TV and the listener or the walls are using sound absorbing material, the surround sound effects will be diminished or disabled.
- This function will only function if AVL is turned off.

**PREFERRED AUDIO LANGUAGE** – This function is for MTS (multi-channel television sound). It will change the spoken language of a TV program via SAP (secondary audio programming). The TV station will need to support the TV program in different languages in order for this function to work.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ◀ or ▶ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select AUDIO LANGUAGE.
4. Press ◀ or ▶ to select the function.
5. Use ◀ or ▶ to switch between the languages.

Please Note :

- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.
- This function is not always available. It is based upon the support of your local TV broadcasting station's signal. If the TV station does not support MTS/SAP, you will not be able to receive any alternative audio language. Please check with your local broadcasting stations for more information.

**DIGITAL AUDIO OUT** – This function enables the TV to output sound in 2 digital formats, PCM, and Bit Stream for digital home theater receivers.



1. Press MENU to open the OSD and highlight SOUND by pressing the ▼ button.
2. Press ◀ or ▶ to move to the functions and highlight SOUND MODE.
3. Press ▼ repeatedly to select DIGITAL AUDIO OUT.
4. Press ◀ or ▶ to select the function.
5. Use ◀ or ▶ to select between the two options PCM and BITSTREAM.

Please Note :

- PCM & BIT STREAM are two formats of digital sound. If you have a digital home theater system, you should use BIT STREAM for your digital audio out.
- Not all TV programming will give you digital surround sound. The sound signal is based on the TV broadcasting station's support. Please check with your local broadcasting stations for more information.
- This function can be reset back to the default via the RECALL subfunction under SOUND MODE.

# Adjusting On-Screen Displays – Function Menu

## Function Menu

This option allows users to turn on TV program filters for children, and also closed captioning support options. To use this option you will need to enter in the password first. The password is "0000".



**AUTO LOCK** – This function helps parents filter TV programming by either locking channels by choice or blocking channels based on the ratings that TV stations submit through the signal.



1. **SET BLOCKING** – This subfunction turns blocking from CHANNEL BLOCKING on or off.



- a. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- b. Press ⏪ or ⏩ to select the option and highlight AUTO LOCK.
- c. Press ⏩ to select the function.
- d. Use ⏪ or ⏩ to select SET BLOCKING.
- e. Enter "0000" as the default password.
- f. Press ⏩ to select the function.
- g. Use ▲ or ▼ to choose the option you want and press ⏩ to select.

Please Note :

- Turning the subfunction on will enable the CHANNEL BLOCKING FUNCTION. Turning the subfunction off will disable the CHANNEL BLOCKING FUNCTION.
- You can also disable the function by pressing in the password.

2. **BLOCK CHANNEL** – This subfunction blocks channels by selecting them off a channel list.



- a. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- b. Press ⏪ or ⏩ to select the functions and highlight AUTO LOCK.
- c. Press ⏩ to select the function.
- d. Press ▼ to select CHANNEL BLOCKING.
- e. Press ⏩ to select the function.
- f. Highlight the channel you want to lock by using ▲ or ▼ buttons.
- g. Lock or unlock the channel by pressing the ⏩ button.
  - i. If a channel is locked it would have the 🔒 symbol.
  - ii. If a channel is unlocked it would have the 🔓 symbol.

Please Note :

- You can also block the channels by using the CH LOCK button on the remote control.
- This function will only work if SET BLOCKING subfunction is turned on.
- You can disable the function during channel browsing when it asks you for the auto lock password.
- The default auto lock password is "0000".
- When a channel is blocked you can only change the channel by the CH+ or CH- buttons.

3. **BLOCK BY RATING** – This subfunction blocks channels by reading each channel's TV program or movie rating.



- a. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- b. Press ⏪ or ⏩ to select the functions and highlight AUTO LOCK.
- c. Press ⏩ to select the function.
- a. Press ▼ until you see BLOCK BY RATING and use ⏩ to select BLOCK BY RATING.
- b. You can block movies by selecting the ratings under MPAA and TV shows under TV Parental Guidelines.
  - i. Use ▲ ▼ ◀ ▶ to move to the ratings you want to block.
  - ii. Press ⏩ to block or unblock. If a rating is locked it would have the 🔒 symbol. If a rating is unlocked it would have the 🔓 symbol.

Please Note :

- This type of filtering for children watching TV will not always work since the ratings signal is dependent on whether the TV station sends the signal or not and whether the TV receives the ratings signal or not. For better assurance please use the CHANNEL BLOCKING subfunction.

## Adjusting On-Screen Displays – Function Menu

4. DTV RATING – This subfunction gathers all digital channels's programming rating.



- Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- Press ◀ or ▶ to select the functions and highlight AUTO LOCK.
- Press ◀ to select the function.
- Press ▼ until you see DTV RATING and use ◀ to select it.
- Press ◀ again to begin scanning for DTV ratings.

**Please Note :**

- This type of ratings for children watching TV will not always work since the ratings signal is dependent on whether the TV station sends the signal or not and whether the TV receives the ratings signal or not. For better assurance please use the CHANNEL BLOCKING subfunction.

5. SETUP CODE – This subfunction sets the password.



- Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- Press ◀ or ▶ to select the functions and highlight AUTO LOCK.
- Press ◀ to select the function.
- Press ▼ until you see SETUP CODE and use ◀ to select it.
- Input "0000" as your password and input your new password.

**Please Note :**

- There is no way of resetting the password.
- If you're going to change the password, please write it down and keep it in a safe place just in case you forget.

- CAPTION – This function shows closed caption of TV programs.



- Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- Press ◀ or ▶ to select the functions and highlight AUTO LOCK.
- Press ▼ until you see CAPTION and use ◀ to select it.
- Use ▲▼◀▶ to select the option you want.
- US stations usually use CC1 for analog and CS1 for digital closed captioning.
- Other CC and CS services do not apply to TV captioning inside US.
- TT refers to text boxes that display the TV channel's extra information.

**Please Note :**

- Analog and digital closed captioning will automatically switch for you when you switch channels.
- Not all TV programs support closed captioning. This function depends on the TV station to support the signal with captioning. For more information please contact your TV broadcasting stations.
- TT box information may or may not display any related info to the TV program you are watching
- Closed Captioning for this TV only works under sources TV, AV1, and AV2.

- CAPTION OPTION – This function locks or unlocks options you can use to adjust the way your digital caption is displayed.



- Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
- Press ◀ or ▶ to select the functions and highlight AUTO LOCK.
- Press ▼ until you see CAPTION OPTION and use ◀ to select it.
- Use ◀ or ▶ to select the option you want.
- DEFAULTS locks up the functions CC BACKGROUND and CAPTION TEXT.
- OPTIONS unlocks the functions CC BACKGROUND and CAPTION TEXT.

**Please Note :**

- Only digital station's closed captioning will be affected by this function. If you are on an analog TV channel, the caption will remain the same as before.

## Adjusting On-Screen Displays – Function Menu

**CC BACKGROUND** – This function adjusts digital channel's closed captioning background.



1. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
2. Press ⏪ or ▶ to select the functions and highlight AUTO LOCK.
3. Press ▼ until you see CC BACKGROUND and use ⏪ to select it.
4. Use ▲▼◀▶ to select the option you want.
5. The normal closed captioning defaults to a solid black background with white color text.
6. COLOR adjusts the background color.
7. OPACITY adjusts how transparent or solid you want the background color to be.

Please Note :

- This function only works under digital channels. If you are on an analog channel this function will default to the regular black background with white text.
- Closed Captioning for this TV only works under sources TV, AV1, and AV2.

**CAPTION TEXT** – This function adjusts digital channel's closed captioning text styles.



1. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
2. Press ⏪ or ▶ to select the functions and highlight AUTO LOCK.
3. Press ▼ until you see CAPTION TEXT and use ⏪ to select it.
4. Use ▲▼◀▶ to select the options you want.
5. The normal closed captioning defaults to a solid black background with white color text.
6. CAPTION SIZE changes the font size of the text.
7. CAPTION STYLE changes the font style of the text.
8. TEXT COLOR changes the font color of the text.
9. TEXT OPACITY changes the caption text from transparent to solid.
10. EDGE STYLE enhances a caption text's visibility by adding a 3 dimensional detail to the text. There are various options to this subfunction.
11. EDGE COLOR changes the 3 dimensional effect's color.
12. ITALIC makes the caption text look slanted.
13. UNDERLINE puts a line across the bottom of the caption text.

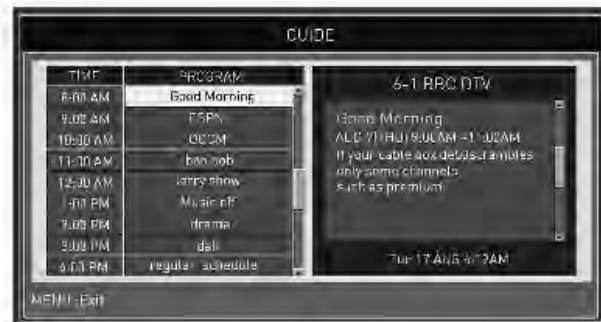
Please Note :

- These options only work under digital channels. If you are on an analog channel this function will default to the regular black background with white text.
- Closed Captioning for this TV only works under sources TV, AV1, and AV2.

**GUIDE** – This function shows you detailed information about your current digital channel's programming and the entire day's program list.



1. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
2. Press ⏪ or ▶ to select the functions and highlight AUTO LOCK.
3. Press ▼ until you see GUIDE and use ⏪ twice to select it.
4. Inside the GUIDE you can select the programming of the TV station by time, and RESERVE it for future viewing by pressing the ⏪ key. When you press ⏪ a clock sign ⌚ will appear next to the programming. This signifies that this program will now be reserved for viewing. When the time comes, the TV will prompt you 30 seconds ahead for switching to that channel. If you choose YES the TV will switch to the channel for you, if you choose NO, then the TV will stay on the current channel and remove the reservation from the reserve list.



Please Note :

The guide only works under ANTENNA connection of TV tuner. It will not work with any other connection.



## Adjusting On-Screen Displays – Function Menu

**RESERV. LIST** – This function is an actual function that's used while you have GUIDE turned on. You can reserve up to 5 programs that you want to watch in the future and the TV will automatically switch to that channel when the time comes.



1. Press MENU to open the OSD and highlight FUNCTION by pressing the ▼ button.
2. Press ⏪ or ⏩ to select the functions and highlight AUTO LOCK.
3. Press ▼ until you see RESERV. LIST and use ⏪ twice to select it.

Please Note :

- The reserve list only works under ANTENNA connection of TV tuner. It will work with any other connection.
- If you did not reserve a program, the TV will tell you that the list is empty.
- You can only select a **maximum of 5** reserve programming.
- This function will only work, when the TV is turned ON.

## Set-Up Menu

This main option has functions that allows users to power the TV on or off at a specific time and date, adjusting PC resolutions for VGA cards, and changing time and date for the TV.

**DATE / TIME** – This function adjusts the time and date.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏪ or ⏩ to select the functions and highlight DATE/TIME.
3. Press ⏪ to select the function.
4. Press ⏪ to select SETTING.
5. Use ▲▼◀▶ to select the options.
  - i. Daylight Savings – This option allows you to select whether you want to or do not want to observe daylight savings time.



- ii. Time Zone – This option allows you to select 7 areas of time zone, between Pacific, Mountain, Central, Eastern, Alaska, Hawaii, and Atlantic.



- iii. Date / Time – This option lets you choose between Auto or Manual date / time.
  - MANUAL allows you to choose your own time and date.
  - AUTO makes the TV receive time from TV station's broadcasting signals.



Please Note :

- The AUTO DATE/TIME feature only works under digital antenna channels. If you are on an analog antenna, analog cable, or digital cable channel, you will have to manually set the time.
- If you choose AUTO, please be aware that current digital channels will not always give you the correct time for syncing. Certain channels will give you different timing depending on the time zone the actual station has selected on their broadcasting server.

# Adjusting On-Screen Displays – Set-Up Menu

**POWER ON TIME** – This function automatically turns the TV on to a specific channel at a set specific time and date.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⬅ or ➡ to select the functions and highlight DATE/TIME.
3. Press ▼ to select POWER ON TIME and press ⬅.
4. Select ACTIVATE and press ⬅.
5. Use ▲▼◀▶ to select the options.
  - Activate – This lets you choose between, daily (as in turn on the TV automatically daily), once (as in turn on the TV automatically only once), or off (as in disable this feature).



- Time – This option lets you select what time you want the TV to automatically turn on.



- Channel – This option lets you choose which channel you want the TV to tune to, after it automatically powers on.



Please Note :

- This function is only for turning on the TV. If you do not setup POWER OFF TIME function, the TV will never turn itself off. If you are going on vacation for a long time, please do not forget to set the function POWER OFF TIME.
- This function is dependent on the TV's time / date. If the time / date is incorrect, this function will also be affected.

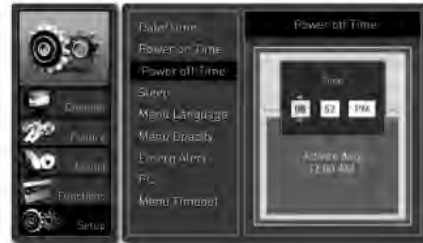
**POWER OFF TIME** – This function automatically turns the TV off at a set specific time and date.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⬅ or ➡ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select POWER OFF TIME and press ⬅.
4. Select ACTIVATE and press ⬅.
5. Use ▲▼◀▶ to select the options.
  - Activate – This lets you choose between, daily (as in turn on the TV automatically daily), once (as in turn on the TV automatically only once), or off (as in disable this feature).



- Time – This option lets you select what time you want the TV to automatically turn on.



Please Note :

- This function is dependent on the TV's time / date. If the time / date is incorrect, this function will also be affected.

**SLEEP** – This function makes the TV turn itself off after a set number of minutes.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⬅ or ➡ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select SLEEP and press ⬅.
4. Use ◀ or ▶ to select how many minutes you want the TV to be on and press ⬅.
5. Once selected the TV will begin counting the minutes immediately.

# Adjusting On-Screen Displays – Set-up Menu

**MENU LANGUAGE** – This function changes the entire OSD's language.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏴ or ▶ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select MENU LANGUAGE and press ⏴.
4. Use ◀ or ▶ to select language you want the TV to display the OSD in and press ⏴.
5. Once selected the TV will display the language of your choice.

**EMERGENCY ALERT** – This function adjusts options regarding your local emergency broadcasting service.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏴ or ▶ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select EMERGENCY ALERT and press ⏴.
4. Use ▲▼◀▶ to select if you want to display medium or low emergency alerts in your local area and press ⏴.

Please Note :

- This function is dependent on your local TV station's support. If your local TV stations do not support such function, EMERGENCY ALERT will not work.

**MENU OPACITY** – This function changes the OSD menu's visual from transparent to solid.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏴ or ▶ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select MENU OPACITY and press ⏴.
4. Use ◀ or ▶ to select how transparent or solid you want to display the OSD in and press ⏴.

# Adjusting On-Screen Displays – Set-up Menu

**PC SETUP** – This function is for people who use the X46 LCD HDTV's VGA port as a PC monitor only. The function adjusts the position and syncs the signal of the PC.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏪ or ⏩ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select PC and press ⏪.
4. Use ▲ or ▼ to select the subfunction you want and press ⏪.
5. AUTO ADJUST is a typical LCD monitor's auto adjust function. It syncs to the signal of the VGA card and auto adjusts the clock and phase of the signal so your picture comes out clear and centered.



Please Note :

- The X46 LCD HDTV's best PC resolution is 1920x1080 at 60Hz.
- Always try to use AUTO ADJUST over manual adjustments.

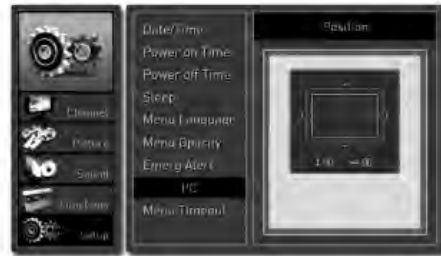
6. AUTO COLOR is a subfunction where the TV balances the color of the screen for you so that all colors on screen are displayed accurately.



7. TRACKING consists of PHASE and CLOCK.
  - PHASE adjusts the video signal in a small increment to sync with the PC.
  - CLOCK adjusts the video signal in a large increment to sync with the PC.



8. POSITION moves the picture left or right, up or down.



**MENU TIMEOUT** – This function adjusts how long the menu will be on the screen when you're not using it.



1. Press MENU to open the OSD and highlight SETUP by pressing the ▼ button.
2. Press ⏪ or ⏩ to select the functions and highlight DATE/TIME.
3. Press ▼ repeatedly until you select MENU TIMEOUT and press ⏪.
4. Use ▲ or ▼ to select how long you want the OSD to display when it is idle.
5. Please finalize the selection by pressing ⏪.

# Information Banner

## Information Banner

The info banner is a banner that shows TV programming info on the top portion of your TV. This function is only available when you use the ATSC/NTSC tuner port. You can use the INFO button on the remote control to access this function.



The info banner's left side shows you typical programming information such as TV station name, number, program name, date, and times the show starts and ends.



The info banner's right side shows you the TV's display information such as HD (High Definition) or SD (regular TV) mode, stereo sound, closed captioning, and digital surround sound.



- **HD or SD** – If highlighted this symbol shows you whether the channel you are watching is in HD (High Definition) or Standard Definition (regular TV).



- **((S))** – If Highlighted this symbol shows you that the channel you are watching is in stereo sound.



- **(S)** If highlighted this symbol shows you are using the SAP (secondary audio programming) function from the TV channel. You can do so via the MTS button on the remote control. Please Note : This function is always active under analog stations whether the station supports this function or not.



- **CC** – If highlighted, this symbol tells you that this channel supports closed captioning.



- **5.1 CH** – If highlighted this symbol tells you that this channel supports 5.1 channel digital surround sound.



- **TV-MA ALL** – This is a type of TV rating. This section tells you the TV ratings of the program you are watching. Please refer to ratings explained for more information on ratings.



- **Signal strength icon** This symbol and the indicator bar show you how strong your current channel's signal is. This function is only available under digital channels.



Please note : If you are watching an analog channel, this function will not work.

# Aspect Ratio

## Aspect Ratio Explained

The TV will display the TV channel's signal format automatically. There are mainly two types of signal format, 16:9 and 4:3.

### 1. 1:1 Mode

This mode will 1 to 1 pixel ratio for the maximum resolution (1080P) of the TV. This mode should only be used for 1080P video sources such as PS3s or Blu-Ray DVD players.



### 2. 16:9

This mode will stretch the picture to a widescreen ratio. If you have a perfect 16:9 ratio picture you will not see any black bars. If you are watching a widescreen movie in 1.85:1 or 2.35:1 ratio, you will still get black bars on the top and bottom of the screen. If you use this mode on 4:3 pictures they will be stretched and distorted horizontally.



### 4. 4:3 Normal

Most analog TV channels have 4:3 signal formats. If the original 4:3 aspect ratio (1.33:1 source) is preserved, black bars are added to the left and right of the display image. This aspect keeps that aspect ratio and shows you the black bars on the side.



### 5. 4:3 Zoom

When watching a 4:3 aspect ratio TV or movie, this mode zooms in to cut off most of the black bars on the side while preserving the 16:9 ratio. Because of the zoom, the top and bottom are cut off as well. Please Note : When in HD mode aspect ratios will not work because it is controlled by the signal.



### 6. Panorama

When watching a 4:3 aspect ratio TV or movie, there will be black bars on the side, you can remove this by using 16:9 aspect but the entire picture will be distorted horizontally. This mode will only distort the two sides of the TV (where the black bars used to be) but in the center the picture will still be proportional. This mode will fill the entire screen but most of your picture will be proportional. Please Note : When in HD mode aspect ratios will not work because it is controlled by the signal.



## Aspect Ratio Availability List

1. Analog Channels
  - 16 : 9, 4 : 3, Zoom 1, Zoom 2, Panorama
2. Digital Channels
  - 16 : 9, 4 : 3, Zoom 1, Zoom 2, 1 : 1 Mode
3. AV1 and AV2 (CVBS / S-Video)
  - 16 : 9, 4 : 3, Zoom 1, Zoom 2, Panorama
4. YPbPr1 and YPbPr2
  - 16 : 9, 4 : 3, Zoom 1, Zoom 2, Panorama
5. VGA
  - 16 : 9, 4 : 3
6. HDMI1, HDMI2, and HDMI3
  - 16 : 9, 4 : 3, Zoom 1, Zoom 2, 1 : 1 Mode



# Picture-in-Picture/Picture-on-Picture

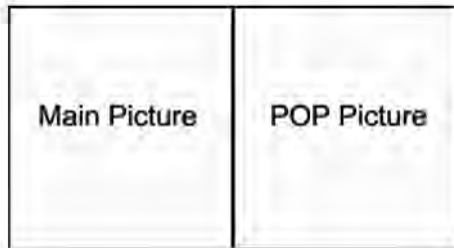
## Picture in Picture/Picture on Picture Explained

This television features Picture In Picture (PIP) and Picture On Picture (POP) options, however the TV is NOT designed for viewing 2 TV channels at the same time. If you want something like that, you'll need an external Tuner box such as a satellite set-top box or cable box. With the external box plugged into the TV, and also an antenna plugged into the TV tuner, you can get your local stations via the source TV, and your cable or satellite channels via another source.

**PIP Window** is a smaller picture window on one of the 4 edges of the TV showing you another source that the TV is connecting to.



**POP Window** is a picture window that takes up half of the screen. The other half is the main picture.



**ON/OFF** – To turn on the PIP or POP, press the ON/OFF button. When you press the ON/OFF button once, PIP will turn on, press the ON/OFF button again and PIP will turn into POP.

**SOURCE** – To switch sources in the PIP or POP window, press the source button and use the ▲▼◀▶↵ buttons select the source you want your PIP or POP window to switch to.

**POS** – Press this button to switch the position of the PIP or POP window.

**SIZE** – Press this button to switch the size of the PIP window.

**AUDIO SWAP (yellow)** – Press this button to interchange the audio between the PIP/POP and the main picture.

**VIDEO SWAP (yellow)** – Press this button to replace the main picture with the PIP window's picture or vice versa.

### PIP/POP Switch List

- TV (Air/Cable) Switches With
  - YPbPr1, YPbPr2, VGA, HDMI1, HDMI2, HDMI3Please Note :
  - VGA can only be used under POP. PIP is N/A.
- AV1 (CVBS / S-Video) Switches With
  - HDMI1, HDMI2, HDMI3
- AV2 (CVBS / S-Video) Switches With
  - HDMI1, HDMI2, HDMI3
- YPbPr1 Switches With
  - TV (Air/Cable), HDMI1, HDMI2, HDMI3
- YPbPr2 Switches With
  - TV (Air/Cable), HDMI1, HDMI2, HDMI3
- VGA Switches With
  - TV (Air/Cable), HDMI1, HDMI2, HDMI3Please Note :
  - Only POP is possible with this source.
- HDMI1 Switches With
  - TV (Air/Cable), AV1, AV2, VGA, YPbPr1, YPbPr2
- HDMI2 Switches With
  - TV (Air/Cable), AV1, AV2, VGA, YPbPr1, YPbPr2
- HDMI3 Switches With
  - TV (Air/Cable), AV1, AV2, VGA, YPbPr1, YPbPr2

### Favorite Channels

Favorite Channels is a TV (Cable/Air) feature where you can use the remote to add your most browsed channels into a list, and then browse just that list of channels with the FAVORITE ▲▼ buttons.



▲▼ – Browses you favorite channel list up or down depending on the button you've pressed.

**ADD/DEL** – You can add or delete your current channel into your favorite channels list by pressing this button. If the channel was not added, then it will be added. If the channel was previously added, the TV will prompt you to remove the channel.

Please Note :

- You can also add or delete your favorite channel list from the QSD MENU.

## Closed Captioning (Digital and Analog Explained)

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 most TV program, and on some VHS home video tapes, at the election of the program provider.



**CC** – Press this button to enable the CC function. You can then use the ▲▼ buttons to select if you want CC off or CC on. You can use the ◀▶ buttons to select between different CC channels.

### Please Note :

- Digital Closed Caption service is a new caption service available on digital TV programs (also at the election of the service provider). It is a more flexible system than the original Closed Caption system, because it allows a variety of caption sizes and font styles.
- Not all programs and VHS video tapes offer closed caption. Please look for the CC 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.
- Closed Captioning for this TV only works under sources TV, AV1, and AV2.



# Ratings

## Ratings

### General Operation

To block channels you don't want your children to watch, you can filter them with the ratings function. MPAA lets you control ratings for movies. For regular TV programs you can use USTV settings. USTV settings lets you filter what content you want at each age level, TV-Y, to TV-MA (refer to definitions below). Below are definitions for each setting.

### USTV Rating

#### TV-Y (USTV) – For All Children

This program is designed to be appropriate for all children. Whether animated or live-action, the themes and elements in this program are specifically designed for a very young audience, including children from ages 2-6. This program is not expected to frighten younger children.

#### TV-Y7 (USTV) – Directed to Older Children

This program is designed for children age 7 and above. It may be more appropriate for children who have acquired the developmental skills needed to distinguish between make-believe and reality. Themes and elements in this program may include mild fantasy violence or comedic violence, or may frighten children under the age of 7. Therefore, parents may want to consider the suitability of this program for their very young children. Note: For those programs where fantasy violence may be more intense or more combative than other programs in this category, such programs will be designated TV-Y7-FV.

#### TV-G (USTV) – General Audience

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

#### TV-PG (USTV) – Parental Guidance Suggested

This program contains material that parents may find unsuitable for younger children. Many parents may want to watch it with their younger children. The theme itself may call for parental guidance and/or the program contains one or more of the following: moderate violence (V), some sexual situations (S), infrequent coarse language (L), or some suggestive dialogue (D).

#### TV-14 (USTV) – Parents Strongly Cautioned

This program contains some material that many parents would find unsuitable for children less than 14 years of age. Parents are strongly urged to exercise greater care in monitoring this program and are cautioned against letting children under the age of 14 watch unattended. This program contains one or more of the following: intense violence (V), intense sexual situations (S), strong coarse language (L), or intensely suggestive dialogue (D).

#### TV-MA (USTV) – Mature Audience Only

This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 17. This program contains one or more of the following: graphic violence (V), explicit sexual activity (S), or crude indecent language (L).

#### TV program description

- FV** - Fantasy Violence
- V** - Violence
- S** - Sexual Situations
- L** - Adult Language
- D** - Sexually Suggestive Dialog

#### MPAA Rating

##### G (MPAA)

General audiences. All ages admitted.

##### PG (MPAA)

Parental guidance suggested. Some material may not be suitable for children.

##### PG-13 (MPAA)

Parents strongly cautioned. Some material may be inappropriate for children under 13.

##### R (MPAA)

Restricted. Under 17 requires accompanying parent or adult guardian (age varies in some jurisdictions).

##### NC-17 (MPAA)

No one 17 and under admitted.

##### X (MPAA)

X is an older rating that is unified with NC-17 but may be encoded in the data of older movies.

## Trouble Shooting

The following table contains the common problems and the solutions to these problems. Please check this list before you contact the technicians.

Problems	Solutions
NO PICTURE	Connect power cord correctly.
	Turn on power.
	Connect video cable correctly
	Select the input signal source with proper cable connection with the source button.
ABNORMAL COLORS	Match the colors on the cables to the ports off the back of the television. I.E. red cable to red colored port.
PICTURE IS TOO DARK	Adjust your contrast, brightness and lamp settings from the OSD Menu.
AUDIO ONLY NO PICTURE	Make sure you have connected both your video and audio cables. The TV's tuner signal must not be lower than 65 dB.
PICTURE ONLY NO AUDIO	Make sure the audio cable is connected. Readjust your volume via the remote control. The TV's tuner signal must not be lower than 65 dB.
REMOTE CONTROL DOES NOT WORK	Turn off the TV, unplug it from the socket. Remove the batteries out of the remote for 30 minutes. Press the remote buttons and the power button randomly for a good 2 seconds, and then reinstall the batteries. Try the remote to see if it works. The TV's remote sensor is also housed in the same place as the power indicator light. Please make sure there is line of sight from the remote control's front sensor to the remote sensor of the TV.
CANNOT RECEIVE SUFFICIENT CHANNELS THROUGH THE ATSC/NTSC TUNER	The TV's tuner signal must not be lower than 65 dB. Change the direction of your antenna and rescan your channels. If you have cable call up your cable company and ask about signal strength of your local cable.
NO COLOR	Please adjust your picture setup and make sure the saturation and the RGB are not turned all the way down. The TV's tuner signal must not be lower than 65 dB. Check your signal.
WEAK SIGNAL OR NO PROGRAM SYMBOL ON SCREEN	The TV's tuner signal must not be lower than 65 dB. Change the direction of your antenna and rescan your channels. If you have cable call up your cable company and ask about signal strength of your local cable.
TV CHANNELS ARE BLOCKED	Check your auto lock function's settings inside the OSD. You may have locked up some channels but forgot about them.
UNIVERSAL REMOTE CODE	This TV follows SONY's universal remote code. Please check your hand book for SONY's codes then apply them.
THE TV TURNS ON OR OFF SLOWLY AND THE SCREEN SHOWS UP SLOWLY	This TV is a High Definition liquid crystal display panel TV. It requires a few more seconds than normal TVs to power up and show the picture.
NO SOUND ON PC	Make sure you have a 3.5 mm mini-jack cable connected from your pc's sound output to the TV's VGA STEREO INPUT

Problems	Solutions
HDCP VIDEO SAYS NO HDCP SUPPORT	Reboot your HDCP video device but turning them off and unplugging the power cord. Wait up to 8 minutes to plug the power back in to see if it works or not.
HDCP VIDEO HAS NO AUDIO	Make sure you have a 3.5 mm mini-jack cable connected from your HDCP video device's sound output to the TV's VGA STEREO INPUT. If your HDCP video device uses RCA AUDIO jacks, you'll need to obtain a RCA audio converted into 3.5 mm mini-jack cable.
CANNOT GET 1366X768 ON PC VGA	Although the screen's max resolution is 1366x768, no video card maker can support such resolution. The industry standard for similar resolution support is 1360x768. Please use that as you resolution.
PICTURE IS DISTORTED OR HAS ABNORMAL SOUND	This might be from interference from large electrical appliances, cars, motorcycles, or fluorescent lights. If the TV is close to the wall, try moving the TV to another room in your house to see if the problem still occurs.
PICTURE DOES NOT COVER THE ENTIRE SCREEN	If you're using HDMI or a TV digital channel make sure you use the ASPECT button to switch to 16:9 WIDE format. If you are using VGA, use the AUTO ADJUST function to adjust to the screen. Please Note ; If you are using 1360x768 or 1280x768 you must also use the PREF. RESOLUTION function to adjust to the screen as well. If you are using regular analog TV, AV1, or component in 480i resolution, use the ASPECT button to switch to 4:3 WIDE in order to fill up the screen. Please Note : This note this feature will distort the picture.
SWITCHING A CHANNEL OR SOURCE CHANGES THE VOLUME	Different channels and inputs will sometimes have this effect because the channel signal's own volume is already loud. There is no way remove this completely. The TV has an AUTO VOLUME LEVEL function that can combat this type of effect. Please make sure that function is turned on.
THERE IS NOISE OR TRASH PIXELS ON THE SCREEN	When your LCD HDTV's resolution is higher than the digital channel's broadcast resolution, the signal is up-converted to match your TV's resolution. Up-converting can cause this type of effect.
I CANNOT FIND THE VOLUME AND CHANNEL CHANGING BUTTONS	The buttons are represented by the ▲▼◀▶ buttons located on the remote control. ▲▼ changes the channels and ◀▶ changes the volume.
I CANNOT FIND ENTER BUTTON	The enter button has the symbol ↵. It is located in the center of the ▲▼◀▶ buttons.

## Important Information About the Anti-Reflective Window on your SunBriteTV Outdoor Television

The anti-reflective window on your all-weather TV is designed to dramatically reduce reflection and improve the contrast of the image on your TV. In order to preserve the anti-reflective properties of the window, it is imperative that you follow the maintenance guidelines below:

### 1. Clean the window by using the following directions:

To clean the SunBriteTV window, use an ammonia-free glass cleaner and a lint-free or micro-fiber cloth. Spray the solution on the cloth and then apply to the window. DO NOT use acrylic cleaners or ammonia.

### 2. When the TV is not in use, keep it covered with the SunBriteTV Outdoor Dust Cover

The fitted dust cover is constructed with weatherproof 4-ply polypropylene UV protection fabric that protects the window from direct and indirect sunlight, and keeps wind-blown objects from scratching the surface of the window.

To order the Dust Cover, contact your Authorized SunBriteTV dealer or SunBriteTV's Customer Service at 866.357.8688.

### General Cleaning

Remove any dirt and salt deposits from the unit, being careful to rinse the cloth frequently to avoid scratching the TV or screen surface. Avoid using harsh chemicals, abrasives, or solvents when cleaning any surface on the unit.

### Snow and Ice

Use a soft brush and towel to remove snow and ice from the unit.

### Fiber Filter

The Fiber Filter is located on the back of the unit, inside the Intake Vent at the top of the TV (Figure 1). In areas where dust or salt air is prevalent, it is recommended that the Fiber Filter be cleaned regularly.

1. Release the Fiber Filter by pulling it out from the corner of the Intake Vent (Figure 2). Notice how the Fiber Filter fits in the upper and lower channels, and tightly against the angled corners (Figure 3).
2. Pull the Fiber filter out of the TV, and wash it with mild detergent and warm water. After rinsing, let the Fiber Filter dry completely.
3. Put the Fiber Filter back up into the Intake Vent pushing the filter first into the upper channel, then fit it into the lower channel. Make sure filter fits tightly against angled corners at each end of the Intake Vent. (Figure 4).

Figure 1

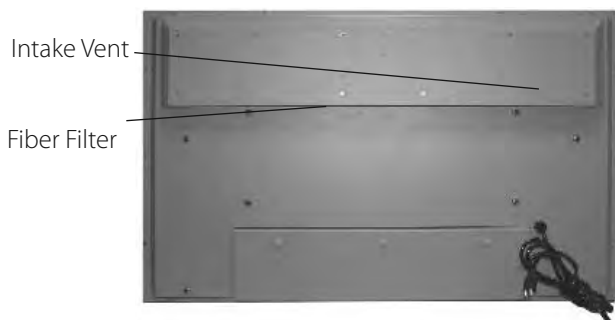


Figure 2



Figure 3

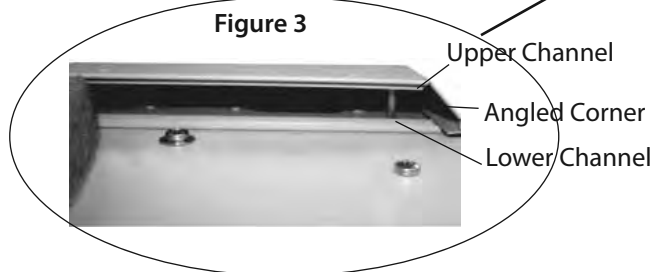
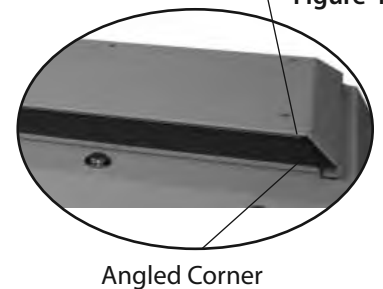


Figure 4



# Specifications

## Specifications for SunBriteTV Model 4610HD

### Specifications

LCD Screen	46-inch diagonal TFT Active Matrix
Resolution	HD 1920 x 1080 Full HD 1080p
Aspect Ratio	16:9
Contrast Ratio	2000:1
Viewing Angle	178°
Response Time	6 milliseconds
TV formats	1080p, 1080i, 720p, 480p, 480i
Input Connectors:	
RF	Antenna/CATV (ATSC/QAM/NTSC) x1
HDMI	HDMI™ Input x2
Video Composite	S-Video x1 and Composite Video x1, L/R Audio Inputs x1
Video Component	YPbPr plus Stereo Audio x2
PC	15-pin D-sub VGA plus Stereo Audio
RS232 Serial	Full-featured command set with discrete on/off, input select and volume control
Discrete IR Control	Codes for Power On/Off and Input Select
Input Power	100-240 VAC, 50-60 Hz 4.0 A Max
Audio	10-watt x 2 channels, water-resistant speaker module (detachable); SPDIF Audio output
Operating Temp.	-24° to 122° F. (-31° to 50° C.) *
Non-op. Temp. (Off-mode with power applied)	-24° to 140° F. (-31° to 60° C.) The non-operating temperature feature requires power to be applied
Accessories Included	Water-resistant remote control with lithium battery
TV Dimensions	44.72" W x 27.16" H (30.47" H with speakers) x 6.85" D
Weight	82.7 lbs; 86.8 lbs with speakers
Warranty	One-year, in-factory, parts and labor

Specifications are subject to change.

\*Temperature range is for operation in shaded location.

### PC Timing Codes

1920\*1080@60Hz (NATIVE)

1360\*768@60Hz

1280\*768@60Hz

1024\*768@60, 70, 75Hz

800\*600@60, 75Hz

640\*480@60, 75Hz



Dimensions with detachable speaker module.  
All measurements are in inches

## Features Information and Instructions

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### Internal Thermostatically-Controlled Heater

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The Internal Thermostatically-Controlled Heater keeps the unit warm in freezing temperatures and activates automatically when the SunBriteTV internal temperature sensor reads a temperature inside the unit of 32° F. or lower. The heater remains on until the internal temperature rises to at least 42° F. The heater provides a 20° F. temperature rise, allowing the TV to safely remain in temperatures as low as -24° F. The ventilation fans are not activated when the heater is running and will automatically activate when required.

If temperatures below -24° F. are expected, we recommend that you bring your SunBriteTV inside to prevent damage to the LCD screen.

**Note:** *In order for the automatic heater to work properly, your SunBriteTV must have power applied at all times.*

### Programming Other Manufacturers' Universal Remote Control Devices

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When programming a DirectTV, local cable universal remote control or Control system, you may find that SunBriteTV may not be on the list of TV manufacturers. If that is the case, Model 4610HD supports SONY's universal remote code.

### SunBriteTV Pixel Quality Policy

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#### SunBriteTV's Pixel Quality Policy

(Applicable to LCD TVs sold within USA and Canada only.)

SunBriteTV™ LCD screens are manufactured with rigorous standards to maintain optimal viewing. However, the LCD screen may have minor defects that appear as a small bright or dark pixel. This is common to all LCD screens used in display and television products, and is not specific to SunBriteTV.

Bright dots are dots that appear bright and unchanged in size when a LCD TV screen displays a black pattern.

Dark dots are dots that appear dark and unchanged in size when a LCD TV screen displays a pure red, green, or blue pattern.

Adjacent dots are pixels located directly next to each other.

#### **Your SunBriteTV will be replaced under warranty if it meets one of the following criteria:**

—A total of 7 defective pixels, including both bright dots and dark dots are present. (Model 4610HD LCD TV screen has over a million pixels.)

—2 or more pairs of adjacent bright dots are present.

—3 adjacent bright dots are present.

—3 adjacent dark dots are present.

To locate defective pixels, the LCD panel should be examined under normal operating conditions, in its native display resolution, with a 90 degree viewing angle, from a distance of approximately 20 inches.

**To qualify for replacement, a defective LCD screen must be reported to SunBriteTV within 14 days from the day the customer receives the TV.**

For questions, please call our toll-free service number at 866.357.8688.

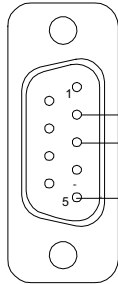
# Appendix - RS232 Control Codes

## RS 232 Control Codes for SunBriteTV Models SB-3220HD and SB-4610HD

Function	ASCII	HEX	Command Received from TV to control system	Response from TV to control system
Firmware Version Number	[ESC]?	1B 3F	[B3220AHD-X.XX] or [B4610AHD-X.XX]	na
Power Status	[ESC]!	1B 21	[PWRON] [PWROFF]	na
Power Toggle	[ESC]\$	1B 24	[S]	[PWR]
Power ON	[ESC]A	1B 41	[A]	[PWRON]
Power OFF	[ESC]B	1B 42	[B]	[PWROFF]
Tuner Input	[ESC]C	1B 43	[C]	[TN1]
Composite Video Input 1	[ESC]D	1B 44	[D]	[AV1(CVBS)]
S-Video Input 1	[ESC]E	1B 45	[E]	[AV1(S-VIDEO)]
Composite Video Input 2	[ESC]F	1B 40	[F]	[AV2(CVBS)]
S-Video Input 2	[ESC]G	1B 47	[G]	[AV2(S-VIDEO)]
Component 1 Input	[ESC]H	1B 48	[H]	[YpbPr1]
Component 2 Input	[ESC]I	1B 49	[I]	[YpbPr2]
HDMI Input 1	[ESC]J	1B 4A	[J]	[HDMI1]
VGA Input	[ESC]K	1B 4B	[K]	[VGA]
HDMI Input 2	[ESC]L	1B 4C	[L]	[HDMI2]
Mute	[ESC]X	1B 58	[X]	[MUTE]
Vol Up	[ESC]Y	1B 59	[Y]	[VOL+]
Vol Down	[ESC]Z	1B 5A	[Z]	[VOL-]
Channel Up	[ESC]V	1B 56	[V]	[CH+]
Channel Down	[ESC]W	1B 57	[W]	[CH-]
1	[ESC]1	1B 31	[1]	na
2	[ESC]2	1B 32	[2]	na
3	[ESC]3	1B 33	[3]	na
4	[ESC]4	1B 34	[4]	na
5	[ESC]5	1B 35	[5]	na
6	[ESC]6	1B 36	[6]	na
7	[ESC]7	1B 37	[7]	na
8	[ESC]8	1B 38	[8]	na
9	[ESC]9	1B 39	[9]	na
0	[ESC]0	1B 30	[0]	na
-	[ESC]-	1B 2D	[-]	na
Channel Return(Previous Channel)	[ESC]r	1B 72	[r]	na
Source Toggle	[ESC]b	1B 62	[SRC]	na
Aspect	[ESC]a	1B 61	[ASPECT]	na
Enter	[ESC]e	1B 65	[ENTER]	na
Info	[ESC]i	1B 69	[INFO]	na
CC	[ESC]c	1B 63	[CC]	na
Sleep	[ESC]z	1B 7A	[SLEEP]	na
Picture	[ESC]p	1B 70	[PICT]	na
Sound	[ESC]s	1B 73	[SND]	na
(4610 only) PIP On	[ESC]P	1B 50	[PIP]	na
(4610 only) PIP Source	[ESC]Q	1B 51	[PSC]	na
(4610 only) PIP Swap Video	[ESC]R	1B 52	[PSV]	na
(4610 only) PIP Swap Audio	[ESC]S	1B 53	[PSA]	na
(4610 only) PIP Size	[ESC]T	1B 54	[PSZ]	na

# Appendix B - RS232 Control Cable Pinout

DB9F, Typical  
PC Serial / Control System  
RS232 port.



1/8" Stereo Plug



Ground      Rx Data  
From control system      Tx Data  
to control system

Com Specs: 9600 baud 8 data, 1 stop, no parity

<b>SunbriteTV RS232 Control Cable</b>				
July 17 2007 Preliminary	SIZE	FSCM NO	DWG NO	REV A1
	SCALE		SHEET	1 OF 1



